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An exploratory study of autistic-like traits and empathy deficits in male
offenders and adolescents

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Project proposal

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An exploratory study on autistic-like traits and empathy deficits in male sexual offenders and adolescents

Current literature has widely suggested a relationship between an individual's empathy deficits and offending behaviours (Day, Casey & Gerace, 2010; Jolliffe & Farrington, 2004; Varker, Devilly, Ward & Beech, 2008). Empathy deficits, the inability to put oneself in the role of others, take their perspectives, and understand their thoughts, behaviours and feelings are postulated to heighten one's risk in committing antisocial acts towards others (Jolliffe & Farrington, 2004). As such, interventions to increase offenders' empathy towards their victims (e.g., hypothetical apology letters) have been incorporated in many contemporary offender treatment programmes (Day et al., 2010).

Varying constructs of empathy

However, efficacy of such victim empathy intervention is debatable due to the conceptualisation and construct of empathy itself (Craig, Browne & Beech, 2008; Day et al., 2010). First theorized by Davis (1983), cited in Varker et al (2008), empathy was seen as a multi-dimensional construct which comprised several factors such as perspective taking, ability to put oneself into the feelings of another imaginary person, having the emotions for another person, and personal feelings of distress. On the other hand, Theory of Mind (ToM), described as an individual's ability to attribute thoughts, beliefs and feelings to others by Premack and Woodruff (1978), cited in Spenser, Betts and Das Gupta (2015), has also shown modest association with empathy which suggests a possible overlap between the two concepts. Notwithstanding, more recent literature have seemed to converge to a consensus that both affective (i.e., how

individuals feel about others) and cognitive (i.e., how individuals recognize and perceive others' feelings) aspects underlie one's empathy in general (Hockley & Langdon, 2015).

Empathy and sexual offending

While both affective and cognitive aspects of empathy hold true for offenders and non-offenders as mentioned earlier, studies looking into the different groups of offending population (e.g., non-sexual offenders and sexual offenders) have indicated that empathy could also be further differentiated into generalized and victim-specific types (Fernandez & Marshall, 2003; Fernandez, Marshall, Lightbody & Sullivan, 1999). In the study by Fernandez and Marshall (2003), rapists were found to show more deficits in empathy towards their 'own victim' but shared the same degree of empathy as non-sexual offenders towards a 'female who was sexually assaulted by another man' in a vignette. Interestingly, rapists reflected higher generalized empathy scores than non-sexual offenders towards a 'woman who was injured in a car-accident' scenario.

Characteristics of sexual offenders

Sexual offenders are thus theorized and seen as a unique group of individuals with marked differences from non-sexual offenders and non-offending population. Sexual offenders are more likely to be sexually abused when they were young, deficient in social and emotion regulation skills, weaker in cognitive and learning abilities, and have atypical sexual interests (Seto & Lalumiere, 2010). Therefore, sex offender treatment programmes often target sexual offenders' cognitive distortion and sexual fantasies, enhance their social and emotion regulation techniques, on top of victim empathy (Craig et al., 2008).

Autism and (sexual) offending

Drawing parallel to the characteristics of sexual offenders, individuals with Autism Spectrum Disorder (ASD) share similarities; they are marked with impairments in communication and social interaction, have distinct and repetitive patterns of interests and behaviour, and might have some forms of learning difficulties due to their cognitive abilities (Centers for Disease Control and Prevention, 2015). Increasingly, researchers have looked at both general and sexual offending in ASD individuals (De La Cuesta, 2010; Mouridsen, 2012; Sevelever, Roth & Gillis, 2013; Sutton et al., 2012).

Howlin (1997), cited in De La Cuesta (2010), suggested that ASD individuals' lack of knowledge and misinterpretation of others' social cues might put them at risk of antisocial behaviours. Furthermore, obsessions, or circumscribed interests, too could lead ASD individuals to offend. To illustrate, an ASD individual might not comprehend a female's behaviours and reaction (e.g., rejection), and continue to seek her attention due to his interest and fascination in her. This could lead to stalking (an offence), and possibly escalate to a sexual crime (e.g., molestation).

Prevalence of ASD in (sexual) offending

The prevalence rate of ASD offenders seems to vary due to methodological differences in various studies. Solely using the diagnostic criteria for Asperger's syndrome (AS), Scragg and Shah (1994), cited in De La Cuesta (2010), found that six out of 392 patients in Broadmoor psychiatric hospital (1.5%) met the criteria. Additional three borderline cases were considered its prevalence increased to 2.3%, higher than the rate for AS in general population (0.55%). In another study, Kumagami and Matsuura (2009) cited in Mouridsen (2012), examined ASD in Japan's family court cases. 17 cases of ASD (out of 93; 18.2%) were found in one court, while remaining three family courts surfaced 11

(out of 335; 3.2%) cases of ASD, which included AS and pervasive developmental disorder not otherwise specified (PDD-NOS). Despite the differences in methodology, results from both studies suggest an over-representation of people with ASD in the criminal justice system, particularly in highly secured or specialized institutions.

More pertinent to sexual offending population, Hart-Kerkhoffs et al (2009) cited in Mouridsen (2012), found that ASD symptoms were significantly higher in male juvenile suspected sexual offenders than non-offenders. Among the sub-groups of these sexual offenders, child molesters reflected higher symptoms of ASD. In a more recent pilot study by Sutton et al (2012), results had shown that 22 out of 37 male adolescent sexual offenders (60%) in an institution met the diagnostic criteria for ASD but were undiagnosed prior to their sentencing. These studies therefore warrant the attention of a possible association between ASD (or autistic-like traits) and sexual offending.

Autistic-like traits and empathy

Lastly, drawing the link between autistic-like traits and empathy, several studies have looked at ASD individuals and their affective and cognitive components of empathy (Grove, Baillie, Allison, Baron-Cohen & Hoekstra, 2015; Lockwood, Bird, Bridge & Viding, 2013; Pasalich, Dadds & Hawes, 2014). Notably, children diagnosed with ASD or had ASD symptoms but were not officially diagnosed, were found to be significantly poor in recognizing and comprehending others' feelings (i.e., cognitive empathy). This lack of empathy was said to possibly mediate children's anti-social behaviours and conduct problem such as cruelty to animals (Rogers, Viding, Blair, Frith & Happe, 2006, cited in Pasalich et al., 2014). Moreover, in the Pasalich et al (2014) study, not only did it support Roger et al (2006) earlier findings, it went on to establish a

moderation effect of ASD symptoms on callous-unemotional traits (i.e., lack of remorse and limited emotions) and affective empathy in a group of 134 children who had conduct disorder but did not meet the diagnostic criteria of ASD. These results therefore imply that autistic-like traits affect one's development of empathy and subsequently, increase his or her anti-social behaviours, given a child's low sense of guilt and remorse.

Rationale for current study

This current study seeks to build on existing literature findings on the associations of ASD, empathy deficits and offending. Given the unique characteristics of sexual offenders, this paper aims to add further evidence to Sutton et al (2012) study on the prevalence of autistic-like traits in sexual offending population. With studies showing that empathy could be conceptualized as generalized and victim-specific modalities for this specific group of offenders (Fernandez & Marshall, 2003; Hockley & Langdon, 2015), this current paper could hence be a pilot study to investigate the possible association between autistic-like traits and the differentiated forms of empathy. Last but not least, this proposed study could impact current treatment programmes for sexual offenders (i.e., prioritising communication and social skills training for sexual offenders, over and on top of victim empathy) if the relationship between autistic-like traits (i.e., weak social interaction and perspective taking) and sexual offending is significant.

Objectives of the study

The first objective is to measure the level of autistic-like traits in a population of male adolescent sexual offenders who are not officially diagnosed

with ASD. It is hypothesized that male adolescent sexual offenders have moderate to high autistic-like traits as compared to male adolescent non-offenders (controls).

Second objective of the study is to compare the empathy deficits, i.e., general empathy, generalized (non-sexual) victim empathy, sexual victim and own victim empathy between male adolescent sexual offenders and non-offenders. The former group should show greater deficits in sexual victim and own victim empathy.

The third objective of the study is to investigate whether there is a moderation effect of autistic-like traits on empathy deficits of sexual and non-offenders.

Proposed methodology

The current research will adopt similar method as Hockley and Langdon's (2015) earlier study. A between and within groups design will be utilised. Both sexual offenders and non-offenders groups will be asked to complete a series of questionnaires and results will be compared.

Sample

A minimum of 30 male adolescent sexual offenders, aged 16 to 21, will be targeted for this study. Offenders are to be convicted with or have a history of sexual offending, with or without sexual crime as the index offence. A convenience sample comprising of adolescents known to the Youth offending teams (YOTs) and Probation Service in United Kingdom would be used. In addition, caseworkers or probation officers of the participants will also be involved to provide collateral information (i.e., fill in a questionnaire about their adolescent clients).

For the non-offenders group, a minimum of 30 male adolescents of the similar age range will be recruited. Students of sixth form colleges and universities are primarily targeted for the recruitment, giving rise to a convenience sample. Self-disclosure of this group of participants will be relied upon to determine their non-offending history.

In a study on the validity of self-reported convictions in a community sample by Auty, Farrington and Coid (2015), it was found that 476 (out of 538; 88%) respondents correctly identified themselves without a conviction when their criminal records were checked. Surprisingly, four respondents made an error (i.e., believed that they were convicted of an offence but no criminal records were found). On the other hand, 53 (out of 58; 91.4%) of the convicted individuals truthfully disclosed their offences (i.e., self-reported offences tallied with their official records), while the remaining five respondents either under-reported or misreported their crimes. Hence, this study suggests that individuals' self-reports of their offending histories could be of reasonably high concurrent validity and credible.

Measures

Participants' demographic information such as age, ethnicity and education level will be gathered (see Appendix I). Items, 'Any known disability', 'Have you been in contact with the police before', and 'Have you been convicted with an offence before', will only be answered by non-offenders.

The 28-item adult Autism Spectrum Quotient short version (AQ-Short) by Hoekstra et al (2011) will be utilised for the measurement of autistic-like traits in participants (see Appendix II). Reduced from the original 50-item adult AQ scale by Baron-Cohen, Wheelwright, Skinner, Martin and Clubley (2001), which

was described to be a good screening tool for autism and AS, for person aged 16 and above (Autism Research Centre, 2015), the shorter version (AQ-Short) has shown reasonably high internal consistency (Cronbach's alpha between .77 and .86) and correlation (r between .93 to .95) with the full AQ scale when validated in the general adult population, students and clinical samples (Hoekstra et al., 2011). AQ-Short has also reflected good test accuracy to distinguish individuals with and without AS (area under curve [AUC] was .97). Hence, AQ-Short is recommended for instances where time and resources are constraints to implement the full AQ scale (Hoekstra et al., 2011).

In addition, a 10-item collateral scale, AQ-10, would also be given to the caseworkers or probation officers of the male adolescent sexual offenders to rate on the latter (clients). Initially designed as a supplement to the main AQ scale and for parents to rate their young teenager (aged 12 to 15), this AQ-10 will be adapted to improve the credibility of sexual offenders' response on the AQ scale in this study (see Appendix III). One item, 'When s/he was younger, s/he used to enjoy playing games involving pretending with other children' will be removed from AQ-10 as caseworkers are assumed to have no prior knowledge on this. Furthermore, three demographic items regarding their clients would be added.

For the measurement of general empathy component, the Empathy Quotient (EQ) scale by Baron-Cohen and Wheelwright (2004) will be adopted. The scale consists of 60 items, of which, 40 items are associated with EQ while 20 are filler statements. Psychometric properties of the scale were tested against clinical and non-clinical samples in Baron-Cohen and Wheelwright's (2004) study, with good test-retest reliability ($r = .97$) and internal consistency (Cronbach's

alpha = .92). For the current study, only items associated with EQ will be assessed, i.e., EQ-40 (see Appendix IV).

Lastly, to measure individual's specific victim empathy, Victim Empathy Scale-Adapted (VESA; Keeling, Rose & Beech, 2007; Langdon et al., 2007; Hockley & Langdon, 2015) will be used in this study. VESA is a 30-item measure in which participants are to respond with reference to a specific victim's name. Thus, sexual offenders in this study will answer the questions with respect to the victim of their own sexual offence (see Appendix V). Good internal consistency of the scale was cited (Cronbach's alpha = .91; Langdon et al., 2007). Two additional vignettes were devised to further differentiate victim empathy into two other dimensions, i.e., unknown non-sexual victim and unknown sexual victim (Hockley & Langdon, 2015; see Appendix VI). Participants will again rate the same 30-items in accordance to the two vignettes. However, some items had to be rephrased to suit the non-sexual victim vignette as original items of the VESA were about sexual offending.

Procedure

- With the approval from the Faculty of Medicine & Health Sciences Research Ethics Committee of the University of Nottingham and National Offender Management Service (NOMS), YOTs and Probation Service of United Kingdom will be contacted and permission will be sought to recruit potential participants.
- Date and time would then be arranged for data collection once YOT and Probation Service agreed to the experiment. Primary researcher aims to target three to five participants, i.e., male adolescent sexual offenders, aged 16 to 21, to fill in the questionnaires concurrently in one session.

Prior to the start of the session, participants will be briefed on the experiment, and consent to participate will be sought and signed. As participants are ought to be above 16 years old, parental consent will not be required for this study.

- During the session, participants will first be asked to fill in the AQ-Short, followed by EQ-40, and lastly the VESA. Both AQ-Short and EQ-40 will be given out at the start for the participants to fill in. Once participants have completed both the questionnaires, VESA would then be administered. All questionnaires would be in the paper and pen format. Each session is estimated to take around 45 minutes to an hour. Participants will be debriefed at the end of the session.
- Subsequently, respective caseworkers or probation officers of the participants will be approached to fill in the collateral questionnaire, AQ-10. This questionnaire would not take longer than five minutes and the information gathered would be a useful element to further explore potential differences in participants' own ratings of their characteristics and others' ratings on their characteristics. Informed consents of the caseworkers will be sought.
- Caseworkers are not needed to administer the questionnaires. They are only to identify participants who fit the criteria based on the case records and fill in the AQ-10 questionnaire subsequently when participants agreed to take part in the study.
- This proposed study could impact caseworkers and probation officers' intervention with sexual offenders. Very often than not, caseworkers have to prioritize client's risks and needs accordingly to the length of the Court order which could range for three to 12 months. Hence, if relationship

between autistic-like traits (i.e., weak social interaction and perspective taking) and sexual offending is significant, prioritising communication and social training for sexual offenders, over and on top of victim empathy, would be more beneficial, realistic and achievable for the client, given the limited length of time in a Court order.

- To reiterate, caseworkers and probation officers will first be approached to identify prospective youths for the study. Caseworkers and probation officers would inform them about the study and if the youths agreed to participate, the primary researcher would then arrange a date with the caseworkers to implement the questionnaire to the youths. During the session, primary researcher will explain the study in detail and obtain youth's written consent to participate. Caseworkers are not required to be in the session while the questionnaire is being administered by the primary researcher. Subsequently, primary researcher would then approach the caseworkers to fill in the AQ-10 questionnaire at another time where it is convenient for the latter to do so.
- The subjects' offences will not be disclosed at any point in time by the youths themselves. However, in the YOI setting, it is highly likely that the youth offenders are grouped according to their nature of offences (i.e., sexual offenders reside in a particular block, separate from other offenders), and hence, it will be a closed group when the questionnaires are being administered collectively. At no instance during the session, subjects will be asked to elaborate their offence. Their offences will only be disclosed by their caseworkers or probation officers in the AQ-10 questionnaire which is to be solely filled by the latter on a separate session with the primary researcher.

- For the non-offenders (controls), male students of the sixth form colleges and universities in United Kingdom will be recruited. A poster will be used in the recruitment of participants (see Appendix VII). An online questionnaire, comprising Appendix I, II, IV, VI, will be devised. Bristol Online Surveys (BOS), supported by the University of Nottingham, will be utilized for the creation of the online questionnaire. One main advantage of using BOS over other online surveys (e.g., SurveyMonkey) is the additional encryption measure which allows participants to complete the questionnaire using a secure connection. Hence, participants' data are protected and kept confidential; no third parties (other than the researchers) can access the data.
- Participants will be briefed on the experiment, and consent to take part will all be sought online.
- Different from the offenders group, data for controls would be collected all at once (instead of administering AQ-Short and EQ-40 scales together, and then VESA). The time taken to complete the online questionnaire is therefore estimated to be shorter, i.e., around 20 minutes.
- Participants, who are of ages 16-21, declare that they have no previous contact with the police and/or prior conviction in their online questionnaires, would eventually be filtered for data analysis.

Data analysis

Given the nature of this study, Statistical Package for Social Sciences (SPSS) will be used for the quantitative analysis of data. Participants' demographics will be summarised with descriptive statistics and compared across two groups using Analysis of Variance (ANOVA). Analysis of Covariance

(ANCOVA) will be utilised when necessary to determine if level of autistic-like traits moderate the empathy deficits of sexual and non-offenders in male adolescents. Other factors such as age and education level would also be controlled for.

Possible limitation(s) of the study

First and foremost, existing robust questionnaires (i.e., with good validity and reliability) are adopted for this study. However, this study does acknowledge a possibility of an inflation effect (e.g., scores on participants' questionnaire could be affected by their mood at the point of assessment); and hence, to account for this circumstance, collateral information (via AQ-10) will be sought from the caseworkers to give a more objective representation of the clients' characteristics.

Ethical considerations

This research will adhere to guidelines set by the Faculty of Medicine and Health Sciences Research Ethics Committee, University of Nottingham. In addition, this study will involve the Ministry of Justice, hence approval from NOMS will therefore be sought; guidelines of the latter governing body will also be adhered to. All participants of this study are to give their informed consent to take part.

Confidentiality and protection of data will be dutifully respected and thoroughly explained to the participants. Participants are assigned with subject ID numbers, hence identities of individuals would not be revealed. All information disclosed during the study will be encrypted and stored in a

password protected network drive in the University of Nottingham. If any data files are needed to be transferred from researcher to study's supervisor, the transfer will be done electronically, using password-protected methods. Data would be stored up to seven years and study's supervisor, Professor David Daley, will act as the custodian of these data. Information will remain confidential unless there is reasonable concern about the welfare of participants, or potential harm to others, by researcher. In such unlikely event, researcher will immediately inform his supervisor for appropriate advice on the next course of action.

In terms of the risk assessment of proposed study, this research will not involve any invasive procedures that will cause immediate harm to the participants. However, it is cautioned that there could be a small possibility that participants might feel discomfort in the course of responding to the questionnaires, particularly VESA, where sexual offenders are reminded about their crimes and victims. In the event that participants require any further support, e.g., counselling services, they will be directed to their caseworkers or probation officers, and for non-offenders, the counselling services of respective colleges and universities accordingly.

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Appendix I

Demographic information

Subject ID no.	(Assigned by researcher)
Age	
Highest Education Qualification/ Level	<input type="checkbox"/> Primary Year: <input type="checkbox"/> Secondary Year: <input type="checkbox"/> College Year: <input type="checkbox"/> University Year:
Ethnicity	<input type="checkbox"/> White <input type="checkbox"/> Mixed/ multiple ethnic groups (e.g., White and Asian) <input type="checkbox"/> Asian British <input type="checkbox"/> African/ Black British <input type="checkbox"/> Other ethnic group (e.g., Arab) Please specify:
Any known disability ¹ ?	<input type="checkbox"/> Yes Please specify: <input type="checkbox"/> No
Have you been in contact with the police before ¹ ?	<input type="checkbox"/> Yes (e.g., arrested by police, given warning) Please specify: <input type="checkbox"/> No
Have you been convicted in court before ¹ ?	<input type="checkbox"/> Yes Please specify: <input type="checkbox"/> No

¹ Only applicable for non-offender participants

Appendix II

Adult Autism Spectrum Quotient short (AQ-Short)

Subject ID no.: (Assigned by researcher)				
Date of birth:				
Today's date:				
How to fill the questionnaire				
Below is a list of statements. Please read each statement very carefully and rate how strongly you agree or disagree with it by circling your answers.				
<u>THERE IS A TOTAL OF 28 STATEMENTS. DO NOT MISS ANY STATEMENTS OUT.</u>				
<i>Examples</i>				
E1. I am willing to take risks.	definitely agree	slightly agree	(slightly disagree)	definitely disagree
E2. I like playing board games.	definitely agree	(slightly agree)	slightly disagree	definitely disagree
E3. I find learning to play musical instruments easy.	definitely agree	slightly agree	slightly disagree	(definitely disagree)
E4. I am fascinated by other cultures.	(definitely agree)	slightly agree	slightly disagree	definitely disagree

1. I prefer to do things with others rather than on my own.	definitely agree	slightly agree	slightly disagree	definitely disagree
2. I prefer to do things the same way over and over again.	definitely agree	slightly agree	slightly disagree	definitely disagree
3. If I try to imagine something, I find it very easy to create a picture in my mind.	definitely agree	slightly agree	slightly disagree	definitely disagree
4. I frequently get so strongly absorbed in one thing that I lose sight of other things.	definitely agree	slightly agree	slightly disagree	definitely disagree
5. I usually notice car number plates or similar strings of information.	definitely agree	slightly agree	slightly disagree	definitely disagree
6. When I'm reading a story, I can easily imagine what the characters might look like.	definitely agree	slightly agree	slightly disagree	definitely disagree
7. I am fascinated by dates.	definitely agree	slightly agree	slightly disagree	definitely disagree
8. In a social group, I can easily keep track of several different people's conversations.	definitely agree	slightly agree	slightly disagree	definitely disagree
9. I find social situations easy.	definitely agree	slightly agree	slightly disagree	definitely disagree
10. I would rather go to a library than a party.	definitely agree	slightly agree	slightly disagree	definitely disagree
11. I find making up stories easy.	definitely agree	slightly agree	slightly disagree	definitely disagree
12. I find myself drawn more strongly to	definitely agree	slightly agree	slightly disagree	definitely disagree

people than to things.				
13. I am fascinated by numbers.	definitely agree	slightly agree	slightly disagree	definitely disagree
14. When I'm reading a story, I find it difficult to work out the characters' intentions.	definitely agree	slightly agree	slightly disagree	definitely disagree
15. I find it hard to make new friends.	definitely agree	slightly agree	slightly disagree	definitely disagree
16. I notice patterns in things all the time.	definitely agree	slightly agree	slightly disagree	definitely disagree
17. It does not upset me if my daily routine is disturbed.	definitely agree	slightly agree	slightly disagree	definitely disagree
18. I find it easy to do more than one thing at once.	definitely agree	slightly agree	slightly disagree	definitely disagree
19. I enjoy doing things spontaneously.	definitely agree	slightly agree	slightly disagree	definitely disagree
20. I find it easy to work out what someone is thinking or feeling just by looking at their face.	definitely agree	slightly agree	slightly disagree	definitely disagree
21. If there is an interruption, I can switch back to what I was doing very quickly.	definitely agree	slightly agree	slightly disagree	definitely disagree
22. I like to collect information about categories of things	definitely agree	slightly agree	slightly disagree	definitely disagree

(e.g. types of car, types of bird, types of train, types of plant, etc.).				
23. I find it difficult to imagine what it would be like to be someone else.	definitely agree	slightly agree	slightly disagree	definitely disagree
24. I enjoy social occasions.	definitely agree	slightly agree	slightly disagree	definitely disagree
25. I find it difficult to work out people's intentions.	definitely agree	slightly agree	slightly disagree	definitely disagree
26. New situations make me anxious.	definitely agree	slightly agree	slightly disagree	definitely disagree
27. I enjoy meeting new people.	definitely agree	slightly agree	slightly disagree	definitely disagree
28. I find it very easy to play games with children that involve pretending.	definitely agree	slightly agree	slightly disagree	definitely disagree

Appendix III

Demographic Information and AQ-10 (with one item removed) for caseworkers and probation officers only

Subject/Client's ID no.:	
Any known disability of client?	<input type="checkbox"/> Yes Please specify: <input type="checkbox"/> No
Index offence of client	
Nature of client's sexual offence	<input type="checkbox"/> Penetration of vagina or anus (using body or object). Penile penetration of mouth in either case by, or of victim <input type="checkbox"/> Masturbation by, or of victim <input type="checkbox"/> Other sexual activity that does not involve penetration or masturbation

Please circle the most appropriate option for each statement with reference to your client.

1. He notices patterns in things all the time.	definitely agree	slightly agree	slightly disagree	definitely disagree
2. He usually concentrates more on the whole picture, rather than the small details.	definitely agree	slightly agree	slightly disagree	definitely disagree
3. In a social group, he can easily keep track of several different people's conversations.	definitely agree	slightly agree	slightly disagree	definitely disagree
4. If there is an interruption,	definitely agree	slightly agree	slightly disagree	definitely disagree

he can switch back to what he was doing very quickly.				
5. He frequently finds that he doesn't know how to keep a conversation going.	definitely agree	slightly agree	slightly disagree	definitely disagree
6. He is good at social chit-chat.	definitely agree	slightly agree	slightly disagree	definitely disagree
7. He finds it difficult to imagine what it would be like to be someone else.	definitely agree	slightly agree	slightly disagree	definitely disagree
8. He finds social situation easy.	definitely agree	slightly agree	slightly disagree	definitely disagree
9. He finds it hard to make new friends.	definitely agree	slightly agree	slightly disagree	definitely disagree

Appendix IV

Empathy Quotient (EQ-40)

Below is a list of statements. Please read each statement very carefully and rate how strongly you agree or disagree with it by circling your answer. There are no right or wrong answers, or trick questions.

YOU ARE TO ANSWER EVERY QUESTION.

E1.	I would be very upset if I couldn't listen to music every day.	strongly agree	slightly agree	slightly disagree	strongly disagree
E2.	I prefer to speak to my friends on the phone rather than write letters to them.	strongly agree	slightly agree	slightly disagree	strongly disagree
E3.	I have no desire to travel to different parts of the world.	strongly agree	slightly agree	slightly disagree	strongly disagree
E4.	I prefer to read than to dance.	strongly agree	slightly agree	slightly disagree	strongly disagree

1.	I can easily tell if someone else wants to enter a conversation.	strongly agree	slightly agree	slightly disagree	strongly disagree
2.	I find it difficult to explain to others things that I understand easily, when they don't understand it first time.	strongly agree	slightly agree	slightly disagree	strongly disagree
3.	I really enjoy caring for other people.	strongly agree	slightly agree	slightly disagree	strongly disagree
4.	I find it hard to know what to do in a social situation.	strongly agree	slightly agree	slightly disagree	strongly disagree
5.	People often tell me that I went too far in driving my point home in a discussion.	strongly agree	slightly agree	slightly disagree	strongly disagree
6.	It doesn't bother me too much if I am late meeting a friend.	strongly agree	slightly agree	slightly disagree	strongly disagree
7.	Friendships and relationships are just too difficult, so I tend not to bother with them.	strongly agree	slightly agree	slightly disagree	strongly disagree
8.	I often find it difficult to judge if something is rude or polite.	strongly agree	slightly agree	slightly disagree	strongly disagree
9.	In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	strongly agree	slightly agree	slightly disagree	strongly disagree

10.	When I was a child, I enjoyed cutting up worms to see what would happen.	strongly agree	slightly agree	slightly disagree	strongly disagree
11.	I can pick up quickly if someone says one thing but means another.	strongly agree	slightly agree	slightly disagree	strongly disagree
12.	It is hard for me to see why some things upset people so much.	strongly agree	slightly agree	slightly disagree	strongly disagree
13.	I find it easy to put myself in somebody else's shoes.	strongly agree	slightly agree	slightly disagree	strongly disagree
14.	I am good at predicting how someone will feel.	strongly agree	slightly agree	slightly disagree	strongly disagree
15.	I am quick to spot when someone in a group is feeling awkward or uncomfortable.	strongly agree	slightly agree	slightly disagree	strongly disagree
16.	If I say something that someone else is offended by, I think that that's their problem, not mine.	strongly agree	slightly agree	slightly disagree	strongly disagree
17.	If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.	strongly agree	slightly agree	slightly disagree	strongly disagree
18.	I can't always see why someone should have felt offended by a remark.	strongly agree	slightly agree	slightly disagree	strongly disagree
19.	Seeing people cry doesn't really upset me.	strongly agree	slightly agree	slightly disagree	strongly disagree

20.	I am very blunt, which some people take to be rudeness, even though this is unintentional.	strongly agree	slightly agree	slightly disagree	strongly disagree
21.	I don't tend to find social situations confusing.	strongly agree	slightly agree	slightly disagree	strongly disagree
22.	Other people tell me I am good at understanding how they are feeling and what they are thinking.	strongly agree	slightly agree	slightly disagree	strongly disagree
23.	When I talk to people, I tend to talk about their experiences rather than my own.	strongly agree	slightly agree	slightly disagree	strongly disagree
24.	It upsets me to see an animal in pain.	strongly agree	slightly agree	slightly disagree	strongly disagree
25.	I am able to make decisions without being influenced by people's feelings.	strongly agree	slightly agree	slightly disagree	strongly disagree
26.	I can easily tell if someone else is interested or bored with what I am saying.	strongly agree	slightly agree	slightly disagree	strongly disagree
27.	I get upset if I see people suffering on news programmes.	strongly agree	slightly agree	slightly disagree	strongly disagree
28.	Friends usually talk to me about their problems as they say that I am very understanding.	strongly agree	slightly agree	slightly disagree	strongly disagree

29.	I can sense if I am intruding, even if the other person doesn't tell me.	strongly agree	slightly agree	slightly disagree	strongly disagree
30.	People sometimes tell me that I have gone too far with teasing.	strongly agree	slightly agree	slightly disagree	strongly disagree
31.	Other people often say that I am insensitive, though I don't always see why.	strongly agree	slightly agree	slightly disagree	strongly disagree
32.	If I see a stranger in a group, I think that it is up to them to make an effort to join in.	strongly agree	slightly agree	slightly disagree	strongly disagree
33.	I usually stay emotionally detached when watching a film.	strongly agree	slightly agree	slightly disagree	strongly disagree
34.	I can tune into how someone else feels rapidly and intuitively.	strongly agree	slightly agree	slightly disagree	strongly disagree
35.	I can easily work out what another person might want to talk about.	strongly agree	slightly agree	slightly disagree	strongly disagree
36.	I can tell if someone is masking their true emotion.	strongly agree	slightly agree	slightly disagree	strongly disagree
37.	I don't consciously work out the rules of social situations.	strongly agree	slightly agree	slightly disagree	strongly disagree
38.	I am good at predicting what someone will do.	strongly agree	slightly agree	slightly disagree	strongly disagree

39.	I tend to get emotionally involved with a friend's problems.	strongly agree	slightly agree	slightly disagree	strongly disagree
40.	I can usually appreciate the other person's viewpoint, even if I don't agree with it.	strongly agree	slightly agree	slightly disagree	strongly disagree

Appendix V

Victim Empathy Scale – Adapted (VESA) for sexual offenders only.

I would like to think about the sexual offence that you have committed. Write down your victim’s name in the blanks below before you answer them. You are to use the SAME NAMED victim for all the questions.

Example: If Sally is the name of my victim,

E1.	Do you think that <u>Sally (name of my victim)</u> enjoyed what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
E2.	Do you think that <u>Sally (name of my victim)</u> thought you were sexy?	Yes, very much	Yes, mostly	No, not much	No, not at all
E3.	Do you think that _____ took it as a game?	Yes, very much	Yes, mostly	No, not much	No, not at all
E4.	Do you think that _____ had shown you that they didn’t mind?	Yes, very much	Yes, mostly	No, not much	No, not at all

1.	Do you think that _____ enjoyed what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
2.	Do you think that _____ thought you were sexy?	Yes, very much	Yes, mostly	No, not much	No, not at all
3.	Do you think that _____ took it as a game?	Yes, very much	Yes, mostly	No, not much	No, not at all
4.	Do you think that _____ had shown you that they didn't mind?	Yes, very much	Yes, mostly	No, not much	No, not at all
5.	Do you think that _____ could have stopped this from happening if they wanted to?	Yes, very much	Yes, mostly	No, not much	No, not at all
6.	Do you think that _____ was turned on by you?	Yes, very much	Yes, mostly	No, not much	No, not at all
7.	Do you think that _____ wanted things to go further?	Yes, very much	Yes, mostly	No, not much	No, not at all
8.	Do you think that _____ was in charge of what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
9.	Do you think that _____ felt good about what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

10.	Do you think that _____ felt okay in the situation?	Yes, very much	Yes, mostly	No, not much	No, not at all
11.	Do you think that _____ was secretly excited by this?	Yes, very much	Yes, mostly	No, not much	No, not at all
12.	Do you think that _____ had nice sexy thoughts about this afterwards?	Yes, very much	Yes, mostly	No, not much	No, not at all
13.	Do you think that _____ felt guilty about how they had behaved?	Yes, very much	Yes, mostly	No, not much	No, not at all
14.	Do you think that _____ was afraid?	Yes, very much	Yes, mostly	No, not much	No, not at all
15.	Do you think that _____ would keep thinking about what had happened in the near future?	Yes, very much	Yes, mostly	No, not much	No, not at all
16.	Do you think that _____ would hope that it might happen again?	Yes, very much	Yes, mostly	No, not much	No, not at all
17.	Did _____ feel sorry for themselves afterwards?	Yes, very much	Yes, mostly	No, not much	No, not at all
18.	Did _____ feel sorry for you over what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

19.	Do you think that _____ had led you on?	Yes, very much	Yes, mostly	No, not much	No, not at all
20.	Do you think that _____ felt angry about what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
21.	Do you think that _____ had experienced something like that in the past?	Yes, very much	Yes, mostly	No, not much	No, not at all
22.	Do you think that _____ felt picked-on/harassed by what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
23.	Do you think that _____ would worry that someone might find out what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
24.	Do you think that _____ would like to do it again if they had the chance?	Yes, very much	Yes, mostly	No, not much	No, not at all
25.	Do you think that _____ had done more sexual things than other (children/women/men) their own age?	Yes, very much	Yes, mostly	No, not much	No, not at all
26.	Do you think that _____ had been led on by you?	Yes, very much	Yes, mostly	No, not much	No, not at all

27.	Do you think that _____ wasn't sure what their feelings were?	Yes, very much	Yes, mostly	No, not much	No, not at all
28.	Do you think that _____ felt dirty inside of themselves?	Yes, very much	Yes, mostly	No, not much	No, not at all
29.	Do you think that _____ is able to forget about it?	Yes, very much	Yes, mostly	No, not much	No, not at all
30.	Do you think that _____ was harmed by what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

Appendix VI

Victim Empathy Scale – Adapted (VESA), additional vignettes.

Vignette A (non-sexual offence victim)

Please read through the short paragraph and answer the questions below.

A 20-year-old man called James was driving too fast along the road. He had been drinking in the pub. He drove up onto the pavement and hit a girl named Jane with his car.

1.	Do you think that Jane enjoyed what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
2.	Do you think that Jane thought James was nice?	Yes, very much	Yes, mostly	No, not much	No, not at all
3.	Do you think that Jane took it as a game?	Yes, very much	Yes, mostly	No, not much	No, not at all
4.	Do you think that Jane would tell James that she didn't mind?	Yes, very much	Yes, mostly	No, not much	No, not at all
5.	Do you think that Jane could have stopped this happening if she wanted to?	Yes, very much	Yes, mostly	No, not much	No, not at all
6.	Do you think that Jane would like James?	Yes, very much	Yes, mostly	No, not much	No, not at all
7.	Do you think that Jane would want to get along with James further?	Yes, very much	Yes, mostly	No, not much	No, not at all
8.	Do you think that Jane was in charge of what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

9.	Do you think that Jane felt good about what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
10.	Do you think that Jane felt okay in the situation?	Yes, very much	Yes, mostly	No, not much	No, not at all
11.	Do you think that Jane was secretly happy by this?	Yes, very much	Yes, mostly	No, not much	No, not at all
12.	Do you think that Jane would have nice thoughts about this afterwards?	Yes, very much	Yes, mostly	No, not much	No, not at all
13.	Do you think that Jane felt guilty about her involvement in the accident?	Yes, very much	Yes, mostly	No, not much	No, not at all
14.	Do you think that Jane was afraid?	Yes, very much	Yes, mostly	No, not much	No, not at all
15.	Do you think that Jane would keep thinking about what had happened in the future?	Yes, very much	Yes, mostly	No, not much	No, not at all
16.	Do you think that Jane would hope that it might happen again?	Yes, very much	Yes, mostly	No, not much	No, not at all
17.	Did Jane feel sorry for herself afterwards?	Yes, very much	Yes, mostly	No, not much	No, not at all
18.	Did Jane feel sorry for James over what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
19.	Do you think that Jane had caused the accident?	Yes, very much	Yes, mostly	No, not much	No, not at all
20.	Do you think that Jane	Yes, very much	Yes, mostly	No, not much	No, not at all

	felt angry about what had happened?				
21.	Do you think that Jane had experienced something like that in the past?	Yes, very much	Yes, mostly	No, not much	No, not at all
22.	Do you think that Jane felt picked-on/unfairly treated by what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
23.	Do you think that Jane would feel worried if no one knew what James had done?	Yes, very much	Yes, mostly	No, not much	No, not at all
24.	Do you think that Jane would like to go through it again if she had the chance?	Yes, very much	Yes, mostly	No, not much	No, not at all
25.	Do you think that Jane would do similar things to other (children/women/men)?	Yes, very much	Yes, mostly	No, not much	No, not at all
26.	Do you think it was James' fault for what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
27.	Do you think that Jane would pity James for the accident?	Yes, very much	Yes, mostly	No, not much	No, not at all
28.	Do you think that Jane felt it was James' fault?	Yes, very much	Yes, mostly	No, not much	No, not at all
29.	Do you think Jane was able to forget about	Yes, very much	Yes, mostly	No, not much	No, not at all

	it?				
30.	Do you think Jane was harmed by what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

Vignette B (unknown sexual offence victim)

Please read through the short paragraph and answer the questions below.

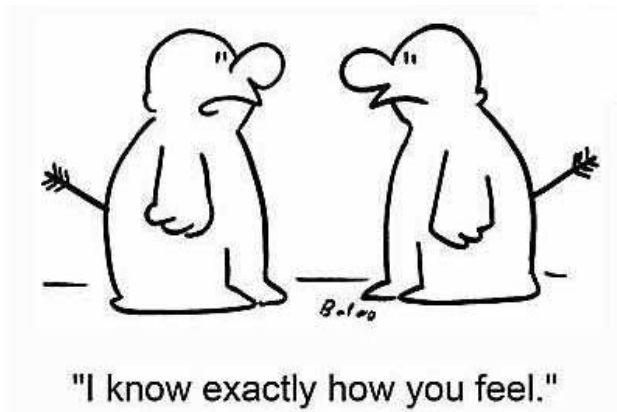
A 20-year-old man named Sam was asked to babysit his neighbour 9-year-old daughter named Tracey. He was alone in the house with her while her parents had gone out for the night. While he was with her, he showed her his penis. He then undressed her and tried to have sex with her.

1.	Do you think that Tracey enjoyed what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
2.	Do you think that Tracey thought Sam was sexy?	Yes, very much	Yes, mostly	No, not much	No, not at all
3.	Do you think that Tracey took it as a game?	Yes, very much	Yes, mostly	No, not much	No, not at all
4.	Do you think that Tracey had shown Sam that she didn't mind?	Yes, very much	Yes, mostly	No, not much	No, not at all
5.	Do you think that Tracey could have stopped this from happening if she wanted to?	Yes, very much	Yes, mostly	No, not much	No, not at all
6.	Do you think that Tracey was turned on by Sam?	Yes, very much	Yes, mostly	No, not much	No, not at all
7.	Do you think that Tracey would want things to go further?	Yes, very much	Yes, mostly	No, not much	No, not at all
8.	Do you think that Tracey was in charge of what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
9.	Do you think that Tracey felt good about what	Yes, very much	Yes, mostly	No, not much	No, not at all

	happened?				
10.	Do you think that Tracey felt okay in the situation?	Yes, very much	Yes, mostly	No, not much	No, not at all
11.	Do you think that Tracey was secretly excited by this?	Yes, very much	Yes, mostly	No, not much	No, not at all
12.	Do you think that Tracey had nice sexy thoughts about this afterwards?	Yes, very much	Yes, mostly	No, not much	No, not at all
13.	Do you think that Tracey felt guilty how they had behaved?	Yes, very much	Yes, mostly	No, not much	No, not at all
14.	Do you think that Tracey was afraid?	Yes, very much	Yes, mostly	No, not much	No, not at all
15.	Do you think that Tracey would keep thinking about what had happened in the near future?	Yes, very much	Yes, mostly	No, not much	No, not at all
16.	Do you think that Tracey would hope that it might happen again?	Yes, very much	Yes, mostly	No, not much	No, not at all
17.	Did Tracey feel sorry for herself afterwards?	Yes, very much	Yes, mostly	No, not much	No, not at all
18.	Did Tracey feel sorry for Sam over what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
19.	Do you think that Tracey had led Sam on?	Yes, very much	Yes, mostly	No, not much	No, not at all
20.	Do you think that Tracey felt angry about what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

21.	Do you think that Tracey had experienced something like that in the past?	Yes, very much	Yes, mostly	No, not much	No, not at all
22.	Do you think that Tracey felt picked-on/harassed by what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
23.	Do you think that Tracey would feel worried if someone finds out what had happened?	Yes, very much	Yes, mostly	No, not much	No, not at all
24.	Do you think that Tracey would like to do it again if she had the chance?	Yes, very much	Yes, mostly	No, not much	No, not at all
25.	Do you think that Tracey had done more sexual things than other (children/women/men) their own age?	Yes, very much	Yes, mostly	No, not much	No, not at all
26.	Do you think that Tracey had been led on by Sam?	Yes, very much	Yes, mostly	No, not much	No, not at all
27.	Do you think that Tracey wasn't sure what her feelings were?	Yes, very much	Yes, mostly	No, not much	No, not at all
28.	Do you think that Tracey felt dirty inside of her?	Yes, very much	Yes, mostly	No, not much	No, not at all
29.	Do you think Tracey was able to forget about it?	Yes, very much	Yes, mostly	No, not much	No, not at all
30.	Do you think Tracey was harmed by what happened?	Yes, very much	Yes, mostly	No, not much	No, not at all

Poster for recruitment of college and university students



ARE YOU INTERESTED
TO BE PART OF A
RESEARCH PROJECT
THAT LOOK AT YOUR
EMPATHY AND
AUTISTIC-LIKE TRAITS?

Always
Unique
Totally
Interesting
Sometimes
Mysterious

I am a post-graduate student working under the supervision of Professor David Daley, Psychological Intervention and Behaviour Change at the University of Nottingham. I am currently doing a research on empathy (i.e., ability to understand other person's feeling) and autistic-like traits (i.e., difficulty in forming relationships and understanding social cues of others) in adolescents.

I will require **male** participants, aged 16 to 21, who have **no** criminal record or mental health issues, to take part in an online questionnaire. The online questionnaire will take about 20 minutes. If you are interested in taking part, kindly take a quick scan of the QR code or go to [this link](https://nottingham.onlinesurveys.ac.uk/autistic-like-traits-and-empathy):
<https://nottingham.onlinesurveys.ac.uk/autistic-like-traits-and-empathy>

If you have further questions, feel free to contact Ken Ang by email, msx1ta@nottingham.ac.uk

YOUR HELP IS MUCH APPRECIATED!



Ethics Application

(Total of 7 pages, including this page)



Application form

Faculty of Medicine & Health Sciences (FHMS) Research Ethics Committee

Application for approval of all studies involving **Healthy Human Volunteers only conducted by Staff and Students of the University of Nottingham**

Please complete in typewritten form one application form, one detailed study proposal(template attached, consent form (template attached) and subject's information sheet (template attached), and supply 1 one signed hard copy and e-mail 1 copy as pdf attachments.

1 **Title of Project:**

An exploratory study on autistic-like traits and empathy deficits in male sexual offenders and adolescents.

Short title: Autistic-like traits, empathy deficits and sexual offending

2 **Names, Qualifications, Job Title, Work Address, telephone and email of Researchers:**

Chief Academic/Supervisor:

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Other key researchers/collaborators:

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3 **Type of Project:**

Masters project
Study involving vulnerable adults

4a Summary of Experimental Protocol - Please give details below (no longer than this side of A4) under the following headings: - 1. Background. 2. Aims (to include hypothesis to be tested), 3. Experimental protocol and methods, 4. Measurable end points/statistical power of the study. 5. Key references. This section must be completed. This is in addition to a more detailed project proposal/protocol which should be attached to this application. Please use 10pt typeface.

Background: Current literature has widely suggested a relationship between an individual's empathy deficits and offending behaviours (Jolliffe & Farrington, 2004). Empathy deficits, the inability to put oneself in the role of others, take their perspectives, and understand their thoughts, behaviours and feelings are postulated to heighten one's risk in committing antisocial acts towards others. Pertinent to the sexual offending population, studies have also revealed that sexual offenders showed more deficits in empathy than non-sexual and non-offenders (Fernandez & Marshall, 2003).

Investigating the characteristic of sexual offenders, this group of population seemed to share similar traits with people diagnosed with Autism Spectrum Disorder (ASD); they are marked with impairments in communication and social interaction, and are likely to misinterpret others' social cues, which put them at risk of acting out anti-socially (De La Cuesta, 2010). Children diagnosed with ASD or had ASD symptoms but were not officially diagnosed, were found to be significantly poor in recognizing and comprehending others' feelings. This lack of empathy was also found to possibly mediate children's anti-social behaviours and conduct problem such as cruelty to animals (Pasalich et al., 2014).

Lastly, in a pilot study by Sutton et al (2012), results had shown that 22 out of 37 male adolescent sexual offenders (60%) in an institution met the diagnostic criteria for ASD but were undiagnosed prior to their sentencing. These studies therefore warrant the attention of a possible association of ASD (or autistic-like traits), empathy deficits and sexual offending.

Aims: This paper aims to first add further evidence to Sutton et al (2012) study on the prevalence of autistic-like traits in sexual offending population. With studies showing that empathy could be conceptualized as generalized and victim-specific types for this specific group of offenders (Fernandez & Marshall, 2003; Hockley & Langdon, 2015), this current paper could hence be a pilot study to investigate the possible association between autistic-like traits and the differentiated forms of empathy. The **first objective** is to measure the level of autistic-like traits in a population of male adolescent sexual offenders. It is hypothesized that male adolescent sexual offenders have moderate to high autistic-like traits as compared to male adolescent non-offenders (controls). **Second objective** of the study is to compare the various empathy deficits, i.e., general empathy, generalized victim empathy, sexual victim and own victim empathy between sexual offenders and non-offenders. The former group should show greater deficits in sexual victim and own victim empathy. The **third objective** of the study is to investigate whether there is a moderation effect of autistic-like traits on empathy deficits of sexual and non-offenders.

Experimental protocol and methods: A between and within groups design will be utilised. Both sexual offenders and non-offenders will be asked to complete a series of questionnaires and results will eventually be compared. Quantitative analysis of data will be adopted.

Measurable end points/statistical power of study: Scores on the various questionnaires will be tabulated for both non-offending and sexual offending population. A minimum of 30 non-offenders and 30 sexual offenders are targeted for this study, bearing in mind that sexual offenders is a unique minority group in the general population. However, given that this is an exploratory and unique study, there is insufficient information to perform a power calculation. Most of the existing related studies do have a sample size of approximately 30 participants.

Key references:

- De La Cuesta, G. (2010). A selective review of offending behaviour in individuals with autism spectrum disorders. *Journal of Learning Disabilities and Offending Behaviour*, 1(2), 47-58.
- Fernandez, Y. M., & Marshall, W. L. (2003). Victim empathy, social self-esteem, and psychopathy in rapists. *Sexual Abuse: A Journal of Research and Treatment*, 15(1), 11-26.
- Jolliffe, D., & Farrington, D. P. (2004). Empathy and offending: A systematic review and meta-analysis. *Aggression and Violent Behavior*, 9(5), 441-476.
- Pasalich, D. S., Dadds, M. R., & Hawes, D. J. (2014). Cognitive and affective empathy in children with conduct problems: Additive and interactive effects of callous-unemotional traits and autism spectrum disorders symptoms. *Psychiatry Research*, 219(3), 625-630.

4b Lay Summary of project (in lay words) :(maximum 200 words) **Summaries which include language which is too technical for lay members of the Committee will be rejected.**

The study aims to measure the level of autistic-like traits (i.e., difficulty forming relationships with others, understanding and responding to social cues) and empathy levels (i.e., ability to understand other person's feeling) in both male adolescent sexual offenders and non-offenders. Sexual offenders are hypothesized to have higher autistic-like traits and lower empathy levels than non-offenders. Furthermore, the study would also investigate whether autistic-like traits moderate individuals' empathy levels (i.e., the higher the autistic-like traits an individual possesses, the lower the individual's empathy level would be, and therefore increases his vulnerability to offend or act in an antisocial manner). Results from this study could thus provide more evidence on the relationships of the different variables, and intervention/therapy programme could eventually be tailored to assist offenders with higher autistic-like traits in improving their empathy awareness.

5 Duration of Study:

Proposed starting date: 1 January 2016

Proposed finishing date: 1 October 2016

6 Location of study:

Youth Offending Teams and Probation Service of United Kingdom.
Sixth form colleges and universities in United Kingdom.

7 Description and number of volunteers to be studied:

Researchers will aim to recruit a minimum of 30 non-offenders and 30 sexual offenders.

8 Will written consent be obtained from all volunteers? Yes/No

Please give the name, status and relevant qualifications of the person who will give a verbal explanation and obtain consent

Ang Lip Tat Ken

Current Masters student in MSc Forensic and Criminological Psychology by Research School of Medicine, Division of Psychiatry and Applied Psychology, University of Nottingham
B.Soc Sci in Psychology, National University of Singapore

9 Will a disturbance allowance be offered? Yes/No

10 Will a medical supervisor be present: Yes/No

11a Does the study involve the exposure of the patient to radioactive materials? ~~Yes/No~~

11b Does the study involve the exposure of the patient to X-rays ? Yes/No

12 Will participant's General Practitioners be told about the study? This would be regarded as essential if the study includes consumption of drugs or novel chemical entities or if you are recommending that the volunteer should see their GP as a result of the study.

Yes/No

If no please justify:

This study does not involve clinical trial or any invasive procedures.

13a 1. If the procedure involves any intervention or treatment (blood sampling, biopsy , i.v injections, manipulation etc) does the practitioner performing this intervention or treatment has personal profession negligence insurance

Yes/No

This study does not involve clinical trial or any invasive methods.

2. If the procedure involves new drug, formulation or device, will full insurance cover be provided by the sponsoring drug firm?

Yes/No

This study does not involve clinical trial or any invasive procedures.

13b FUNDING

Will there be any material benefits from the study for the Department or individual investigator? (E.g. equipment, research salaries, consumables etc)

Yes/No

13c Trust R&D

Does the study involve any staff who holds a contract with the hospital trust? (This does not include investigators with an honorary contract with the NHS but does include staff whose salary is provided by the NHS e.g. Nurse, radiographer, physiotherapist)

Yes/No

Will the study use any space/facilities/ resources belonging to the hospital trust? (e.g. X-ray, pathology, blood tests other than those used to screen volunteers).

Yes/No

If you answer yes to both of the above questions please complete and submit the online QMC Trust R&D form available at the following links:

<http://intranet/sQMCInfo/Divisions/Others/R&D/index.htm> or
<http://www.qmc.nhs.uk/research/index.htm>.

14a Drugs or other substances to be administered (including placebo and comparators)

Not applicable. This study does not involve clinical trial or any invasive procedures.

14b Will any drug used be stored in the Pharmacy and dispensed to a prescription written in red?

Yes/No

If No, please explain why:

This study does not involve clinical trial or any invasive procedures.

15 Does the project involve painful/dangerous or invasive procedures on volunteers?

Yes/No

16 Will blood samples or other specimens be required?

Yes/No

17 How will the subjects be chosen? Please specify what criteria will be used and which groups you wish to target.

For the recruitment of male adolescent sexual offenders, Youth Offending Teams (YOTs) and Probation Service will be approached. Offenders who have a history of sexual offending will be recruited. For non-offenders, students from the sixth form colleges and universities will be the primary targets for recruitment. Self-disclosure will be relied upon for their non-offending histories. All participants are to be of ages 16 to 21 in this study.

18 Describe how possible participants will be approached?

YOT and Probation Service will be approached through email or phone contact. Point of Contact (PoC) of the respective agencies will be briefed about the study. If the agencies agree for researcher to conduct the study, further arrangement will be made for data collection from the male adolescent sexual offenders at the various agencies.

For the recruitment of non-offending population, the college and university's digital research recruitment notice board will be utilised to reach out to prospective participants. An online version of the questionnaire will be drafted to facilitate data collection over the internet.

****If your study is community-based or epidemiological study please answer the following questions (19-21)**

19 What sources of information will be included? (Tick any that apply)

Criminal records of the male adolescent sexual offenders might be needed for verification.

****Please submit a copy of your proposed questionnaire if you are a student please make sure your supervisor has reviewed and approved it.**

20 Whose permission will be sought to access this information (e.g. GP, consultant)?

Permission from the manager or PoC of the YOT and Probation Service will be sought.

21 For interview surveys only:

Not applicable.

22 What ethical problems do you foresee in this project?

No real ethical challenges over and above those relevant to every study such as confidentiality and consent etc.

DECLARATION: I will inform the Medical School Ethics Committee as soon as I hear the outcome of any application for funding for the proposed project and/or if there are any significant changes to this proposal. I have read the notes to the investigators and clearly understand my obligations as to the rights, welfare and dignity of the subjects to be studied, particularly with regard to the giving of information and the obtaining of consent.



Signature of Lead Investigator:

Date: 11.12.15

****Nb If you are student your supervisor must sign this form otherwise it will be rejected**

Name and e-mail address for correspondence with applicant:

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MSc student
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7th March 2016

Ang Lip Tat Ken
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Institute of Mental Health
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Jubilee Campus
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Wollaton Road
NG8 1BB

Dear Ang Lip Tat Ken

Ethics Reference No: L18012016 SoM PAP– **please always quote**

Study Title: An exploratory study on autistic-like traits and empathy deficits in male sexual offenders and adolescents.

Short Title: Autistic-like traits, empathy deficits and sexual offending

Chief Investigator/Academic Supervisors: Professor David Daley, Psychological Intervention and Behaviour Change, Dr Shihning Chou, Deputy Director of Centre for Forensic & Family Psychology, Psychiatry and Applied Psychology, School of Medicine.

Lead Investigator/student: Ang Lip Tat Ken, MSc Forensic and Criminological Psychology Student, Psychiatry and Applied Psychology, School of Medicine.

Duration of Study: 01/01/2016 – 01/10/2016

No of Subjects: 60 (16-21)

Thank you for your letter dated 3rd March 2016 responding to the comments made by the Committee and the following documents were received:

Autistic-like traits, empathy deficits and sexual offending:

- Ethics Amendments Guide dated 03/03/2016
- FMHS REC Application Form, version 1.2 11.12.2015
- Dissertation Protocol version 2.0, 01.03.2016
- Appendix I Demographic information
- Appendix II Adult Autism Spectrum Quotient Short (AQ-Short)
- Appendix III Demographic and AQ-10 for caseworkers
- Appendix IV Empathy Quotient EQ-40
- Appendix V Victim Empathy Scale – adapted VESA for sexual offenders only.
- Appendix VI Victim Empathy Scale – Adapted VESA, additional vignettes.
- Appendix VII Poster for Recruitment of College and University Students
- Volunteer's Information Sheet - College and University Students v2.0, 01.03.2016
- Volunteer's Information Sheet – Youth sexual offenders v2.0, 01.03.2016
- Volunteer's Information Sheet – caseworker v2.0, 01.03.2016
- Volunteer's Consent Form version 2.0, 01.03.201

These have been reviewed and are satisfactory and the study has been given a favourable opinion.



A favourable opinion is given on the understanding that the condition set out below are followed:

1. Please submit a copy of an approval letter from NOMS and make any recommended changes and let us know what these are.
2. Please submit the link to the online survey for the College student cohort when this is ready for us to review.
3. You must follow the protocol agreed and inform the Committee of any changes using a notification of amendment form (please request a form).
4. You must notify the Chair of any serious or unexpected event.
5. This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be performed on the study which may arise in the process of publication and peer review.
6. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee



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4th April 2016

Ang Lip Tat Ken
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Jubilee Campus
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Wollaton Road
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Dear Ang Lip Tat Ken

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Lead Investigator/student: Ang Lip Tat Ken, MSc Forensic and Criminological Psychology Student, Psychiatry and Applied Psychology, School of Medicine.

Duration of Study: 01/01/2016 – 01/10/2016

No of Subjects: 60 (11-25 years).

Thank you for your letter dated 8th March 2016 notifying the Committee of amendment no 1: 8th March 2016 and the following documents were received:

Autistic-like traits, empathy deficits and sexual offending:

- Notice of Amendment no 1: 08 March 2016.
- Volunteer's Information Sheet - College and University Students v3.0, 08.03.2016
- Volunteer's Information Sheet – Youth sexual offenders v3.0, 08.03.2016
- Volunteer's Information Sheet – caseworkers v3.0, 08.03.2016
- Volunteer's Information Sheet – parents of 11-16 year old offenders, version 3.0, 08.03.2016
- Volunteer Information Sheet – parents of School Children 11-16 year olds v3.0, 08.03.2016
- Volunteer's Consent Form – Parent of 11-16 year olds version 3.0, 01.03.2016

These have been reviewed and are satisfactory and the study amendment no 1: 08 March 2016 has been given a favourable opinion.

A favourable opinion is given on the understanding that the condition set out below are followed:

1. Please submit a copy of an approval letter from NOMS and make any recommended changes and let us know what these are.



2. Please submit the link to the online survey for the College student cohort when this is ready for us to review.
3. You must follow the protocol agreed and inform the Committee of any changes using a notification of amendment form (please request a form).
4. You must notify the Chair of any serious or unexpected event.
5. This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be performed on the study which may arise in the process of publication and peer review.
6. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee



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10th May 2016

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NG8 1BB

Dear Ang Lip Tat Ken

Ethics Reference No: L18012016 SoM PAP– **please always quote**

Study Title: An exploratory study on autistic-like traits and empathy deficits in male offenders and adolescents.

Short Title: Autistic-like traits, empathy deficits and offending

Chief Investigator/Academic Supervisors: Professor David Daley, Psychological Intervention and Behaviour Change, Dr Shihning Chou, Deputy Director of Centre for Forensic & Family Psychology, Psychiatry and Applied Psychology, School of Medicine.

Lead Investigator/student: Ang Lip Tat Ken, MSc Forensic and Criminological Psychology Student, Psychiatry and Applied Psychology, School of Medicine.

Duration of Study: 01/01/2016 – 01/10/2016

No of Subjects: 60 (11-25 years).

Thank you for your letter dated 8th March 2016 notifying the Committee of amendment no 2: 29th April 2016 as follows:

- Change of title to have the words 'sexual offending' changed to 'offending' in order to widen pool of participants to include a variety of different offences.
- To explore other social care and voluntary organisations that might be working with these groups to broaden recruitment.

and the following documents were received:

Autistic-like traits, empathy deficits and offending:

- Notice of Amendment no 2: 29 April 2016.
- Volunteer's Information Sheet – non offenders v4.0, 29.04.2016
- Volunteer's Information Sheet – offenders v4.0, 29.04.2016
- Volunteer's Information Sheet – caseworkers v4.0, 29.04.2016
- Volunteer's Information Sheet – parents non offenders, v4.0, 29.04.2016
- Volunteer Information Sheet – parents offenders v4.0, 29.04.2016

These have been reviewed and are satisfactory and the study amendment no 2: 29 April 2016 has been given a favourable opinion.



A favourable opinion is given on the understanding that the condition set out below are followed:

1. You must follow the protocol agreed and inform the Committee of any changes using a notification of amendment form (please request a form).
2. You must notify the Chair of any serious or unexpected event.
3. This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be performed on the study which may arise in the process of publication and peer review.
4. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

An exploratory study of autistic-like traits and empathy deficits in male offenders
and adolescents

Ang Lip Tat Ken

University of Nottingham

Abstract

Purpose

This present study seeks to investigate the relationship between autistic-like traits and empathy deficits among male adolescent offenders and non-offenders.

Methods

59 non-offenders and 11 offenders, aged 16-25 with no official diagnosis of autism, were recruited to complete self-reported questionnaires that measured their level of autistic-like traits, general empathy, and empathy towards specific victims in hypothetical scenarios. Due to the limited sample size, non-parametric tests were favoured to compare the scores on the different measures between offenders and non-offenders.

Results

Offenders were found to have higher levels of autistic-like traits than non-offenders. However, this significance was only marginal. Offenders scored significantly lower in their general empathy scores than non-offenders. No difference was found between both groups' empathic level towards specific victims in the hypothetical scenarios. In addition, regression analysis revealed that both offending status and autistic-like traits were significant predictors of general empathy scores. However, there was no interaction effect between autistic-like traits and offending status on participants' empathy.

Conclusions

Offenders were generally less empathic than non-offenders. Moreover, level of autistic-like traits appeared to significantly influence one's ability to recognize and understand others' feelings and perspectives. Due to the study's limited sample size, generalisability of the results is an issue. Further research is recommended to determine if different sub-groups of offenders (i.e., non-sexual and sexual offenders) differ in autistic-like traits and empathy levels; and if empathy is a causal risk factor of one's offending.

An exploratory study of autistic-like traits and empathy deficits in male offenders and adolescents

Current literature has widely suggested a relationship between an individual's empathy deficits and offending behaviours (Day, Casey & Gerace, 2010; Jolliffe & Farrington, 2004, 2007; Varker, Devilly, Ward & Beech, 2008). Empathy deficits, the inability to put oneself in the role of others, take their perspectives, and understand their thoughts, behaviours and feelings were postulated to heighten one's risk in committing antisocial acts towards others (Jolliffe & Farrington, 2004, 2007). Therefore, interventions to increase offenders' empathy towards their victims (e.g., hypothetical apology letters) have been incorporated in many contemporary offender treatment programmes (Day et al., 2010).

However, efficacy of such victim empathy intervention is debatable due to the differing conceptualisation and construct of empathy itself (Craig, Browne & Beech, 2008; Day et al., 2010). First theorized by Davis (1983), empathy was viewed as a multi-dimensional construct, comprising several factors such as perspective taking, the ability to put oneself into the feelings of another imaginary person, having the emotions for another person, and personal feelings of distress. On the other hand, empathy had also shown to modestly associate with the Theory of Mind (ToM), which Premack and Woodruff (1978) construed as an individual's ability to attribute thoughts, beliefs and feelings to others. This suggested a possible overlap between the two. Notwithstanding, more recent literature have seemed to reach a consensus that both affective (i.e., how individuals feel about others) and cognitive (i.e., how individuals recognize and

perceive others' feelings) aspects underlie the general concept of empathy (Hockley & Langdon, 2015).

While both affective and cognitive aspects of empathy are relevant in explaining one's propensity to offend as mentioned, studies looking into the different groups of offending population (e.g., non-sexual and sexual offenders) have indicated that empathy could also be further differentiated into general and victim-specific types (Fernandez & Marshall, 2003; Fernandez, Marshall, Lightbody & Sullivan, 1999). In the study by Fernandez and Marshall (2003), individuals convicted of rape shared the same degree of empathy as non-sexual offenders towards a 'female who was sexually assaulted by another man' in a vignette, but displayed greater deficits in empathy towards their 'own victims'. Interestingly, these sexual offenders reflected higher empathy scores than non-sexual offenders towards a 'woman who was injured in a car-accident' scenario. Thus, within the offending population, sexual offenders presented some unique characteristics and marked differences from non-sexual offenders (Seto & Lalumiere, 2010).

Autism Spectrum Disorder and offending

In addition, there has been increasing interest by researchers to examine the link between empathy and offending among individuals with Autism Spectrum Disorders (ASD; De La Cuesta, 2010; Mouridsen, 2012; Sevelever, Roth & Gillis, 2013; Sutton et al., 2012). Marked with impairments in communication and social interaction, difficulties in learning due to poorer cognitive abilities, and often engaging in distinct and repetitive patterns of interests and behaviours (American Psychiatric Association, 2013; Centers for Disease Control and Prevention, 2015), it was postulated by that ASD individuals' lack of knowledge and misinterpretation of others' social cues might put them at

risk of antisocial behaviours (Howlin, 1997). Furthermore, obsessions, or circumscribed interests, could also lead ASD individuals to offend in relation to their obsessions (Woodbury-Smith et al., 2010). To illustrate with reference to sexual offending, an ASD individual might not comprehend a female's behaviours (e.g., rejection), and continues to seek her attention due to his interest and fascination in her. This might lead to stalking (a non-contact offence) or could even escalate to a contact offence such as molestation.

Studies examining the prevalence of offenders diagnosed with ASD however revealed varying results due to methodological differences (De La Cuesta, 2010; Mouridsen, 2012). Solely using the diagnostic criteria for Asperger's syndrome (AS), Scragg and Shah (1994) found that six out of 392 patients in Broadmoor psychiatric hospital (1.5%) met the diagnostic criteria. In addition, when three borderline cases were considered, its prevalence increased to 2.3%, significantly higher than the normative rate of 0.55% for AS in the general population. In another study by Kumagami and Matsuura (2009), a high prevalence (1.3%-6.7%) of Pervasive Development Disorder (which includes autism, AS, and pervasive developmental disorder not otherwise specified) was reported among juvenile offenders across four family courts in Japan. Results from both studies hence suggested an over-representation of individuals with ASD in the criminal justice system, particularly in highly secured or specialised institutions.

More pertinent to the sexual offending population, ASD symptoms were significantly higher in suspected male juvenile sexual offenders than non-offenders; and among the sub-groups of these suspected sexual offenders, child molesters reflected higher symptoms of ASD (Mouridsen, 2012). In a pilot study by Sutton et al. (2012), results showed that 22 out of 37 male adolescent sexual

offenders (60%) in an institution met the diagnostic criteria for ASD but were undiagnosed prior to their sentencing. These studies therefore warrant the attention of a possible association between autistic traits and sexual offending.

Relationship between ASD and empathy

Lastly, drawing the link between autistic traits and empathy, several studies had examined ASD individuals and their affective and cognitive components of empathy (Grove, Baillie, Allison, Baron-Cohen & Hoekstra, 2015; Lockwood, Bird, Bridge & Viding, 2013; Pasalich, Dadds & Hawes, 2014). Notably, children diagnosed with ASD or who had ASD symptoms but were not officially diagnosed, were found to be significantly poorer in recognizing and comprehending others' feelings (i.e., cognitive empathy). This lack of empathy was said to possibly mediate ASD children's antisocial behaviours and conduct problems such as cruelty to animals (Rogers, Viding, Blair, Frith & Happe, 2006). Building on the prior findings by Rogers and colleagues, Pasalich et al. (2014) went on to establish a moderation effect of ASD symptoms on an individual's callous-unemotional traits (i.e., lack of remorse and limited emotions) and affective empathy, in a group of 134 children who had conduct disorder but did not meet the diagnostic criteria of ASD. A child who scored high on his callous-unemotional traits, coupled with more ASD symptoms, showed greater deficit in his affective empathy scores compared to another child who was similarly high on the callous-unemotional traits but had a significantly fewer ASD symptoms. These results therefore implied that given an individual's low sense of guilt and remorse, the presence of autistic (or autistic-like) traits could further affect the individual's empathic stance towards others and possibly increase his or her risk of antisocial behaviours.

This current study therefore sought to build on existing literature on the associations of autistic traits, empathy deficits and offending behaviours. With studies showing that empathy could be conceptualized as general and victim-specific modalities for offenders, particularly sexual offenders (Fernandez & Marshall, 2003; Hockley & Langdon, 2015), this research proposed to be a pilot study to investigate the association between autistic-like traits and the differentiated forms of empathy within the adolescent offending population (i.e., non-sexual and sexual offenders).

The first objective of the study was to measure the level of autistic-like traits in a population of male adolescent offenders who were not officially diagnosed with ASD. It was hypothesised that male adolescent offenders would demonstrate higher autistic-like traits than non-offenders (controls). Secondly, the study compared the various empathy deficits, i.e., general empathy and victim-specific empathy (towards a non-sexual and sexual victim) between offenders and non-offenders. Within the offending population, this study also attempted to delineate the various empathy levels between non-sexual and sexual offenders. Lastly, this research investigated whether the level of autistic-like traits would moderate the relationship between one's offending status (i.e., non-offenders vs. offenders) and his empathy level.

Method

Participants

A total of 59 adolescent non-offenders and 11 adolescent offenders participated in the study. 35 non-offenders (59.2%) were White-British, 12 (20.4%) were Black, Asian or minority ethnicity (BAME) British, while the remaining 12 (20.4%) were of a different ethnicity not listed (e.g., Asian/Chinese). Within the offending population, 8 (72.7%) were White-British, three (18.2%) were BAME British and the remaining one participant was from the Caribbean. These compositions differed from the last national census conducted in 2011, where 86.0% of the England and Wales population were White-British, 13.0% were BAME British and 1.0% were of other ethnicity (e.g., Arab; Office for National Statistics, 2012).

Measures

Adult Autism Spectrum Quotient-short version (AQ-short). The 28-item AQ-short by Hoekstra et al. (2011) was utilised for the measurement of autistic-like traits (see Appendix I). Reduced from the original 50-item adult Autism Spectrum Quotient (AQ) scale by Baron-Cohen, Wheelwright, Skinner, Martin and Clubley (2001), which was described as a good screening tool for autism and AS for person aged 16 and above (Autism Research Centre, 2015), the shorter version (AQ-Short) showed reasonably high internal consistency (Cronbach's alpha between .77 and .86) and correlation (r between .93 to .95) with the full AQ scale when validated in the general adult population, students and clinical samples (Hoekstra et al., 2011). AQ-Short had also reflected good test accuracy to distinguish individuals with and without AS (area under curve [AUC] was .97). The Cronbach's alpha for this study was .80.

AQ-10. In addition, a 10-item collateral scale, AQ-10, was given to the case managers of the male adolescent offenders to rate the latter's level of autistic-like traits. Initially designed as a supplement to the main AQ scale for parents to rate their young teenager (aged 12 to 15) on their symptoms of autism, AQ-10 was adapted to improve the credibility of offenders' responses on the AQ-Short scale in this study (see Appendix II). One item, 'When s/he was younger, s/he used to enjoy playing games involving pretending with other children' was removed from the AQ-10 as case managers were assumed to have no prior knowledge on this aspect of their clients.

Empathy Quotient (EQ-40). For the measure of the general empathy component of participants, the EQ-40 scale, which taps on the affective and cognitive aspects of empathy, by Baron-Cohen and Wheelwright (2004) was used. The original scale consists of 60 items, of which 40 are associated with EQ and 20 are filler statements. Psychometric properties of the scale were tested against clinical and non-clinical samples in Baron-Cohen and Wheelwright's (2004) study, with good test-retest reliability ($r = .97$) and internal consistency (Cronbach's alpha = .92) reported. For the current study, items associated with EQ (excluding the filler statements) were assessed (see Appendix III). The Cronbach's alpha for EQ-40 in this sample was .90.

Victim Empathy Scale-Adapted (VESA). Lastly, to measure participants' various victim-specific empathy, VESA (Keeling, Rose & Beech, 2007; Langdon, Maxted, Murphy & Group, 2007; Hockley & Langdon, 2015) was adopted. VESA first comprises two vignettes which describe a 'female who was sexually assaulted by another man' and a 'woman who was injured by another man in a car accident'. These two vignettes attempt to differentiate victim empathy into two dimensions, an unknown sexual victim and unknown non-sexual victim

(Hockley & Langdon, 2015; see appendix IV). Sexual offenders were additionally asked to rate a same set of questions with reference to their 'own victim' in the sexual offence that they had committed (see appendix V). This is to investigate sexual offenders' empathy level towards a known sexual victim. Overall, VESA had shown good internal consistency (Cronbach's alpha = .91; Langdon et al., 2007). The Cronbach's alpha for this study was .78.

Procedure

A favourable ethical opinion for this study was granted by the University of Nottingham, Faculty of Medicine and Health Sciences Research Ethics Committee. Male adolescents, aged 11 to 25 with no official diagnosis of ASD, were targeted for the study. Non-offending participants were primarily recruited through various social media (e.g., University of Nottingham research portal and online groups) while offenders were recruited from the Youth Offending Teams (YOTs) of Nottinghamshire Youth Justice Services (YJS) through their case managers. Given that Nottinghamshire YJS works with youths, aged 10 to 17 at the time of their conviction, offenders who participated in the study were generally younger ($M_{\text{age}} = 17.27$, $SD = .65$) than the non-offending population ($M_{\text{age}} = 22.86$, $SD = 2.34$). Attempts were made to recruit participants from sixth-form colleges and older youth offenders under the Probation Services but approvals from respective organisations were not granted. Hence, majority of the non-offenders in this study (49.2%) stated as graduates or undergraduates, 38.9% had obtained a college level achievement, while the remaining 11.9% had secondary level qualification as their highest education level attained. For the offending population, 72.7% expressed to have attained secondary level as their highest educational achievement while 27.3% had primary level qualification.

No participants declared having any major learning disabilities. Two youth offenders however reported to suffer from dyslexia but it did not affect their abilities to complete the series of questionnaire. Participants (all offenders and some non-offenders) who did the pen and paper format of the questionnaire were given opportunity to clarify any queries throughout the whole study (i.e., before, during and after the implementation of questionnaire). The remaining participants (non-offenders) who opted for the online questionnaire were also provided with appropriate feedback channel should they have any queries upon completion. All participants had dutifully responded to all items in the questionnaire (i.e., no missing data was recorded).

Data analysis

Participants' data were entered and analysed using IBM SPSS Statistics Version 22. Descriptive data, together with histograms and P-P plot were generated and plotted to check for normality. Data from the VESA, namely the unknown non-sexual victim (i.e., car accident) scenario ($D(70) = 0.118$ $p < .05$) and the unknown sexual victim scenario ($D(70) = 0.153$, $p < .001$) significantly deviated from normal. Given the limited sample size in the study, transformation of data approach to correct skewed distribution was unsuccessful and non-parametric statistics were utilized as a result. Mann-Witney test was conducted to analyse the comparison between non-offenders and offenders while Wilcoxon test was conducted to analyse within-group comparisons on the VESA.

Results

Male adolescent offenders ($Mdn = 70.00$) reflected marginally significant higher levels of autistic-like traits than non-offenders ($Mdn = 63.00$), $U = 449.50$, $z = 2.02$, $p < .05$, $r = .24$. Notwithstanding, the former ($Mdn_{\text{offenders}} = 27.00$) scored significantly lower than the latter ($Mdn_{\text{non-offenders}} = 39.00$) on general empathy, $U = 135.50$, $z = -3.134$, $p < .01$, $r = -.37$.

For the scores on the VESA, offenders ($Mdn = 75.00$) were not significantly different from their counterparts ($Mdn_{\text{non-offenders}} = 78.00$) in their responses to an unknown victim of a non-sexual crime, $U = 241.50$, $z = -1.34$, $p = .18$, $r = -.16$. However, marginal significant difference between offenders ($Mdn = 76.00$) and non-offenders ($Mdn = 73.00$) on the sexual crime vignette was found, $U = 499.50$, $z = 2.02$, $p < .05$, $r = .24$.

Examining victim-specific empathy solely within the offenders revealed no significant difference in their responses towards the non-sexual victim ($Mdn = 75.00$) and sexual victim ($Mdn = 76.00$), $T = 25.00$, $z = -.26$, $p = .80$, $r = -.08$. Interestingly, non-offenders reflected significant lower empathy levels for the sexual victim ($Mdn = 73.00$) than the non-sexual victim ($Mdn = 78.00$), $T = 217.00$, $z = -4.85$, $p < .001$, $r = -.63$.

Above results are presented in Table 1, together with the mean and standard deviation.

In addition, the case managers' ratings of their clients' (i.e., offenders) autistic-like traits significantly correlated with the latter's performance on the AQ-short measure, $\tau = .69$, 95% BCa CI [.281, .945], $p < .01$. Further examination of the correlations of demographic and study variables revealed that level of autistic-like traits were negatively associated with general empathy scores, $\tau = .61$, 95% BCa CI [-.701, -.503], $p < .001$. The level of highest

educational achievement had also shown a significant positive correlation with general empathy scores, $\tau = .24$, 95% BCa CI [.058, .413], $p < .05$. Results are presented in Table 2.

Hierarchical multiple regression was further conducted to investigate the additive effects of variables (which showed significant correlation with general empathy), namely individual's offending/non-offending status, highest education level attained and level of autistic-like traits, on one's general empathy. Participant's offending status was entered first in the regression model, followed by their education achievement in step 2, scores on AQ-short in step 3, and lastly, the interaction of scores on the AQ-short and offending status to determine whether level of autistic-like traits would moderate the relationship between one's offending status and his general empathy (see Table 3).

Regression analysis showed that both the offending status and autistic-like traits of an individual were significant in predicting one's general empathy. When only offending status was used as a predictor for one's general empathy (i.e., step 1), it accounted for 13% of variability in an individual's EQ scores, $R^2 = .13$, $p < .01$. When an individual's education level was taken into account (step 2), it did not have a significant impact on one's EQ scores, change in $R^2 = .01$, $p = .45$. When AQ-short scores were added into the regression model, autistic-like traits accounted for an additional 46.1% of variability (change in $R^2 = .46$) in an individual's general empathy, $R^2 = .60$, $p < .001$. Lastly, the interaction effect between offending status and autistic-like traits revealed no significant result on one's general empathy, change in $R^2 = .004$, $p = .45$.

Discussion

Several studies thus far had demonstrated the association of ASD, empathy deficits and one's offending behaviour (Jolliffe & Farrington, 2004, 2007; Mouridsen, 2012; Pasalich et al., 2014). Additionally, studies had also suggested that empathy could operate differently for different groups of offenders (Fernandez & Marshall, 2003; Varker et al., 2008). This present study not only sought to build on the current literature on the relationship between autistic traits, empathy and offending, it also proposed to expand the plausibility of differentiated forms of empathy (i.e., general and victim-specific empathy) demonstrated within a male adolescent offending population.

The study's first hypothesis of offenders having higher levels of autistic-like traits than their non-offending counterpart was supported. This finding supported Howlin (1997) and De Le Cuesta's (2010) notions that certain characteristics of an ASD individual might increase his or her vulnerabilities in committing anti-social behaviours. For instance, social naïveté, a characteristic of autism proposed by Howlin (1997), could put an individual in a risky position to be coerced or influenced by others to commit a crime (e.g., theft). De Le Cuesta (2010) also postulated that individuals with ASD symptoms could more likely be targeted by bullies, and this might possibly lead to aggressive retaliation against the bullies. Although the prevalence of autistic-like traits were found to be more pronounced in sexual offenders (Mouridsen 2012; Sutton et al., 2012), result from this study suggested that a fair number of non-sexual offenders could also display symptoms of ASD, given that 9 out of the 11 offenders recruited in this research had committed non-sexual offences. This, however, would require further validation due to the small sample size of the study.

The study's second hypothesis of comparing various empathy deficits (i.e., general and victim-specific empathy) between controls and offenders was partially supported. Male adolescent offenders demonstrated significantly less general empathy than non-offenders. Offenders generally showed lower ability to recognise, feel, and understand others' feelings and perspectives than non-offenders. With regard to victim-specific empathy, there was no significant difference between offenders and non-offenders in their responses to the car accident scenario. Both groups showed similar levels of endorsement in their empathy towards the non-sexual victim in the vignette. Surprisingly, non-offenders were less empathic towards the hypothetical sexual victim than offenders. This result was not expected given a previous related study by Hockley and Langdon (2015), in investigating similar victim-specific empathy deficits between non-offenders and sexual offenders with intellectual disabilities (ID), had shown that controls (i.e., non-offenders with ID) were more empathic than sexual-offenders in this aspect. In addition, subsidiary hypothesis to compare various empathy levels between non-sexual and sexual offenders in the present study could not be ascertained due to insufficient number of sexual offenders.

The study's final hypothesis, where level of autistic-like traits would moderate the relationship between one's offending status and (general) empathy level, was not supported. Varying levels of autistic-like traits did not amplify or attenuate the strength of the relationship between offending status and general empathy; offenders with higher autistic-like traits did not differ significantly from those with lower autistic-like traits in their general empathy scores. This result differed from a significant finding from an earlier study by Pasalich et al. (2014) on a group of children with conduct disorder, in which presence of autistic-like

traits further lowered a child's empathic stance when coupled with the child's high level of callous-unemotional trait. Notwithstanding, the autistic-like traits of male adolescent offenders had proven to be a strong influence in their general empathy towards others in this current study.

Limitations

Several limitations of this study should be taken into consideration for the results discussed. This study was largely constrained by its small sample size. Furthermore, convenience sampling of non-offenders through the University's social media mainly targeted undergraduates or post-graduates, who not only differed from the offenders in terms of education level attained and age, they might also pose an issue of an inaccurate representation of the adolescent population at large. It was also worthwhile to note that education level was not a significant predictor of general empathy (when entered into the regression model) despite its significant correlation with general empathy scores.

With respect to the recruitment of offenders, case managers of the offenders in the YOTs were the first point of contact and an inherent recruitment bias could exist as case managers were likely to identify clients who had fairly reasonable literacy skills for the study due to their tight work schedule and job demands. Consequently, adolescent offenders with more pronounced autistic-like characteristics (i.e., poorer communication skills and signs of learning difficulties) were less likely to be considered as they would take a longer time to respond to the measures. Although offenders in this study were found to show significantly higher level of autistic-like traits than non-offenders, the difference was only marginal. One could contend that offenders indeed do not differ from the general population in terms of autistic-like traits, and it could be only a

specific group (i.e., sexual offenders) who showed significant signs of autism based on past research. More needs to be done in future studies (e.g., recruiting a substantive number of both non-sexual and sexual offenders) to ensure a more representative sample and consequently, improve the generalisability of findings.

In terms of the measures utilised, Hockley and Langdon (2015) cautioned that the construct validity of VESA was still debatable as it might not adequately tap on the affective and cognitive components of empathy like the EQ-40 despite that it had been used in past research, predominantly with sexual offenders (Keeling et al., 2007, Langdon et al., 2007). Non-significant results between offenders and non-offenders on the VESA and significant difference on EQ-40 in this study again questioned VESA's convergent validity. Furthermore, feedback from a couple of non-offenders was that they found it difficult to answer some questions in the VESA due to inadequate information provided in the vignettes. Respondent fatigue could have set in for non-offenders who responded to the online version of the measures, resulting in a marginal difference between their scores and offenders' on the sexual victim vignette which was placed at the end of the whole series of measures. Offenders who completed the questionnaire in pen and paper format administered by the researcher on the other hand, were informed of the number of measures at the start and were given short breaks in between each measure.

Implication of current findings and contribution to literature

Despite the limitations, results from this study had further evidenced the relationship between an individual's general empathy deficit and offending behaviours. In addition, presence of autistic-like traits had demonstrated to be a

good predictor of one's general ability to feel and take the perspectives of others. This therefore highlighted the importance of early intervention for children and young adolescents who display symptoms of ASD. By targeting and addressing autism or autistic-like traits such as improving communication and social skills, encouraging role or pretend play, managing sensory stimuli and regulating one's emotions and anxiety, it could help improve one's ability to recognize social cues, understand and develop a more empathic stance towards others.

With respect to the forensic population, contemporary intervention programmes aimed at increasing offenders' victim empathy would often first discuss the importance of empathy, second, work through a number of scenarios related to the offence to prompt offenders to consider victim's feelings and point of view, and lastly, reinforce learning points through role plays with offenders (Day et al., 2010). With the findings from this study, prioritising communication and social skills training (e.g., learning ways to socialise and live with others in a local authority accommodation for probationers), over and on top of contemporary victim empathy intervention could help to enhance offenders' general empathy. Furthermore, future longitudinal research could also be conducted to determine if empathy is a causal risk factor for offending. The nature of offences (e.g., drug, violent, sexual offence) could again be taken into account to determine whether victim awareness and empathy intervention programmes would benefit specific groups of offenders.

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Table 1

Median, mean and standard deviation across groups for AQ-short, EQ-40 and VESA

	Non-Offenders (n = 59)				Offenders (n = 11)				Mann-Whitney Test (2-tailed)
	Median	Mean	Standard Deviation	No. of participants above cut-off score for AQ and below cut-off score for EQ	Median	Mean	Standard Deviation	No. of participants above cut-off score for AQ and below cut-off score for EQ	
Autism Quotient (AQ-short) ^a	63.00	63.71	9.27	24 (40.7%)	70.00	68.91	8.36	9 (81.8%)	$p = .044$
Empathy Quotient (EQ-40) ^b	39.00	38.10	12.52	13 (22.0%)	27.00	25.64	8.91	7 (63.6%)	$p = .002$
Victim Empathy Scale Adapted (VESA) ^c									
Non-sexual victim	78.00	77.39	4.66	-	75.00	75.73	4.22	-	$p = .179$
Sexual victim	73.00	71.73	6.43	-	76.00	75.36	5.35	-	$p = .043$
Own victim ^d	-	-	-	-	-	-	-	-	

^a Higher scores indicate higher level of autistic-like traits. An individual can have a minimum score of 28 and a maximum of 112. Proposed cut-off score is 65 based Hoekstra et al. (2011) study.

^b Higher scores reflect greater empathy. An individual can have a minimum score of zero and a maximum score of 80. Proposed cut-off score is 30 based on Baron-Cohen and Wheelwright (2004) study.

^c Higher scores reflect greater empathy. An individual can have a minimum score of zero and a maximum score of 84. No proposed-cut off score.

^d Due to the small number of sexual offenders in the study, further data analysis was not carried out.

Table 2

Correlation of study and demographic variables

	AQ-short	EQ-40	VESA (non-sexual victim scenario)	VESA (sexual victim scenario)	Offending status ^a	Age	Highest education level achieved ^b
AQ-short	-	-0.61* $p < .001$ [-.701, -.503]	-0.05 $p = .534$ [-.210, .116]	-0.13 $p = .128$ [-.264, .014]	0.20* $p = .044$ [.017, .361]	0.01 $p = .872$ [-.174, .220]	-0.21* $p = .026$ [-.409, -.016]
EQ-40		-	0.05 $p = .593$ [-.120, .210]	0.09 $p = .283$ [-.053, .244]	-0.31* $p = .002$ [-.441, -.165]	0.15 $p = .095$ [-.058, .317]	0.24* $p = .010$ [.058, .413]
VESA (non-sexual victim scenario)			-	0.11 $p = .186$ [-.035, .281]	-0.14 $p = .179$ [-.305, .059]	0.08 $p = .357$ [-.086, .240]	0.09 $p = .351$ [-.085, .248]
VESA (sexual victim scenario)				-	0.20* $p = .043$ [-.006, .388]	-0.15 $p = .084$ [-.321, .030]	-0.12 $p = .205$ [-.301, .060]
Offending status					-	-0.54* $p < .001$ [-.649, -.372]	-0.57* $p < .001$ [-.649, -.404]
Age						-	0.56* $p < .001$ [.395, .694]
Highest education level achieved							-

Correlation coefficient cited as Kendall's tau, τ , p (2-tailed), with 95% bias corrected and accelerated confidence intervals in [brackets] based on 1000 bootstraps samples. Correlation coefficient with significant p value ($p < .05$) is denoted with *.

^a Offenders were coded as 2 while non-offenders were coded as 1 in the data set.

^b Primary education was coded as 1, secondary as 2, college as 3 and university/tertiary as 4 in the data set.

Table 3

Regression analysis of AQ, offending status, highest education achievement and EQ

Steps/Independent variables	EQ (general empathy)					
	<i>b</i>	Standard Error	β	<i>p</i> (2-tailed)	<i>R</i>	$R^2\Delta$
Step 1						
Constant	50.57 [42.23, 59.59]	4.19		<i>p</i> = .001		
Offending status	-12.47 [-18.91, -6.57]	3.16	-.36	<i>p</i> = .001	.13	.13*
Step 2						
Constant	42.08 [14.65, 69.25]	14.73		<i>p</i> = .008		
Offending status	-9.68 [-21.31, 1.28]	5.74	-.28	<i>p</i> = .084		
Highest education achieved	1.69 [-3.56, 7.07]	2.66	.12	<i>p</i> = .539	.14	.01
Step 3						
Constant	113.72 [86.37, 137.42]	13.24		<i>p</i> = .001		
Offending status	-9.27 [-17.76, -1.81]	3.83	-.27	<i>p</i> = .014		
Highest education achieved	-1.15 [-4.94, 2.75]	1.90	-.08	<i>p</i> = .539		
AQ-short (autistic-like traits)	-0.98 [-1.16, -0.81]	0.09	-.71	<i>p</i> = .001	.60	.46*

Above analysis was conducted with 95% bias corrected and accelerated confidence intervals reported in [brackets]. Both the confidence intervals and standard errors were based on 1000 bootstrap samples.

*Denotes significant $R^2\Delta$, $p < .01$ for step 1, and $p < .001$ for step 3.

Table 3 (continued)

Steps/Independent variables	EQ (general empathy)					
	<i>b</i>	Standard Error	β	<i>p</i> (2-tailed)	<i>R</i>	$R^2\Delta$
Step 4						
Constant	113.70 [85.98, 137.48]	13.41		<i>p</i> = .001		
Offending status	-10.13 [-19.83, -0.34]	4.72	-.29	<i>p</i> = .010		
Highest education achieved	-1.09 [-4.87, 2.95]	1.90	-.08	<i>p</i> = .558		
AQ-short (autistic-like traits)	-0.97 [-1.19, -0.79]	0.12	-.70	<i>p</i> = .001		
Interaction between offending status and AQ-short	0.26 [-0.50, 0.67]	0.52	.07	<i>p</i> = .203	.60	Non-significant

Above analysis was conducted with 95% bias corrected and accelerated confidence intervals reported in [brackets]. Both the confidence intervals and standard errors were based on 1000 bootstrap samples.

Appendix I

28-item Adult Autism Spectrum Quotient short (AQ-Short)

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
1. I prefer to do things with others rather than on my own.				
2. I prefer to do things the same way over and over again. [R]				
3. If I try to imagine something, I find it very easy to create a picture in my mind.				
4. I frequently get so strongly absorbed in one thing that I lose sight of other things. [R]				
5. I usually notice car number plates or similar strings of information. [R]				
6. When I'm reading a story, I can easily imagine what the characters might look like.				
7. I am fascinated by dates. [R]				
8. In a social group, I can easily keep track of several different people's conversations.				
9. I find social situations easy.				
10. I would rather go to a library than a party. [R]				
11. I find making up stories easy.				
12. I find myself drawn more strongly to people than to things.				
13. I am fascinated by numbers. [R]				
14. When I'm reading a story, I find it difficult to work out the characters' intentions. [R]				
15. I find it hard to make new friends. [R]				
16. I notice patterns in things all the time.				
17. It does not upset me if my daily routine is disturbed.				
18. I find it easy to do more than one thing at once.				
19. I enjoy doing things spontaneously.				
20. I find it easy to work out what someone is thinking or feeling				

Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
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just by looking at their face.

- 21.If there is an interruption, I can switch back to what I was doing very quickly.
- 22.I like to collect information about categories of things (e.g. types of car, types of bird, types of train, types of plant, etc.).
[R]
- 23.I find it difficult to imagine what it would be like to be someone else. [R]
- 24.I enjoy social occasions.
- 25.I find it difficult to work out people's intentions. [R]
- 26.New situations make me anxious. [R]
- 27.I enjoy meeting new people.
- 28.I find it very easy to play games with children that involve pretending.

[R] denotes reverse coding.

Appendix II

AQ-10 (with one item removed) for case managers

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
1. He notices patterns in things all the time. [R]				
2. He usually concentrates more on the whole picture, rather than the small details.				
3. In a social group, he can easily keep track of several different people's conversations.				
4. If there is an interruption, he can switch back to what he was doing very quickly.				
5. He frequently finds that he doesn't know how to keep a conversation going. [R]				
6. He is good at social chit-chat.				
7. He finds it difficult to imagine what it would be like to be someone else. [R]				
8. He finds social situation easy.				
9. He finds it hard to make new friends. [R]				

[R] denotes reverse coding.

Appendix III

40-item Empathy Quotient (EQ-40) scale

	Strongly agree	Slightly agree	Slightly disagree	Strongly disagree
1. I can easily tell if someone else wants to enter a conversation. [R]				
2. I find it difficult to explain to others things that I understand easily, when they don't understand it first time.				
3. I really enjoy caring for other people. [R]				
4. I find it hard to know what to do in a social situation.				
5. People often tell me that I went too far in driving my point home in a discussion.				
6. It doesn't bother me too much if I am late meeting a friend.				
7. Friendships and relationships are just too difficult, so I tend not to bother with them.				
8. I often find it difficult to judge if someone is rude or polite.				
9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.				
10. When I was a child, I enjoyed cutting up worms to see what would happen.				
11. I can pick up quickly if someone says one thing but means another. [R]				
12. It is hard for me to see why some things upset people so much.				
13. I find it easy to put myself in somebody else's shoes. [R]				
14. I am good at predicting how someone will feel. [R]				
15. I am quick to spot when someone in a group is feeling awkward or uncomfortable. [R]				
16. If I say something that someone else is offended by, I think that that's their problem, not mine.				
17. If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.				
18. I can't always see why someone should have felt offended by a remark.				

19. Seeing people cry doesn't really upset me.
20. I am very blunt, which some people take to be rudeness, even though this is unintentional.
21. I don't tend to find social situations confusing. [R]
22. Other people tell me I am good at understanding how they are feeling and what they are thinking. [R]
23. When I talk to people, I tend to talk about their experiences rather than my own. [R]
24. I enjoy social occasions. [R]
25. I am able to make decisions without being influenced by people's feelings.
26. I can easily tell if someone else is interested or bored with what I am saying. [R]
27. I get upset if I see people suffering on news programmes. [R]
28. Friends usually talk to me about their problems as they say that I am very understanding. [R]
29. I can sense that I am intruding, even if the other person doesn't tell me. [R]
30. People sometimes tell me that I have gone too far with teasing.
31. Other people often say that I am insensitive, though I don't always see why.
32. If I see a stranger in a group, I think that it is up to them to make an effort to join in.
33. I usually stay emotionally detached when watching a film.
34. I can tune into how someone else feels rapidly and intuitively. [R]
35. I can easily work out what another person might want to talk about. [R]
36. I can tell if someone is masking their true emotion. [R]
37. I don't consciously work out the rules of social situations. [R]
38. I am good at predicting what someone will do. [R]
39. I tend to get emotionally involved with a friend's problems. [R]

Strongly agree	Slightly agree	Slightly disagree	Strongly disagree
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40.I can usually appreciate the other person's viewpoint, even if I don't agree with it. [R]

<u>Strongly agree</u>	<u>Slightly agree</u>	<u>Slightly disagree</u>	<u>Strongly disagree</u>
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[R] denotes reverse coding.

Appendix IV

Victim Empathy Scale – Adapted (VESA), which primarily consists of two vignettes:

Vignette A (non-sexual offence victim)

Please read through the short paragraph and answer the questions below.

A 20-year-old man called James was driving too fast along the road. He had been drinking in the pub. He drove up onto the pavement and hit a girl named Jane with his car.

Yes, very much	Yes, mostly	No, not much	No, not at all
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1. Do you think that Jane enjoyed what had happened?
2. Do you think that Jane thought James was nice?
3. Do you think that Jane took it as a game?
4. Do you think that Jane would tell James that she didn't mind?
5. Do you think that Jane could have stopped this from happening if she wanted to?
6. Do you think that Jane would like James?
7. Do you think that Jane would want to get along with James further?
8. Do you think that Jane was in charge of what had happened?
9. Do you think that Jane felt good about what had happened?
10. Do you think that Jane felt okay in the situation?
11. Do you think that Jane was secretly happy by this?
12. Do you think that Jane would have nice thoughts about this afterwards?
13. Do you think that Jane felt guilty about her involvement in the accident?
14. Do you think that Jane was afraid? [R]
15. Do you think that Jane would keep thinking about what had happened in the future? [R]
16. Do you think that Jane would hope that it might happen again?
17. Did Jane feel sorry for herself afterwards? [F]
18. Did Jane feel sorry for James over what had happened? [F]

	Yes, very much	Yes, mostly	No, not much	No, not at all
19. Do you think that Jane had caused the accident?				
20. Do you think that Jane felt angry about what had happened? [R]				
21. Do you think that Jane had experienced something like that in the past?				
22. Do you think that Jane felt picked-on/unfairly treated by what had happened? [R]				
23. Do you think that Jane would feel worried if no one knew what James had done? [R]				
24. Do you think that Jane would like to go through it again if she has the chance?				
25. Do you think that Jane would do similar things to other (children/women/men)?				
26. Do you think it was James' fault for what had happened? [R]				
27. Do you think that Jane would pity James for the accident?				
28. Do you think that Jane felt it was James' fault? [R]				
29. Do you think that Jane was able to forget about it?				
30. Do you think that Jane was harmed by what had happened? [R]				

[F] denotes filler statements.

[R] denotes reverse coding.

Vignette B (unknown sexual offence victim)

Please read through the short paragraph and answer the questions below.

A 20-year-old man named Sam was asked to babysit his neighbour 9-year-old daughter named Tracey. He was alone in the house with her while her parents had gone out for the night. While he was with her, he showed her his penis. He then undressed her and tried to have sex with her.

	Yes, very much	Yes, mostly	No, not much	No, not at all
1. Do you think that Tracey enjoyed what had happened?				
2. Do you think that Tracey thought Sam was sexy?				
3. Do you think that Tracey took it as a game?				
4. Do you think that Tracey would have shown Sam that she didn't mind?				
5. Do you think that Tracey could have stopped this from happening if she wanted to?				
6. Do you think that Tracey was turned on by Sam?				
7. Do you think that Tracey would want things to go further?				
8. Do you think that Tracey was in charge of what had happened?				
9. Do you think that Tracey felt good about what had happened?				
10. Do you think that Tracey felt okay in the situation?				
11. Do you think that Tracey was secretly excited by this?				
12. Do you think that Tracey would have nice thoughts about this afterwards?				
13. Do you think that Tracey felt guilty about how they had behaved?				
14. Do you think that Tracey was afraid? [R]				
15. Do you think that Tracey would keep thinking about what had happened in the future? [R]				
16. Do you think that Tracey would hope that it might happen again?				
17. Did Tracey feel sorry for herself afterwards? [F]				
18. Did Tracey feel sorry for James over what had happened? [F]				
19. Do you think that Tracey had led Sam on?				
20. Do you think that Tracey felt angry about what had happened? [R]				
21. Do you think that Tracey had experienced something like that in the past?				

	Yes, very much	Yes, mostly	No, not much	No, not at all
22. Do you think that Tracey felt picked-on/harassed by what had happened? [R]				
23. Do you think that Tracey would feel worried if someone finds out what has happened? [R]				
24. Do you think that Tracey would like to do it again if she has the chance?				
25. Do you think that Tracey had done more sexual things than other (children/women/men) their own age?				
26. Do you think that Tracey had been led on by Sam? [R]				
27. Do you think that Tracey wasn't sure what her feelings were?				
28. Do you think that Tracey felt dirty inside of her? [R]				
29. Do you think that Tracey was able to forget about it?				
30. Do you think that Tracey was harmed by what had happened? [R]				

[F] denotes filler statements.

[R] denotes reverse coding.

Appendix V

Victim Empathy Scale – Adapted (VESA), sexual offenders' own victims

I would like you to think about the sexual offence/act that you have committed. Write down your victim's name in the blanks. You are to use the SAME NAMED victim for all questions.

	Yes, very much	Yes, mostly	No, not much	No, not at all
1. Do you think that _____ enjoyed what had happened?				
2. Do you think that _____ thought Sam was sexy?				
3. Do you think that _____ took it as a game?				
4. Do you think that _____ would have shown you that she/they didn't mind?				
5. Do you think that _____ could have stopped this from happening if she/they wanted to?				
6. Do you think that _____ was turned on by you?				
7. Do you think that _____ would want things to go further?				
8. Do you think that _____ was in charge of what had happened?				
9. Do you think that _____ felt good about what had happened?				
10. Do you think that _____ felt okay in the situation?				
11. Do you think that _____ was secretly excited by this?				
12. Do you think that _____ would have nice thoughts about this afterwards?				
13. Do you think that _____ felt guilty about how she/they had behaved?				
14. Do you think that _____ was afraid? [R]				
15. Do you think that _____ would keep thinking about what had happened in the future? [R]				
16. Do you think that _____ would hope that it might happen again?				
17. Did _____ feel sorry for herself/themselves afterwards? [F]				
18. Did _____ feel sorry for you over what had happened? [F]				
19. Do you think that _____ had led you on?				
20. Do you think that _____ felt angry about what had happened? [R]				
21. Do you think that _____ had experienced something like that in the past?				

	Yes, very much	Yes, mostly	No, not much	No, not at all
22. Do you think that _____ felt picked-on/harassed by what had happened? [R]				
23. Do you think that _____ would feel worried if someone finds out what has happened? [R]				
24. Do you think that _____ would like to do it again if she has the chance?				
25. Do you think that _____ had done more sexual things than other (children/women/men) their own age?				
26. Do you think that _____ had been led on by you? [R]				
27. Do you think that _____ wasn't sure what her/their feelings were?				
28. Do you think that _____ felt dirty inside of her/themselves? [R]				
29. Do you think that _____ was able to forget about it?				
30. Do you think that _____ was harmed by what had happened? [R]				

[F] denotes filler statements.

[R] denotes reverse coding.

Executive summary

(Total of 10 pages, including this page)

986 words

An exploratory study of autistic-like traits and empathy deficits of male offenders and adolescents

This executive summary serves to inform practitioners who primarily work with youth offenders, e.g., Youth Offending Teams (YOT), Probation Services, Children and Adolescent Mental Health Services (CAMHS), and other social care and charity organisations about the above mentioned study.

Background

Current literature has widely suggested a relationship between an individual's empathy deficits and offending behaviours.¹⁻³ Empathy deficits, the inability to put oneself in the role of others, take their perspective, and understand their thoughts and feelings, were postulated to heighten one's risk of committing antisocial acts towards others.² Therefore, interventions to increase offenders' empathy towards their victims (e.g., hypothetical apology letters) have been incorporated in many contemporary offender treatment programmes.³

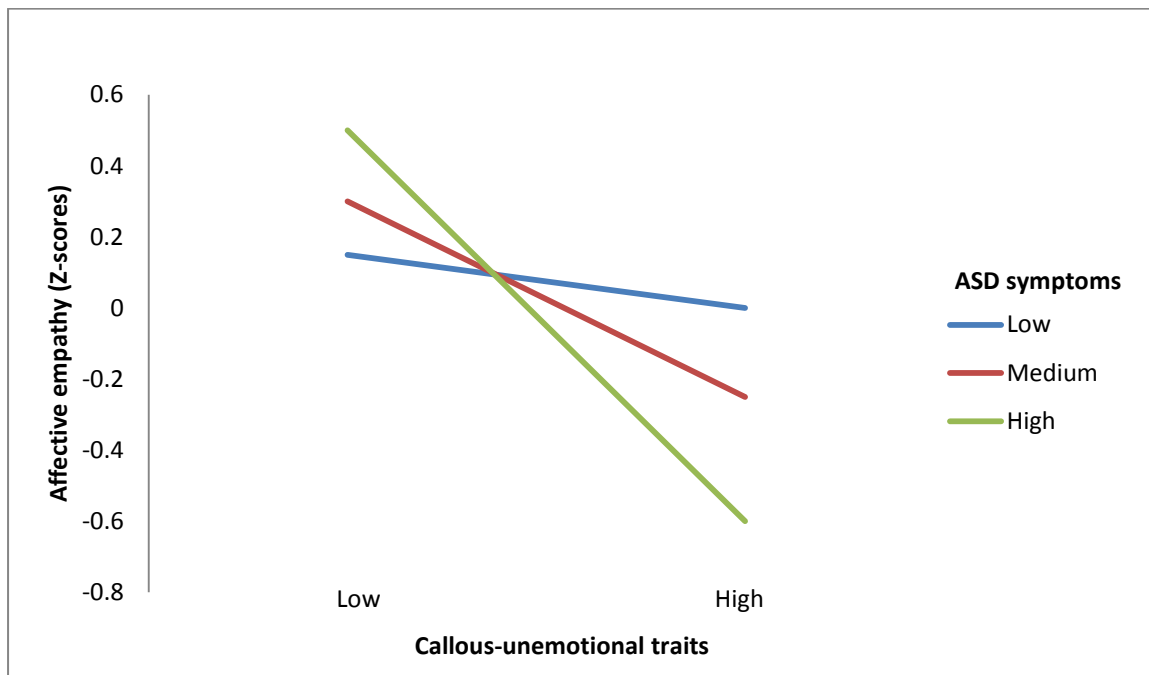
Within the offending population, research has also suggested that levels of empathy differ among the types of offence (i.e., non-sexual and sexual offences). Notably in a study by Fernandez and Marshall⁴, individuals convicted of rape displayed poorer empathy towards their 'own victims' but shared the same degree of empathy as non-sexual offenders towards a 'female who was sexually assaulted by another man' in a hypothetical scenario. Interestingly, these sexual offenders reflected

higher empathy scores than non-sexual offenders towards a 'woman who was injured in a car-accident' scenario.

In addition, there is also an interest by researchers to look at the link between empathy and offending among individuals with Autism Spectrum Disorders (ASD). Marked with impairments in communication and social interaction, difficulties in learning due to poorer cognitive abilities, and often engaging in distinct and repetitive behaviours,⁵⁻⁶ it was postulated that ASD individuals' lack of knowledge and misinterpretation of others' social cues might put them at risk of antisocial behaviours and conduct problems such as cruelty to animals.⁷⁻⁹ Notably in the study by Pasalich and colleagues⁸, a moderation effect of ASD symptoms on an individual's callous-unemotional traits and empathy was established in a group of 134 children (who had conduct disorder but did not meet the diagnostic criteria of ASD). Simply put, a child who scored high on callous-unemotional traits, coupled with more ASD symptoms, showed greater deficit in his empathy scores compared to another child who was similarly high on the callous-unemotional traits but had a significantly lower number of ASD symptoms (see Figure 1).

Figure 1

Moderation effect of ASD symptoms on child's callous-unemotional traits and affective empathy (Pasalich et al⁸)



Rationale for current study

This study therefore sought to build on existing literature on the associations of ASD, empathy deficits and offending behaviours. With studies showing that empathy could be conceptualized as general and victim-specific modalities for different groups of offenders, this study also aimed to pilot the investigation on autistic-like traits and the differentiated forms of empathy within the adolescent offending population (i.e., non-sexual and sexual offenders).

Research aims

The first objective of the study was to measure the level of autistic-like traits in a population of male adolescent offenders who were not officially diagnosed with ASD. It was hypothesized that offenders would

demonstrate higher autistic-like traits than non-offenders (controls). Secondly, the study compared the empathy deficits (i.e., general empathy, (non-sexual) victim-specific empathy, and (sexual) victim-specific empathy) between offenders and non-offenders. Within the offending population, this study attempted to delineate these various empathy deficits between non-sexual and sexual offenders. Lastly, this research had also investigated interaction effects of autistic-like traits and one's offending status on his empathy scores.

Data collection and analysis

Male adolescents, aged 11 to 25, with no official diagnosis of ASD were targeted for the study. A total of 59 adolescent non-offenders and 11 offenders participated. Non-offending participants were primarily recruited through various social media (e.g., University of Nottingham research portal and online groups) while offenders were recruited from the Youth Offending Teams (YOTs) of Nottinghamshire Youth Justice Services (YJS). All participants were asked to fill out a series of self-reported questionnaires which measured their autistic-like traits, general empathy and victim-specific empathy. Case managers were also asked to rate a 9-item questionnaire with regard to their clients' (i.e. offenders) autistic-like traits as collateral information.

Findings

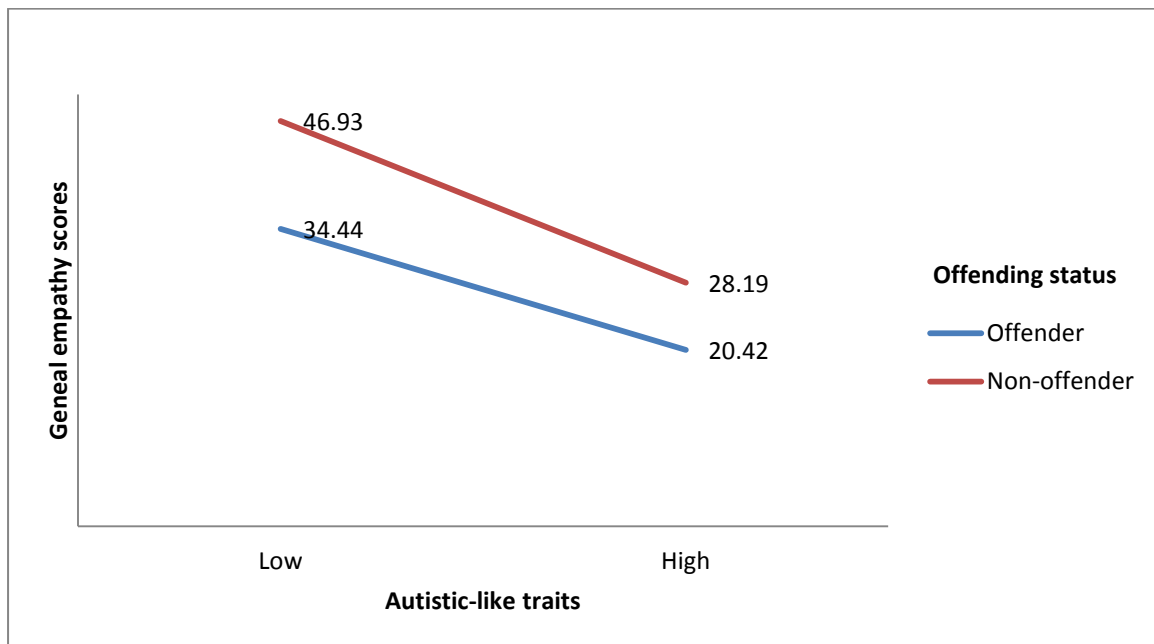
Analysis of the data revealed that offenders showed greater general empathy deficits than non-offenders. However, there was no significant

difference in victim-specific empathy between offenders and non-offenders. Due to the limited number of offenders in this study, further analysis on their empathy according to offender type (i.e., non-sexual and sexual) was not conducted.

Offenders were only found to have slightly higher autistic-like traits than non-offenders. Case managers were relatively accurate in identifying autistic-like traits in their clients (i.e., a significant correlation between case managers' ratings and offenders' self report of autistic-like traits). Both offending status and autistic-like traits significantly predicted one's general empathy scores; however, no interaction effect was established (i.e., offenders with high autistic-like traits did not significantly differ in the general empathy scores when compared to non-offenders with similar high autistic-like traits, see Figure 2).

Figure 2

No interaction/moderation effect of autistic-like traits on individual's offending status and general empathy



Implication and further recommendation

Results from this study (i.e., autistic-like trait is a significant predictor of general empathy) highlighted the importance of early intervention for children and adolescents who display symptoms of ASD. Improving adolescents' communication and social skills, encouraging role or pretend play, and regulating their emotions, anxiety and sensitivity towards sensory stimuli, could in turn help to improve their ability to recognise social cues, understand and develop their empathic stance towards others. For offenders, prioritising communication and social skills training (e.g., learning ways to socialise and live with others in local authority accommodation for probationers) over and on top of contemporary victim-specific empathy treatment programmes could therefore help to increase their general empathy.

Future studies should seek to increase the number of participants to improve the generalisability of results. Additionally, different typologies of offenders (e.g., drugs, violent, sexual offenders) could be recruited to examine possible differences in empathy and autistic-like traits amongst them.

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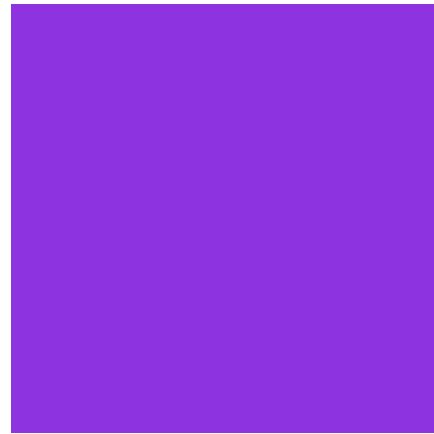
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An exploratory study of autistic-like traits and empathy deficits in male offenders and adolescents

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Aim and rationale



Why?

Current studies have shown some association between one's empathy level (i.e., ability to recognise and understand other person's feelings) and the likelihood to commit crime. Other research has also suggested that autistic-like traits (i.e., difficulty forming relationships and interpreting social cues of others) could lower one's empathy. This study therefore would like to explore the relationship between autistic-like traits and empathy level in male adolescent offenders and the general population.

What?

It is hypothesised that offenders would reflect higher autistic-like traits than the general population. Similarly, offenders are expected to show greater deficits in their empathy. Lastly, the study also attempts to investigate the presence of an interaction effect of autistic-like traits and one's offending status on his empathy.

So what?

Results from the study could shed light on the current understanding of the relationship between autistic-like traits, empathy and offending. Moreover, it could inform treatment to be more targeted to help at-risk youths who show higher autistic-like traits in improving their empathy awareness. Enhancing the social/communication skills of offenders could therefore be prioritised (over and on top of addressing victim empathy) in treatment programmes.

Methodology



Participants:

Non-offenders = 59; offenders = 11

$M_{\text{age}} = 22.86$; $M_{\text{age}} = 17.27$

(Self-reported) Measures:

- i. Adult Autism Spectrum Quotient-short version (AQ-short)
- ii. Empathy Quotient (EQ-40) – for general empathy
- iii. Victim Empathy Scale-Adapted (VESA) – for victim specific empathy

Additional measure:

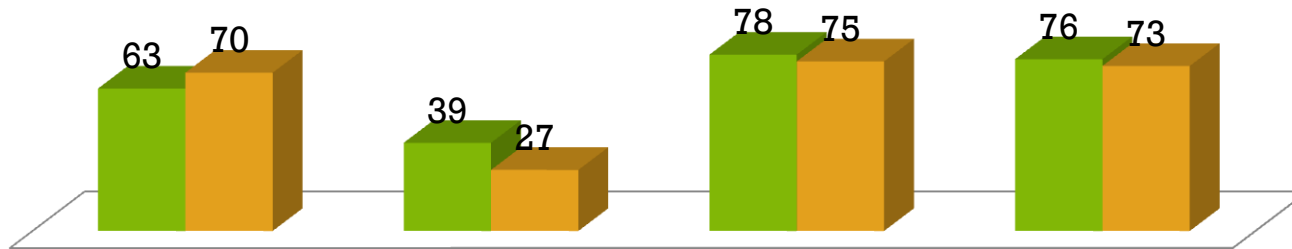
- i. AQ-10 – for case managers to rate on their clients' (i.e. youth offenders) autistic-like traits

Results

Comparison on various measures

■ Non-offenders ■ Offenders

*Marginally significant, $p < .05$;
** Significant, $p < .01$

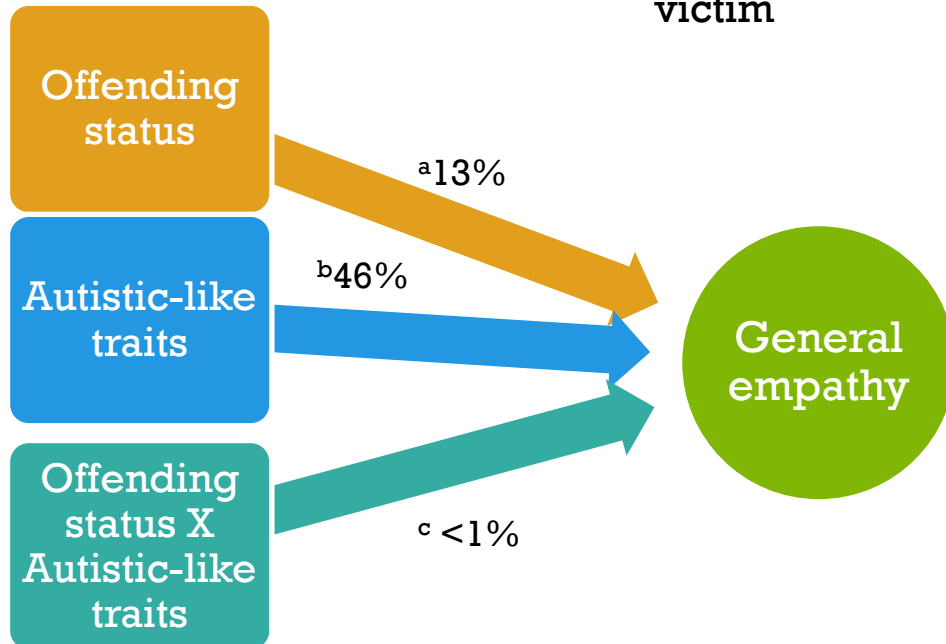


*AQ - autistic-like traits

**EQ - general empathy

VESA - empathy for car accident victim

VESA - empathy for sexual offence victim



^a Significant, $p < .01$. Accounts for 13% of variability in general empathy scores;

^b Significant, $p < .001$. Accounts for 46% of variability in general empathy scores;

^c Non-significant, $p = .45$

Results/ Implications



- ☑ Offenders had greater general empathy deficits than non-offenders
- ☑ Offenders showed only slightly higher autistic-like traits than non-offenders
- ☑ Looking at what could account for an individual's general empathy, one's offending status and level of autistic-like traits were found to significantly predict his or her general empathy scores respectively.

So what does all these mean...?

- This study highlights the importance of early intervention for children and young adolescents who display symptoms of ASD.
- This involves improving their communication and social skills, encouraging role or pretend play, managing and regulating adolescents' emotions, anxiety and sensitivity towards sensory stimuli, which in turn helps to improve their ability to recognise cues, understand and develop their empathic stance towards others.
- For offenders, prioritising such communication and social skills training (e.g., learning ways to socialise and live with others in a local authority accommodation for probationers), over and on top of contemporary victim empathy treatment programmes could help to enhance their general empathy.

Suggestions for future research



- Increase the sample size and sample representativeness of future studies for generalisability
- Include offenders of various offences (e.g., drugs, violent, sexual offence) and determine whether the benefits of contemporary victim awareness and empathy intervention programmes differ within the offending population
- Pilot a new programme which focuses more on one's general empathy (e.g., emphasis on scenarios which are more likely to be encountered in one's daily routine such as working with colleagues or in school with classmates) than victim empathy specific to their offence
- Longitudinal research could also be conducted to determine if empathy is a causal risk factor for offending



Reflective report

(Total of 18 pages, including this page)

1955 words

Conceptualisation

My previous work experience with young offenders in a Youth Offender Institution (YOI) equivalent setting in Singapore had a direct influence to my research. TYM, a youth with whom I worked, was ordered by the Court to reside in the YOI for a rehabilitation period of two years for his non-contact sexual offence. Although I was not his primary case manager, I was part of a rehabilitation team (as a YOI warden), together with his psychologist and case manager, that managed his risks and needs. TYM was diagnosed with Autism Spectrum Disorders (ASD) and this seemed to have impeded his progress in the intervention addressing his sexual risks. He had difficulties understanding why he was harshly penalised by the judge for a non-contact offence (i.e., stalking) and perceived that no visible harm was done to his victim. In the institution, his poor situational awareness and social skills have led to his behavioural issues (e.g., multiple aggressive episodes) with other young offenders. This hence prompted me to think about ASD in a forensic population, particularly sexual offenders, and how it could influence one's ability to feel and take the perspective of others (i.e., empathy).

Preparation

I ploughed through the literature in early July 2015 on the association between ASD and offending behaviours. In an early study by Ruble and Dalrymple (1993), parents of children with ASD cited their concerns as their children would exhibit a wide range of sexualized

behaviours (e.g., touching own private parts, removal of clothing in public, and inappropriate touching of opposite gender). Furthermore another study by Sutton and colleagues (2012) found that more than half of the youth sexual offenders in an institution in the United States had met the ASD diagnostic criteria but were not diagnosed of the condition prior to their offence and conviction. A further investigation of the difference between sexual and non-sexual offenders revealed that the former showed poorer social competence and lower levels of empathy (Seto & Lalumiere, 2010; Varker, Devilly & Beech, 2008). These studies showed promising findings on the association between autistic traits, empathy and offending behaviours but had yet to yield conclusive results (De La Cuesta, 2010; King & Murphy, 2014; Mouridsen, 2012).

In my very first proposal in September 2015, I had wanted to investigate the prevalence of ASD in male adolescent sexual offenders within the United Kingdom (UK) criminal justice system. Based on Fernandez and Marshall's (2003) conceptualisation of empathy, I was keen to explore if there was indeed a notable deficit in sexual offenders' general empathy, and also towards their 'own sexual victim' (i.e., victim-specific empathy) when compared to the general population and non-sexual offenders. Last but not least, I had also planned to include a qualitative component to investigate whether ASD sexual offenders' obsession in sexuality strongly corresponds to their index offences.

Design of study

“Overly ambitious” as I would describe myself in hindsight, I had wanted to produce a good research dissertation worthy of a Masters level. However, not having done a thesis before in my undergraduate course, I was concerned that my proposal and approach towards academic research was too naïve and lacked depth. I am very grateful to my primary supervisor, Professor David Daley, for his comments and advice throughout the whole research. Proposed aims and objectives of the research were further streamlined during the initial supervision sessions with Professor Daley in November 2015. Instead of looking at sexual offenders with ASD, it was suggested that the general population of sexual offenders be explored with reference to their autistic-like traits and empathy deficits. Professor Daley had also kindly shared related articles and advised me to review those journals. Over three supervision sessions (November 2nd, 10th and 26th), a dissertation protocol (to be submitted to the ethics committee) was drafted.

Titled “An exploratory study of autistic-like traits and empathy deficits in male sexual offenders and adolescents”, the first objective of the revised study was to investigate the level of autistic-like traits in a population of male adolescent sexual offenders, aged 16-21, who were not officially diagnosed with ASD. Second, empathy deficits (i.e., general empathy and victim-specific empathy) would be compared between sexual offenders and non-offenders. Third, the study also sought to examine the presence of an interaction effect of autistic-like traits and one’s offending status on his empathy levels.

Adopting a similar between and within group design by Hockley and Langdon (2015), both sexual offenders and non-offending population were asked to complete a series of self-reported questionnaires and the data was analysed using Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA) when necessary. A minimum of 30 male adolescents from each group were targeted for this study.

One main challenge at this stage was to obtain the measures needed. Non-response from previous authors who had used the measures (e.g., the Victim Empathy Scale-Adapted, VESA) was encountered. Fortunately with Professor Daley's assistance, the measure was eventually secured. From this experience, I had learnt to consider the accessibility of resources and the need to have alternative measures in mind when selecting measures for future research.

The dissertation protocol was vetted and approved by Professor Daley in early December 2015, and was eventually submitted to the ethics committee (a month earlier than the suggested dateline in the Course Handbook). Meanwhile, I began to work on the introduction of the dissertation which was vetted during a supervision session in January 2016.

Data collection

It was only in late February 2016, two months after the submission of ethics application that I received a reply from the ethics committee. During this period of time, I had started to approach the Youth Offending

Teams (YOTs) in Nottinghamshire and the Probation Services for the approval to recruit participants. A placement with the West YOT in Mansfield was secured through the university, and this gave me the much needed access to this young offending population. I further discussed the research with my placement supervisor, Mr Kees-Jan Speelman, who cautioned that the YOT might not have the number of sexual offenders that I needed. Moreover, my application to the National Offender Management Service (NOMS) was unsuccessful; I was told that there were no sexual offenders in the Probation Service in Nottinghamshire who were between ages 16 and 21 (see Appendix I).

A discussion was subsequently held with Professor Daley and it was decided to revise the eligibility criteria to include males aged 11 to 25, with a history of sexually inappropriate behaviour (with or without a formal conviction), in order to recruit more participants for the study. The first notice of amendment to the ethics was made on 3 March 2016, and it was only in early April that I received the approval. During this period, contacts with other possible agencies (e.g., Clayfields Secure Unit, Nottinghamshire Healthcare NHS Foundation Trust) were made through the assistance of my placement supervisor and a community nurse with whom I got acquainted during my placement (see Appendix II & III). However, recruitment of participants had to be halted as there were far too many layers of approval involved and time was a constraint. A second application to the NOMS was made with my revised participants' criteria but was again unsuccessful. As this was only a Masters level research,

NOMS required an endorsement from a business lead within the service (e.g., lead psychologist) which I did not have (see Appendix IV).

Downhearted, a meeting was held with Professor Daley and secondary supervisor, Dr Shihning Chou, to further discuss my roadblocks in data collection on 28 April 2016. Not affecting the integrity of my original study, a second amendment was made to include all youths, regardless of the nature of their offences. This was made after careful deliberation, ensuring that the questionnaires used in this study could remain unchanged. The focus of the study however was tweaked and the general youth offending population was studied instead of solely sexual offenders.

Data analysis

Another difficulty faced was the lukewarm responses from the case managers at the YOT. Although several emails were sent to inform them about the research, many of the caseworkers were not responsive, probably due to their tight work schedules and job demands. When approached, interim replies (e.g., "let me schedule a session with my youth", "I'll speak to them first and get back to you") were given. Some case managers did share that their clients were not keen to participate, or in their opinion (based on their experiences and relationship with the youths), youths would highly decline. Other case managers added that their clients did not fulfil the eligibility criteria as the youths were diagnosed with ASD.

This ultimately affected the analysis of data and highlighted a need for me to adopt a more systematic approach in data collection in future. Upon reflection, the number of youths with ASD could be better documented and accounted for. Likewise for youths who declined participation, reasons for not participating could also be noted. These could serve as evidence in the main paper to give readers a clearer idea on how participants were recruited and accounted for.

Eventually, the number of offenders recruited was significantly lower than the targeted 30 participants. Consequentially, this had also impacted on the tests which were utilised to analyse the data due to its normality issues. Tests such as t-test and ANOVA which I was familiar with were no longer applicable. It created a sense of uncertainty as I explored appropriate tests to analyse my data. On a positive note, it led me to read more on non-parametric tests which I was unfamiliar and furthermore, re-visit the fundamentals of statistics and its assumptions. Hence, I felt that it was more of a 'psychological battle' of (i.e., am I right in running the data this way in SPSS? How are the information and examples in the reference book relevant to my data?) at this stage of data analysis.

Write-up of the paper

As the data collection did not go smoothly according to plan, it created a domino effect and left me with lesser amount of time to do my write-up. That aside, in my opinion, writing the analysis was far more

manageable than the previous two stages (i.e., data collection and analysis) as findings were fairly cast in stone. The main challenge was to ensure that the paper was coherent and clear for the readers (i.e., what the objective of my research was, what was done and why it was carried out in this manner, how do I present the results in a meaningful way to the readers for their interpretation of the significance and relevance, and what is next following this research?), bearing in mind that the paper was to be written as if it was a submission for a journal publication.

Further learning points

Lastly, this journey had indeed opened my mind towards research in general. I used to find research daunting (I still think it is but to a lesser extent) and it is only meant for scholars with brilliant minds to have a journal article published (which I still think is). I also view research as a long-drawn process, and this experience and exposure is akin to the tip of an iceberg; there is so much more that lies underneath for a motivated individual to unravel. In the process, it builds one's capabilities to analyse and make sense of the information available. It will also be dampened by setbacks (e.g., poor participation rate) but it builds one's resilience to overcome difficulties or make the best out the circumstances, and spurs one to improve his or her next piece of work. Every piece of (unpublished or published) work generates more knowledge in the particular area, and this to me, is perhaps the most valuable and matters fundamentally.

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Appendix I

Excerpt of first email response from NOMS

Hi Mark

Thank you for the information and advice. I will proceed to contact the Youth Offending Teams then. Greatly appreciate your help once again.

Best regards
Lip Tat

Mark.Walton@probation.gsi.gov.uk
Cc:Ang Lip

Monday, January 18, 2016 11:55 AM

You forwarded this message on 2/12/2016 12:17 PM.

Hi

Apologies for the delay in responding. I have spoke with our Head of Divisional Sex Offender Unit who has confirmed that unfortunately all offenders dealt with by NPS within our DSOU are aged 21 and over and therefore would not fit the criteria for your research request.

It may be you could request access to Youth Offending Teams instead.

Mark Walton

Business Manager

NPS Midlands

King Edward House

Birmingham

07880 472991 (Blackberry)

Appendix II

Excerpt of email correspondence with NHS community nurse

Hi Michael

Thank you so much for your kind assistance and the contact details of your colleagues from the research department. I shall contact them shortly.

On the same note, do you have the contact details of the person/manager of the social service whom you mentioned the other time? Just hope to widen/increase the numbers of participants.

Best regards
Ken

Sent from my iPhone

Woods Michael [Michael.Woods@nottshc.nhs.uk]

To: Ang Lip
Placement
Wednesday, April 06, 2016 1:08 PM

You replied on 4/6/2016 4:50 PM.

Hi Ken,

I have spoken to my manager about your research and we would be happy to participate but this would need to be approved by our Trust research department. I have put their contact details below for you to contact direct.

Thanks

Michael

Research Governance Administrator
Emma Pearson
Email: emma.pearson@nottshc.nhs.uk
Phone: 0115 969 1300 ext 10661
Address:
Duncan MacMillan House
Porchester Road
Mapperley
Nottingham
NG3 6AA

RM&G Officer
Dr Kaela Stevenson
Email: kaela.stevenson@nottshc.nhs.uk
Address:
Duncan MacMillan House

Porchester Road
Mapperley
Nottingham
NG3 6AA

Michael Woods
Clinical Nurse Specialist
Head 2 Head CAMHS Team
1st Floor
200 Lichfield Lane
Mansfield
Notts
NG18 4RG
01159560842 / 07880744658

Appendix III

Excerpt of email correspondence with Nottinghamshire Healthcare NHS Foundation Trust

Mitchell Shirley - Head of Research and Innovation
[Shirley.Mitchell@nottshc.nhs.uk]

In response to the message from Ang Lip, 4/19/2016

To: Ang Lip

Cc: CALLAGHAN Patrick - Non Executive
Director [Patrick.Callaghan@nottshc.nhs.uk]

Attachments:

[Ken Ang Research.zip \(1014 KB\)](#)

Thursday, April 21, 2016 1:50 PM

You replied on 4/21/2016 3:16 PM.

Dear Ken

Thank you for your email, I had received it, but due to the high request for queries at the moment I had not got around to replying, and also we are incredibly short staffed so I do not have the staff to support the high demand at present.

To conduct your research within our Trust you need to seek further advice from the research graduate services in the university, as any research within the NHS needs to go through relevant approval processes. The processes for undertaking research in the NHS has just changed, and they will be able to advise. You need to contact sponsor@nottingham.ac.uk

The relevant link to understand the processes are highlighted here <http://www.hra.nhs.uk/research-community/applying-for-approvals/> , however your first contact should be the above email address. No research in the NHS can be undertaken without a sponsor and also clinical services approval to where you want to do your research.

Once you have spoken to the sponsor office at the University and completed the relevant applications by the integrated research application system, you will need to come back to me.

Thanks
Shirley

Shirley Mitchell
Head of Research and Innovation
Nottinghamshire Healthcare NHS Foundation Trust
Duncan MacMillan House
Porchester Road
Mapperley

Nottingham
NG3 6AA
Mobile: 07920 454530
Telephone: 0115 9691300 ext. 11903
Email: shirley.mitchell@nottshc.nhs.uk

CALLAGHAN Patrick - Non Executive Director

[Patrick.Callaghan@nottshc.nhs.uk]

To:

Ang Lip

Thursday, April 21, 2016 1:27 PM

Dear Ken

Thanks for getting in touch. If you require access to patients who are using a current NHS service you will need to get clinical ethics approval. Shirley Mitchell can best advise on how to do this. I will forward your email to Shirley to give you advice. If Michael is working with young people who are not using services you can get permission from his unit's clinical director.

Patrick

Appendix IV

Excerpt of second application to NOMS

National Research [NOMS] [National.Research@noms.gsi.gov.uk]

To: Ang Lip

Cc: Kelman, Jude [HMPS] [Jude.Kelman@hmeps.gsi.gov.uk]

Wednesday, April 20, 2016 2:48 PM

Dear Ken,

Thank you for your email. Unfortunately a staff member from the Youth Offending Team would not be considered as a suitable supporting referee. In this case an example of a NOMS/ MOJ business lead would be Jude Kelman (Jude.Kelman@hmeps.gsi.gov.uk) the East Midlands Regional lead psychologist. Or another option would be a NOMS business lead from NOMS HQ. Thank you.

Kind regards,

Richard,
NRC Co-ordinator

Ang Lip

To: National Research [NOMS] [National.Research@noms.gsi.gov.uk]

Sent Items

Wednesday, April 20, 2016 8:57 AM

Dear Richard

Thank you for your prompt reply. I am a MSc student. I would like to clarify if a staff from the Youth Offending Team (YOT) is in support for this research, would he/she be considered as a supporting referee from a MoJ business lead?

Thank you.

Regards

Ken

National Research [NOMS] [National.Research@noms.gsi.gov.uk]

Actions

To: Ang Lip

Attachments: [Application NOMS 15042016.zip \(1 MB\)](#)

Tuesday, April 19, 2016 4:18 PM

You replied on 4/20/2016 8:57 AM.

Dear Ken, Lip Tat ANG,

Thank you for your application form. Could you kindly clarify if you are a PhD or a MSc student.

Please note as set out in the "Research Applications Instruction", academic applications **below Doctoral level** are only accepted when the research is supported by a NOMS/MoJ business lead.

If you are a **non** Doctoral student could you kindly resubmit the NRC application with a written confirmation of support from a NOMS/MoJ business lead to the following email address: National.Research@noms.gsi.gov.uk

Kind regards,

Richard,
NRC Co-ordinator