Autism Spectrum Disorders and stalking
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Autism Spectrum Disorders and Stalking
Abstract

**Purpose:** Despite an increasing number of studies which examine sexual offending behaviour in autism spectrum disorder (ASD) individuals (e.g. Allen et al., 2008; de la Cuesta, 2010; King & Murphy, 2014; Pearce & Berney, 2016), there has been a lack of research investigating stalking and ASD. The present study will carry out a scoping review following PRISMA guidelines in order to identify studies which have been carried out exploring stalking behaviour in individuals with threshold or subthreshold ASD. **Methodology:** A total of five bibliographic databases were searched to identify studies which explored ASD in relation to stalking and harassment (including case studies as well as empirical studies). **Findings:** A total of five relevant articles were identified in the present review. One article contained a case study (Dell’Osso et al., 2015). In a short report, Stokes and Newton (2004) discussed stalking and ASD. One paper explored ASD and stalking behaviour in employment settings and specific interventions that could be employed in such environments (Post et al., 2014b). Another paper focused on stalking behaviour in those with ASD in school settings (Post et al., 2014a). The final paper examined stalking and social and romantic functioning in individuals with ASD (Stokes et al., 2007). This final paper contained the only empirical study identified in this search. **Practical implications:** The studies identified in this review clearly highlight the need for intensive socio-sexual interventions to improve social interaction skills and romantic functioning in individuals with ASD. There is also a need for schools to provide sex education programs for individuals with ASD. **Originality/value:** This is the first review looking at ASD and stalking.

**Keywords:** Autism spectrum disorders; ASD; Asperger’s syndrome; stalking; stalker.
Introduction

Autism Spectrum Disorder

Autism spectrum disorders (ASD) are a neurodevelopmental condition. ASDs are characterised by social communication and social interaction difficulties and restricted, repetitive behaviours (RRBs) or interests (American Psychiatric Association, APA, 2013). It is worth highlighting here that RRBs characterise behaviours that can include repetitive motor movements, sensory reactions, rituals and routines. In the Diagnostic and Statistical Manual of Mental Disorders (DSM–5, APA, 2013), the subtypes of ASD have been abandoned (e.g., autistic disorder and Asperger disorder) and there is now a single category of ASD (Maenner et al., 2014). A number of studies have found that about four males fulfil the diagnostic criteria for ASD for every female (e.g., Fombonne 2009; Szatmari, Chawarska, Dawson, Georgiades, Landa et al., 2016; Lord, Rutter, & Le Couteur, 1994; Volkmar, Szatmari, & Sparrow, 1993; McLennan, Lord, & Schopler, 1993; Brugha, McManus, Bankart, Scott, Purdon et al., 2011; Loomes, Hull, & Mandy, 2017).

ASD and Sexual Offending Behaviour

There are an increasing number of case studies that describe individuals with ASD who have engaged in sexual offending behaviour (e.g., Fujikawa et al., 2002; Kohn et al., 1998; Murrie et al., 2002; Kellaher, 2015; Kumagami & Mutsuura, 2009; Mogavero, 2016; Sutton et al., 2013). However, Allen and colleagues (2008) used a survey methodology which examined offending behaviour amongst those with Asperger’s Syndrome in the United Kingdom (UK). Of the 126 individuals they assessed in their study, only three had sexual offending behaviour. This led them to conclude that there is insufficient support for the previous evidence which had indicated that individuals with ASD are more likely to engage in sexual offending behaviour or sexually harmful behaviour. While there have been some studies that have found that individuals with ASDs are no more likely to commit sexual offending behaviour when compared to the general population, some research highlights the importance of recognising that, in individuals with ASD impairments in social functioning and engagement in addition to a desire for attachment or sexual intimacy with others, the challenges they face may lead to sexually inappropriate and harmful behaviour (e.g., Murrie et al., 2002; Sevlever, Roth, & Gillis, 2013; Allely & Creaby-Attwood, 2016, Creaby-Attwood & Allely, 2017). Murrie and colleagues (2002) describe six case studies of individuals with ASD who engaged in harmful sexual behaviour. Critically, these authors highlight the importance of recognising that there are innate vulnerabilities in individuals with ASD which may increase the risk of the individual being charged with a sexual offence. These innate vulnerabilities include impaired theory of mind (ToM), repetitive
and stereotyped behavioural patterns, and persistent preoccupation (see also Allely & Creaby-Attwood, 2016). Increased understanding of these ASD impairments are important for informing appropriate treatments and avoiding unjust harsh sentencing (Freckelton, 2013). There has been a plethora of studies investigated ASD and sexual offending. It would therefore be useful to explore the literature which has explored stalking behaviours in individuals with ASD and subthreshold ASD. Specifically, what are the innate vulnerabilities in individuals with ASD which may increase the risk of the individual being charged with a stalking offence.

**Definition of stalking and stalking typologies**

Mullen, Pathe, Purcell and Stuart (1999) define stalking as attempts to associate or communicate with someone in a repeated or persistent unwanted way. Within the last two decades, a number of stalking typologies have been proposed. For instance, Racine and Billick (2014) argued that there are three main typologies, namely, Zona’s Stalker-Victim Types (Zona, Sharma, & Lane, 1993), Mullen’s Stalker Typology (Mullen, Pathe, Purcell, & Stuart, 1999) and the RECON Typology of Stalking (Mohandie, Meloy, McGowan, & Williams, 2006). Mullen’s Stalker Typology (Mullen et al., 1999) has an in-depth view of stalkers and so divides the types into five categories: i) Rejected Stalkers, who have had a former relationship with the victim and whose stalking behaviour is an attempt to reconcile or to take revenge against them; ii) Intimacy Seekers, who are commonly socially inept and isolated and wish to have a romantic relationship with the victim; iii) Incompetent Stalkers are aware that the target of their attention does not reciprocate their affection but still continue in their pursuit in the hope that their behaviour will eventually result in intimacy; iv) Resentful Stalkers, who often threaten their victim in order to induce fear, which produces a sense of control for the stalker who generally believes their victim has wronged them in some way; and v) Predatory Stalkers, who typically have past criminal convictions and usually commit sexualised assaults on the victim.

**The association between stalking behaviour and mental health disorders**

There is a substantial amount of research investigating stalking behaviour and mental health problems (Kamphuis & Emmelkamp, 2000; Rosenfeld, 2003; Sansone & Sansone, 2010). Foellmi (2016) suggested that personality disorder is a common risk factor for stalking, which is consistent with the finding from a variety of studies (e.g., Kamphuis & Emmelkamp, 2000; McEwan, Daffern, MacKenzie, & Ogloff, 2017; McEwan & Strand, 2013; Meloy, 1999). For example, Nijdam, Rosenfeld, Gerbrandij, Quick and Galietta (2018) found that 50% of the 137 stalking offenders they had interviewed had a personality disorder. Other risk factors have also been identified including psychosis, mood and substance misuse disorders (Nijdam et al, 2018). In studies of stalkers, anything
from 72% up to 100% are thought to have a clinical diagnosis of one form of mental disorder or another (e.g., Kienlen, Birmingham, Solberg & O’Regan, 1997; Whyte, Petch, Penny & Reiss, 2008; Zona et al, 1993).

**ASD and stalking behaviour**

There has been some suggestions of the possible association or links between ASD and stalking behaviour. For instance, there has been some suggestion in the literature that obsessive tendencies of ASD may be potentially problematic when they are directed into behaviours which have a sexual component (e.g., Allen et al., 2008; Barry-Walsh & Mullen, 2004; Freckelton, 2011; Haskins & Silva, 2006). Some of these behaviours which have a sexual component may include sexual attraction to a person, fixation on body parts, or obsession with pornography (Higgs & Carter, 2015). Such behaviours may increase the risk of that individual engaging in stalking behaviour or sexual advances which are not reciprocated (e.g., Higgs & Carter, 2015; Freckelton, 2011).

**Present review**

Despite an increasing number of studies which examine sexual offending behaviour in ASD individuals (e.g. Allen et al., 2008; de la Cuesta, 2010; King & Murphy, 2014; Pearce & Berney, 2016), there has been a lack of research investigating stalking and ASD. The present study carried out a scoping review following PRISMA guidelines in order to identify studies which have been carried out exploring stalking behaviour in individuals with ASD or subthreshold ASD (e.g., Peters et al., 2015; Munn, Peters, Stern, Tufanaru, McArthur, & Aromataris, 2018). As already mentioned, articles which also discuss cases or include samples of individuals with subthreshold autistic traits in clinical and general populations were also included (e.g., Dell’Osso et al., 2016; 2017; 2018). There is a growing recognition that autistic traits should be conceptualised as cardinal and also associated features of ASD. These autistic traits typically are subthreshold social and communication impairments, unusual personality features and stereotyped behaviours (Dell’Osso et al., 2016). Such autistic traits, as highlighted by Dell’Osso and colleagues are continuously distributed in the general population and are also used to characterise the Broad Autism Phenotype which is commonly identified in the relatives of individuals with a diagnosis of ASD (e.g., Wheelwright, Auyeung, Allison, & Baron-Cohen, 2010; Taylor, Maybery, Wray, Ravine, Hunt, & Whitehouse, 2013). As argued by Dell’Osso and colleagues (2016) “the conceptualization of autism as a spectrum should not only refer to the dimensional nature of the core features of autism within the clinical population (i.e., differences in the severity of symptoms among those with a diagnosis of ASD), as conceptualized by the DSM-5, but could also be interpreted as the continuity between the clinical and the general
population” (Dell’Osso et al., 2016, pp. 124; Lai, Lombardo, Chakrabarti, & Baron-Cohen, 2013). It is worth briefly noting here that Dell’Osso and colleagues have also developed the subthreshold autism spectrum model which is supposed to encompass threshold- as well as subthreshold-level manifestations of ASD, with a particular focus on mild and atypical symptoms, behavioural features and personality traits (e.g., Dell’Osso et al., 2018). The threshold or subthreshold-level manifestations of ASD may, or may not, have a significant impact on the individual’s level of functioning (e.g., Oldershaw, Treasure, Hambrook, Tchanturia, & Schmidt, 2011). It is also important to emphasise that these manifestations may also include positive features of neuroatypicality. For instance, divergent and creative thinking (Dell’Osso, Dalle Luche, & Maj, 2016). In sum, there is a very real need to evaluate the relation of stalking behaviours not only with full-blown or threshold ASD but also with the subthreshold-level or broad autism spectrum.

**Method**

A total of five bibliographic databases were searched to identify studies which explored ASD (or subthreshold ASD) in relation to stalking (including case studies as well as empirical studies). The five databases searched included: APA PsycArticles Full Text; AMED (Allied and Complementary Medicine) 1985 to March 2020; APA PsycExtra 1908 to March 09, 2020; APA PsycInfo 1806 to March Week 4 2020; and, lastly, Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily 1946 to April 01, 2020. Mainly psychological and medical databases were searched as these are the papers where relevant articles pertaining to ASD and stalking typically appear. In order to limit the risk of missing any potentially relevant articles in other types of databases such as Scopus or Web of Science, a detailed search was conducted on Google Scholar – which is detailed later in this section. The search on the five electronic databases was performed on the 2nd April 2020. The search followed PRISMA guidelines for systematic reviews (Liberati et al., 2009; Moher, Liberati, Tetzlaff, & Altman, 2009). The aims of PRISMA are to reduce the risk that there will be biased reporting of certain studies and also to improve the clarity and transparency in how reviews are performed (Liberati et al., 2009). The search was not restricted by date. Search terms were applied to title. The following search criteria were entered into the five databases: (“stalking” or "stalker*" or "stalk technology" or "stalk surveillance" or "cyberstalking" or stalk).m_titl. AND (ASD or "autis* spectrum disorder*" or autis* or "autis* spectrum condition*" or asperger*).m_titl. Both authors reviewed the returned articles for relevance. Both authors reviewed all nine titles and abstracts against the inclusion/exclusion criteria. Both authors also checked all five full-texts for eligibility and were in agreement.

This search returned a total of nine articles. Following the removal of duplications there were five articles (there were four duplicates). As well as the searches carried out on the five databases outlined above, numerous permutations of the search terms which were entered into the databases
were used to search for potentially relevant articles in Google Scholar. Google Scholar was searched thoroughly for any potentially relevant articles not identified through the search carried out on the five databases. Some examples of the search term groupings included: ASD AND stalking; ASD AND stalkers; autism AND stalkers; autism AND stalking; asperger’s syndrome AND stalking; asperger’s syndrome AND stalker. The searches on Google Scholar did not result in the identification of any further relevant articles which were not found in the database searches (see Figure 1. For PRISMA Flow Diagram of this process).

Lastly, given the relative lack of research in this area, the present scoping review adopted an inclusive approach. There were no exclusion criteria for the papers identified which investigated ASD in relation to stalking or included a discussion of a case study of someone with ASD who had engaged in stalking behaviour with the exception that the papers must be written in English. The reason for this was to be more inclusive given the lack of literature in this area. All papers which were relevant were also included regardless of quality given the lack of research. The key aim of this paper is to investigate all the literature that has explored stalking in relation to ASD. All forms of sources will be considered for inclusion including academic peer reviewed articles, brief reports, discussion papers, book chapters, conference abstracts, dissertations, etc. In all the papers which were relevant for inclusion in the present review, the reference section of each was also thoroughly examined for any potentially relevant articles not identified in the database or Google Scholar searches. A total of 1,000 article titles were screened on Google Scholar. No further articles were identified.

Although all papers were included irrespective of quality, the strengths and weaknesses of the articles are highlighted in the Results section.

[Figure 1: PRISMA Flow Diagram about here]

**Results**

A total of five relevant articles were identified in the present review (Stokes & Newton, 2004; Stokes, Newton, & Kaur, 2007; Post, Haymes, Storey, Loughrey, & Campbell, 2014a; Post, Storey, Haymes, Campbell, & Loughrey, 2014b; Dell’Osso, Dalle Luche, Cerliani, Bertelloni, Gesi, & Carmassi, 2015). A narrative summary of each paper will be given in turn. One article contained a case study (Dell’Osso et al., 2015). In a short report, Stokes and Newton (2004) discussed stalking and ASD. One paper explored ASD and stalking behaviour in employment settings and specific interventions that could be employed in such environments (Post et al., 2014b). Another paper focused on stalking behaviour in those with ASD in school settings (Post et al., 2014a). The final paper examined stalking and social and romantic functioning in individuals with ASD (Stokes et al.,
2007). This final paper contained the only empirical study identified in this search. The five papers identified in this scoping review were published between 2004 and 2015. Two were published by Stokes and colleagues, two were published by Post and colleagues and one was published by Dell’Osso and colleagues. The papers by Stokes and colleagues were produced in Australia. The papers by Post and colleagues were produced in United States and the paper by Dell’Osso and colleagues was produced in Italy.

Case Study

Dell’Osso and colleagues (2015) explored how adult (subthreshold) symptoms of ASD influenced the stalking behaviour of one of their cases. We decided to include this case study paper even though there were only subthreshold symptoms of ASD and the individual also had delusional disorder because of the lack of literature in the field and because the authors do suggest some ASD symptomology that may have placed this individual at higher risk of engaging in stalking behaviour. This case is only briefly referred to because the individual has delusional disorder, erotomanic type, and adult autism spectrum symptoms. This individual failed to meet the diagnostic criteria for DSM-5 criteria for ASD. Specifically, he did not have any criterion B symptoms which are restricted and repetitive patterns of behaviour, interests, or activities, including stereotypies. He did have a total score of 26 on the Ritvo Autism and Asperger Diagnostic Scale-Revised (RAADS-14, +) which is well above the cut-off point of 14 recommended to identify most individuals with ASD. The case study describes the long-term stalking behaviour of patient G.C, who began his stalking following a break up with his former girlfriend which led him to start using drugs and develop erotomanic delusions about her.

Three years after, G.C’s psychotic symptoms reached critical levels, leading him to be hospitalised after attempting suicide due to being frustrated by his lack of ability in dealing with rejections. After treatment with antipsychotic medication and being discharged, the symptoms diminished but the persistent focus on his former girlfriend continued. Not long after, the erotomanic delusions returned, along with various other symptoms such as auditory hallucinations, which led him to again attempt to contact his former girlfriend. After a few months of no success, he attempted suicide a second time and was once more admitted and treated with antipsychotics. There was a period of well-being for patient G.C until his brother’s diagnosis with a psychotic disorder led to a relapse in symptoms. Seeking out contact again with his former girlfriend, he was then taken voluntarily into a psychiatric clinic after his ex-girlfriend’s mother called the emergency unit. During his time in the clinic, the erotomanic delusions about his relationship continued along with his instable mood. After treatment, both symptoms decreased and he reported behaviours similar to what he had experienced with his former girlfriend with other girls, despite not being romantically involved with
some of them. Dell’Osso and colleagues (2015) argue that this patient’s lack of insight into his victim’s lack of emotional reciprocity is one of the key features of the “incompetent stalker” as defined by Mullen and colleagues (1999). Additionally, they suggest that this patient’s perseverative focus on his former girlfriend and his repetitive suicide attempts (despite numerous hospitalisations), highlights how these common behaviours in ASD (perseverative focus and lack of awareness of social or legal consequences due to lack of understanding), can subsequently lead to a higher risk of the individual with ASD engaging in stalking behaviour.

This case study allows for a more in depth insight into something that is unclear for most: the link between ASD and stalking. In this, a better understanding of stalking severity in someone with ASD is laid out in detail. However, there is the issue that the patient does not clearly fit into the ASD category due to lack of ‘criterion B symptoms’ in the DSM-V. Despite this, some may arguably say that his repetitive stalking behaviour and fixated interest on his former girlfriend could fall under this criterion and so this case has been left included in this paper. The use of a case study containing a single participant heavily limits the generalizability of the findings/conclusions.

The importance of investigating ASD and stalking behaviour

In their letter to the editor, Stokes and Newton (2004) discussed the importance of investigating stalking and ASD and highlight some of the features of ASD which may result in this group being more ‘prone’ to engaging in stalking behaviour. The researchers point out, in their letter to the editor, the similarity between certain characteristics of ASD (e.g., social isolation, social impairments and, in individuals who are obsessive, feelings of entitlement to the victim) and the incompetent stalker type described by Mullen and colleagues (1999). Stokes and Newton (2004) then further go on to suggest that adults with ASD may share a variety of similar demographic characteristics with stalkers. Some of these similar demographic characteristics they suggest include: a good level of education and have average intelligence, are male and have past problematic relationships, are unemployed or underemployed, are isolated, have obsessive behaviours and have social impairments. Stokes and Newton (2004) argue that this overlap of the clinical features of stalkers and the core features of ASD are “suggestive of a possible tendency toward stalking behaviour, as ASD individuals crave and persistently seek out intimacy, yet lack social competence to initiate such a relationship” (pp. 338). In their paper, Stoke and Newton (2004) also highlight that the erroneous diagnoses/misdiagnoses which are commonly applied to individuals with ASD are similar to the diagnoses which are frequently considered to be associated with stalkers. Some of these erroneous diagnoses typically include the following disorders: schizotypal personality disorder, type II schizophrenia and obsessive-compulsive disorder (OCD). Stokes and Newton (2004) also discuss how obsessional behaviour from ASD individuals who wish to seek contact with another person is not limited to one gender, reporting the cases of a female inappropriately pursuing another female in order
to become friends, then mentioning other cases involving males. The conclusion is that there is an overlap between the features of ASD and stalkers, which may be a contributing factor towards those with ASD demonstrating stalking behaviour.

Employment settings: ASD and stalking behaviour

In their paper, Post and colleagues (2014b), in relation to ASD, discuss specific interventions which can be employed in the work setting in order to improve social interaction and cover legal implications. They point out that the lack of research in stalking behaviours, until recently, has made it difficult for Human Resource (HR) professionals to address such behaviour. This unavailability of knowledge has also meant that businesses lack the knowledge to identify that the outcome of not taking action against a stalker early on, can lead to severe consequences such as violence and, in some cases, murder. Post and colleagues (2014b) indicate that any damage caused, after a failure to respond to any concern about stalking in the workplace, will be the employers’ responsibility.

The researchers discuss many different implementations that can be put in place to help prevent stalking behaviours in individuals with ASD. Firstly, focusing on HR professionals and how they manage complaints from employees, and HR guidelines for carrying out an investigation in a matter such as stalking. Post and colleagues (2014b) outline some steps in this process which may place the individual with ASD at a disadvantage. The first being step 1 which is where the investigators are chosen. They may have a lack of knowledge and understanding of the features of traits of ASD or of the specific impairments and difficulties of the individual with ASD under investigation. The individual with ASD can also be disadvantaged at step 2, the interviewing process. An increasing number of studies have indicated that individuals with ASD are more compliant in interrogative interviews which could put them at a disadvantage with regards to the Equal Employment Opportunity Commission (EEOC, 1999) guidance for interviewing with some examples of questions being: ‘What is your response to the allegations?’; ‘Are there any persons who have relevant information?’; ‘Are there any notes, physical evidence, or other documentation regarding the incident(s)?’ and ‘Do you know of any other relevant information?’ (http://www.eeoc.gov/policy/docs/harassment.html). If the investigator has a lack of understanding and knowledge of some of the features of ASD (such as impaired Theory of Mind) for an individual with ASD, difficulties in interpreting answers may occur.

Post and colleagues (2014b) also describe the difficulties in social skills ASD individuals suffer with, which can lead to stalking behaviour. They explain how there are a variety of strategies that can prevent inappropriate social behaviours from occurring, stating how the stalkers social system can be addressed with help from business workplace supports. Support programs can be mediated by these businesses for the ASD individual. The best way, they argue, to address this behaviour is to understand what the motivation behind it is. A functional behavioural assessment (FBA) is considered
to be the most effective tool for assessing this, which can be conducted using both indirect and direct methods. The indirect interviews can reveal motives whilst direct observations can reveal more information about the behaviour, collectively this can help determine what triggered the stalking behaviour.

The next stage in the intervention process involves teaching social interaction skills which are more appropriate, having identified the motivation behind the stalking behaviour. For example, the obsessive behaviours which are exhibited in individuals with ASD need to be replaced by alternative positive behaviours. These alternative positive behaviours require continual reinforcement. The Premack Principle can help limit the obsessions of individuals who follow it, by reinforcing activities of lower interest through the use of a high interest area (obsession). Cognitive behaviour therapy, alongside counselling or psychopharmacology therapy, can help address these obsessions whilst allowing the professional to provide interventions to the individual with ASD. As depression and anger can result in those with ASD due to their lack of friendship and their sense of the world being unfair, there are three aspects which counselling focuses on for learning compensatory skills and additional coping mechanisms: recognising the triggers, learning techniques that self-calm and being taught strategies that can be self-managed for engaging in these self-calming behaviours. Furthermore, the researchers suggest that a checklist should be kept by the ASD individual which is tailored to their social interaction needs, and provides guidelines for appropriate behaviour (e.g., reminders for appropriate interaction duration, acceptable workplace interests).

Video Feedback can also be used to help decrease stalking behaviour in those with ASD, as the employee can, with the help of a counsellor, look back and assess their behaviour to determine what is deemed acceptable. Rule governed behaviour is also an effective methodology for the development of skills, for example, the employee may state ‘if I do not follow my co-worker, after they have talked to me at lunch, my point sheet gets a check’. The points can represent a reward in the future, such as going to a movie, which is positive to the individual. Skills can further be learnt and reinforced in social skills groups, which can be generalised to non-group settings through the use of prompting in everyday situations from family members or co-workers. As friendships aid in the development of these social skills, these groups can help model correct social interaction skills, which the ASD individual can learn and use to develop such friendships, whilst counsellors can reduce the anxiety these individuals feel through coping strategies.

Finally, Post and colleagues (2014b) argue that to determine in what situations a communication skill needs to be taught, or an interpersonal behaviour developed, workplace environmental assessments can be conducted. These assessments can additionally help identify the preferences and strengths that will aid those with ASD, by letting the professionals create workspaces, supports and schedules that will help provide more comfortable conditions and decrease the chance of social skill errors occurring.
Post and colleagues (2014a) provide an overview of stalking behaviour in those with ASD in school settings. As mentioned earlier, the first step in the intervention process is the assessment of the stalking behaviour which involves the completion of an FBA to identify the motivation behind the stalking behaviour. FBA can be carried out using indirect methods, direct observation, or functional analysis. The most effective way to gather information is through structured interviews with a range of individuals including: the student, teachers, support staff, campus security, parents, administration, counsellors. Direct observation in the natural setting is another way to gather information regarding the individual’s behaviour, impairments, etc. Functional assessment involves direct observation using a chart which is used to track antecedents, behaviours and consequences across the school day. This can reveal triggers for the behaviour in question (in this case stalking behaviour) and can highlight the skill needs of the student.

Post and colleagues then briefly give a background to understanding stalking behaviour functions, by drawing on research by Mullen and colleagues (1999) of the stalking types, highlighting the similarity in characteristics of those with Asperger’s Syndrome and the incompetent stalker. Additionally, they delve into the concept that stalking behaviour in ASD persons is often due to their rejection in relationships, lack of social awareness and lack of perspective taking. This leads on to the next stage of the intervention plan, which uses pre-determined skills and functions of the stalking behaviour to develop the intervention plan. This plan should include, based on the function determined, strategies which teach the skills needed: For example, devising a plan that includes learning coping skills, if revenge for rejection is the function of the stalking behaviour. The researchers go on to determine the importance of the inclusion of strategies which teach relationship building and social skills in the school curriculum, including the use of non-disabled peers alongside the interventions.

Other strategies and interventions that are useful in decreasing stalking behaviours amongst ASD individuals in school, as determined by Post and colleagues (2014a) includes: 1) Social skill groups; 2) Video modelling; 3) Self-management strategies; 4) Self-Management Combined with Video Feedback; 5) Scripts, Social Stories and Visual Supports; 6) Rule Governed Behaviour; 7) Increasing Areas of Interest beyond Obsessions; 8) Anger Management and Counselling and 9) Pharmacotherapy. Each of these strategies is outlined below.

1) Social skill groups, discussing the curriculum that has been specifically developed for stalking, that addresses what illegal behaviour is, relationships and personal boundaries. Highlighting how the skills taught in these groups need to be reinforced outside of the group and how typical peers should also be included in the group. Three components included to help increase social skill instruction effectiveness are: inclusion of appropriate peers, conducting the instruction in multiple natural settings and having explicit and direct instruction that has opportunities which it can be
practiced in. In order to maintain the social skills which are developed in group instruction, the students may continue to need cueing, corrective feedback, and reinforcement for the appropriate behaviours. When the student exhibits appropriate social behaviour they are more likely to receive the natural reinforcement of positive social interactions. This will maintain the appropriate social behaviour in the criterion environment. 2) Video modelling, whereby the ASD student imitates a desired behaviour demonstrated by a model, or inappropriate behaviours are analysed. This type of modelling has previously been used to develop the positive social behaviours that replace negative ones, in order to prevent stalking. Additionally, it may be useful to help the student learn more about wanted and unwanted behaviours along with responses deemed appropriate after rejection. 3) Self-management strategies help to improve social skills and the generalisability of these learnt skills in ASD individuals and reduces disruptive behaviour. This strategy can include a checklist that can allow a student to monitor their behaviour, whilst further allowing for the individual to record and self-reinforce their own behaviour, typically reinforcing a new skill they have learnt. For example, the individual can record whether they have been able to stop a behaviour after they received negative feedback. Self-management can teach the skills that are necessary for replacing and preventing stalking behaviours. This technique can further be combined with video feedback, which involves a review by student and an instructor of footage which has been taken of the student’s behaviour. This allows for the student to tell the difference between inappropriate and appropriate responding through the assessment of their own behaviour. 4) Self-Management Combined with Video Feedback is another strategy. Video feedback (VFB) is different from video modelling. During video feedback, the student and an instructor watch and review videos of the student’s behaviour. This helps the student learn to evaluate their behaviour and to help them distinguish what is appropriate and inappropriate responding. 5) Scripts, Social Stories and Visual Supports. The use of scripts for guiding conversations have been found to be effective, even more so when coupled with social stories and visual supports for teaching social language skills. Scripts are written step-by-step comments or requests. They consist of ‘initiating statements, maintenance statements and ending statements for conversational exchanges’. 6) Rule Governed Behaviour. Rules typically include an antecedent which specifies a behaviour, such as walking with girls after being invited, and a consequence e.g. they will then like me. These rules may be said aloud initially but can be replaced by internal statements. In order to become an automatic process, these rules should be repeated. 7) Increasing Areas of Interest beyond Obsessions. Through inclusion in school, ASD individuals can have access to new information and activities that can aid in redirecting their obsessive behaviours and reducing other stalking behaviours, the use of non-disabled peers modelling appropriate behaviours will also help in achieving this. 8) Anger Management and Counselling. ASD students who participate in counselling sessions can develop a clearer understanding of events, or experiences, they may have misinterpreted and be shown strategies and/or interventions that can help them to learn beneficial skills, such as recognising their own triggers (e.g., anxiety or anger), learning self-calming techniques and self-
management strategies, that will reduce their stalking behaviours. Lastly, 9) Pharmacotherapy - Pharmacotherapy may additionally be used alongside this to help prevent stalking behaviours in ASD individuals by helping to treat their obsessional thoughts (Post et al., 2014a).

In summary, Post and colleagues (2014a) structurally highlight interventions that would be useful for individuals with ASD who had engaged in stalking behaviour. The interventions they outline include: social skills groups, video counselling, self-management, video feedback, rule governed counselling, scripts, visual supports, counselling, psychopharmacology and reducing the amount of isolating interests and activities while increasing more opportunities for integration. It would be interesting if the authors noted the effectiveness of these interventions on those with ASD at various levels on the spectrum. However, Post and colleagues (2014a) pointed out that this was something future researchers could look into.

Stalking and social and romantic functioning in individuals with ASD

Stokes, Newton and Kaur (2007) carried out a study which investigated how learning sources influence sexual and social functioning levels in individuals with ASD, whilst also observing the types of behaviours which are exhibited by older individuals with ASD who are attempting to initiate intimate or social relationships. Stokes and colleagues (2007) sample consisted of parental reports for 25 ASD adolescents and adults (13–36 years, 16 males and 9 females), and 38 typical adolescents and adults (13–30 years, 32 males and 6 females). Parents were asked to complete a number of questionnaires. One was the Courting Behaviour Scale which was developed by the authors and can be found in the appendix of their paper. This scale examines social relationship issues, checking the parents’ responses of their typical or ASD diagnosed child’s knowledge and behaviours relating to this. The proceeding section addressed issues in intimate romantic relationships, followed by a final optional section covering issues that may be sensitive to the participants, such as whether their child, in relation to courting behaviours, had any contact with the justice system. Additionally, a Social Functioning Subscale was used to assess overall levels of social functioning. Specifically, this included knowledge about the initiation of social relationships, interest of any social relationships that are outside of the family and meaningful social relationship levels. In terms of investigating the functioning of romantic and intimate relationships, a Romantic Functioning scale was used which assesses the individual’s desire for an intimate relationship, their level of knowledge relating to intimate relationships and sexually related behaviour and their experience in intimate relationships.

Findings from this study conducted by Stokes and colleagues (2007) found that individuals with ASD were more likely to engage in inappropriate courting behaviours and were more likely to focus their attention upon celebrities, strangers, colleagues, and ex-partners, and to pursue their target longer than controls. Findings also revealed that individuals with ASD were not reported as receiving any learning of romantic skills from either parents, siblings, observation, the media, sex education, or
peers. Parents of the ASD group reported that contributing factors to relationship issues their children experienced were caused by their “lack of understanding in social contexts” and “lack of empathy”, amongst other things. Parents of ASD children reported that their child found it difficult to know when to stop persisting in an attempted relationship. Reported individuals struggled to understand why the pursued person was not responding to them in the way they wanted, also believing that they had not done anything wrong. Findings also showed that adolescents and adults with ASD persisted in their relationship pursuits for significantly longer durations when compared to typical adolescents and adults following a negative or no response from the individual (or from one of their family members). After controlling for age, Stokes and colleagues found that individuals with ASD reported level of romantic functioning was significantly lower compared to their peers without ASD. In individuals with ASD, level of social functioning was found to be the only significant predictor of romantic functioning. (Stokes et al., 2007).

Stokes and colleagues (2007) also found that the adolescents and adults with ASD were more likely to touch in an inappropriate way the individual of interest, believe that the target must reciprocate their feelings, exhibit an obsessional interest, make comments which are inappropriate, monitor their targets activities, follow them, pursue them in a threatening manner, make threats against the individual and threaten to engage in self-harm. Another interesting finding from this study was that individuals with ASD have a tendency not to engage in behaviours that involve interpersonal contact such as asking the individual for a date, telephoning or attempting social contact. One explanation for this may be the lack of awareness that these are the typical ways that people initiate relationships. Another explanation may be the lack of confidence in their impaired social competence. In summary, this study by Stokes and Newton (2004) shows that those with ASD may have an unrecognised preponderance towards intrusive and stalking behaviours (Stokes et al., 2007).

These findings have provided support for assumptions which have previously been untested in relation to the impact of social functioning on romantic functioning, with the use of parental reporting on scales rather than self-reporting strengthening the results. This is due to the restricted and unreliable nature of self-report sources, especially in those with impaired cognitive or social skills, so the use of parents made this report more objective. However, there are some limitations to doing this. For example, some parents may be unaware of the type and number of romantic and social relationships their child had had, including the behaviours they presented when engaging in pursuit of these relationships, therefore, the data may have underreported or contained inaccurate answers due to this. Additionally, there may be other unlisted variables that could contribute in the influence of romantic or social functioning, and so this should be considered also. However, the inclusion of likert scales and closed questions produces clear answers which can be interpreted easily, making for an increased certainty that the data reported by the individual parent has been fully captured in the analysis. Despite this strength of likert scales and closed questions, it does have some potential
limitations. Predetermined response options could be supplemented with a qualitative approach to ensure that the data “has been fully captured”.

**Discussion**

A total of five relevant articles were identified in the present review (Stokes & Newton, 2004; Stokes et al., 2007; Post et al., 2014a; Post et al., 2014b; Dell’Osso et al., 2015). One was a case study (Dell’Osso et al., 2015). This case study allows for a more in-depth insight into something that is unclear for most: the link between ASD and stalking. However, there is the issue that the patient does not clearly fit into the ASD category, due to lack of ‘criterion B symptoms’ in the DSM-V. Despite this, some may arguably say that his repetitive stalking behaviour and fixated interest on his former girlfriend could fall under this criterion and so this case has been left included in this paper. However, the use of a case study containing a single participant heavily limits the generalizability of the findings/conclusions. In a short report, Stokes and Newton (2004) discussed stalking and ASD. One study explored ASD and stalking behaviour in employment settings and specific interventions that could be employed in such environments (Post et al., 2014b). In this paper by Post and colleagues (2014b), in relation to ASD, they discuss specific interventions which can be employed in the work setting in order to improve social interaction and cover legal implications. They point out that the lack of research in stalking behaviours, until recently, has made it difficult for Human Resource (HR) professionals to address such behaviour. Post and colleagues (2014b) argue that to determine in what situations a communication skill needs to be taught, or an interpersonal behaviour developed, workplace environmental assessments can be conducted. These assessments can additionally help identify the preferences and strengths that will aid those with ASD, by letting the professionals create workspaces, supports and schedules that will help provide more comfortable conditions and decrease the chance of social skill errors occurring. It would be interesting if the authors noted the effectiveness of these different interventions on those with ASD at various levels on the spectrum. One paper explored stalking behaviour in those with ASD in school settings (Post et al., 2014a). Post and colleagues (2014a) highlight interventions that would be useful for individuals with ASD who had engaged in stalking behaviour in school settings. The interventions they outline include: social skills groups, video counselling, self-management, video feedback, rule governed counselling, scripts, visual supports, counselling, psychopharmacology and reducing the amount of isolating interests and activities while increasing more opportunities for integration. It would be interesting if the authors noted the effectiveness of these different interventions on those with ASD at various levels on the spectrum. Post and colleagues (2014a) pointed out that this was something future researchers could look into.

Lastly, one study looked at stalking and social and romantic functioning in individuals with ASD (Stokes et al., 2007). This was the only empirical study which was identified. Stokes, Newton and Kaur (2007) carried out a study which investigated how learning sources influence sexual and
social functioning levels in individuals with ASD, whilst also observing the types of behaviours which are exhibited by older individuals with ASD who are attempting to initiate intimate or social relationships. Some of the key findings from this empirical study include the following. Individuals with ASD were more likely to engage in inappropriate courting behaviours and were more likely to focus their attention upon celebrities, strangers, colleagues, and ex-partners, and to pursue their target longer than controls. Individuals with ASD were not reported as receiving any learning of romantic skills from either parents, siblings, observation, the media, sex education, or peers. Reported individuals struggled to understand why the pursued person was not responding to them in the way they wanted, also believing that they had not done anything wrong. These findings have provided support for assumptions which have previously been untested in relation to the impact of social functioning on romantic functioning, with the use of parental reporting on scales rather than self-reporting strengthening the results. However, the inclusion of likert scales and closed questions produces clear answers which can be interpreted easily, making for an increased certainty that the data reported by the individual parent has been fully captured in the analysis. Despite this strength of likert scales and closed questions, it does have some potential limitations. Predetermined response options could be supplemented with a qualitative approach to ensure that the data “has been fully captured”.

There are some potential limitations with the present scoping review. There is the potential that relevant articles have not been identified in the search carried out on the databases. However, to reduce the risk of this, a number of Google Scholar searches were carried out in addition to the searches performed on the database. The reference sections of all relevant papers were also screened for the purposes of identifying any relevant articles not found in the database searches.

**Future Research Directions**

There is an urgent need for further research exploring the association between ASD and stalking behaviour. For instance, investigating the prevalence of ASD in stalking offender populations. Additionally, as recommended by Post and colleague (2014b), treatments addressing the characteristics of an individual with ASD that increases their risk for stalking need to be examined. Specifically, what is the most effective treatment/intervention for individuals with ASD who engage in this offending behaviour. More research which investigates the different types of stalking behaviour in individuals with ASD may help contribute to a better understanding of what treatments/interventions may be more suitable for certain stalking types. Research could also investigate if individuals with ASD who engage in stalking behaviour have a significantly different stalking risk profile compared to individuals who engage in stalking behaviour who do not have any diagnosis of ASD. The Stalking Risk Profile (MacKenzie, McEwan, Pathé, James, Ogloff, & Mullen, 2009) is a structured professional judgment approach used to assess stalking risk. It consists of five items in the assessment of violence, namely, suicidal ideation, homicidal ideation, last resort thinking,
high-risk psychotic phenomena and psychopathy. We strongly advocate the use of the Stalking Risk Profile.

What the sparse number of studies carried out to date highlight is that there is an urgent need for research to identify the most effective teaching strategies for educating or coaching individuals with ASD in appropriate dating and romantic behaviours. In the workplace, there is a need for research to investigate treatments or intervention that address the key features of ASD which may make the individual more prone to engaging in stalking behaviours (Post et al., 2014b). Lastly, as highlighted by Stokes and Newton (2004), there have been no studies conducted which have examined the prevalence of stalking in an ASD population. Nor has there been any investigation into the incidence of ASDs within the forensic stalking population (Stokes & Newton, 2004). There is a clear need for research to address these gaps in the literature.

Clinical and Legal Implications and Recommendations

The studies identified in this review clearly highlight the need for intensive socio-sexual interventions to improve social interaction skills and romantic functioning in individuals with ASD (e.g., Stokes & Newton, 2004; Stokes et al., 2007). There is a need for schools to provide sex education programs for individuals with ASD (Post et al., 2014a). Post and colleagues (2014a) recommended that the skills which are needed to be taught may include:

1. Perception of other’s feelings.
2. Recognising both wanted and unwanted behaviour.
3. Acceptance of rejection.
4. Development of alternative behaviours after rejection.
5. Development of vocabulary and meaning of language associated with relationships and intimacy.
6. Distinguishing between acquaintances and friends.
7. Discerning appropriate targets for relationships.
8. Understanding social rules and norms for approaching an individual with romantic intentions.

There is an urgent need for teachers and students to be more aware of misunderstood social interaction behaviours and to receive education/training on the impairments that some individuals with ASD may face (Post et al., 2014a). Additionally, Stokes and colleagues (2007) have recommended that judicial and enforcement agencies should become more aware of the deficits and symptoms of those individuals with ASD through Autism Awareness Training (AAT). Employers and employees should also take part in AAT. Not only on the deficits and symptoms of ASD but on what
job supports might be necessary for successful employment (Post et al., 2014b). There is a need for more research on this topic.


caracteristics shared between ASD individuals and certain stalking types, specifically the incompetent stalker (Mullen et al., 1999). Furthermore, a variety of implementation strategies and interventions have been suggested which can support individuals with ASD, in a variety of settings (e.g., the workplace, school).

Conclusion

In the papers discussed in this review, there is a common reoccurring mention of characteristics shared between ASD individuals and certain stalking types, specifically the incompetent stalker (Mullen et al., 1999). Furthermore, a variety of implementation strategies and interventions have been suggested which can support individuals with ASD, in a variety of settings (e.g., the workplace, school).

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