

# Stalking, and Social and Romantic Functioning Among Adolescents and Adults with Autism Spectrum Disorder

Mark Stokes · Naomi Newton · Archana Kaur

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**Abstract** We examine the nature and predictors of social and romantic functioning in adolescents and adults with ASD. Parental reports were obtained for 25 ASD adolescents and adults (13–36 years), and 38 typical adolescents and adults (13–30 years). The ASD group relied less upon peers and friends for social (OR = 52.16,  $p < .01$ ) and romantic learning (OR = 38.25,  $p < .01$ ). Individuals with ASD were more likely to engage in inappropriate courting behaviours ( $\chi^2_{df=19} = 3168.74$ ,  $p < .001$ ) and were more likely to focus their attention upon celebrities, strangers, colleagues, and ex-partners ( $\chi^2_{df=5} = 2335.40$ ,  $p < .001$ ), and to pursue their target longer than controls ( $t = -2.23$ ,  $df = 18.79$ ,  $p < .05$ ). These results show that the diagnosis of ASD is pertinent when individuals are prosecuted under stalking legislation in various jurisdictions.

**Keywords** Autism · High-functioning-autism · Social-skills · Sexual behaviour · Stalking

## Introduction

Autism Spectrum Disorder (ASD) is an umbrella term currently used to describe a variety of autistic presentations, including high-functioning autism (HFA) and Asperger Syndrome (AS). Although ASDs are enduring conditions with pervasive limitations across the social and communication domains, little is known

about the impact of the core deficits characteristic of ASDs in adolescence and adulthood (Seltzer et al., 2003).

Considering that researchers have reported an increased prevalence of ASD (Fombonne, 2003), and that clinicians are reporting increasing numbers of children with ASD (Prior, 2003), it is apparent that the impact of ASD on the individuals, their families, and society is of growing importance. ASD in childhood is characterised by marked social impairment (Asperger, 1944/1991; Gillberg, 2001; Howlin, 1997; Wing, 1981). Individuals with ASD have difficulty in peer interactions, lack appreciation of social cues, are egocentric, and frequently display socially and emotionally inappropriate behaviours (Gillberg, 2001). They have deficits in pragmatic language and non-verbal communication (Tantam, 1991), which often result in empathic inaccuracy of expression (Gillberg, 1992; Roeyers, Buysse, Ponnet, & Pichal, 2001).

Current knowledge on the social and romantic functioning of adolescents and adults with ASD is limited. The literature suggests that individuals with ASD gain social skills with increased age, however they move into adolescence and adulthood with inadequate social competence, and continue to have problems in the social realm (Mesibov & Handlan, 1997; Orsmond, Krauss, & Seltzer, 2004). Like typically developing individuals, previous research has found that ASD individuals desire intimate relationships, yet they lack the appropriate skills and knowledge to initiate such relationships successfully (Henault & Attwood, 2002; Stokes & Kaur, 2005). Due to their social ineptness, individuals with ASD may naively engage in inappropriate or intrusive courtship behaviours in their attempts to initiate

M. Stokes (✉) · N. Newton · A. Kaur  
School of Psychology, Faculty of Health, Medicine, Nursing,  
and Behavioural Sciences, Deakin University, 221 Burwood  
Highway, Burwood, VIC 3125, Australia  
e-mail: stokes@deakin.edu.au

interpersonal relationships, which may constitute stalking (Stokes & Newton, 2004).

Most studies find that adolescents with autism suffer the consequences of social impairment and lack of interpersonal relationships (Engstrom, Ekstrom, & Emilsson, 2003; Howlin, Goode, Hutton, & Rutter, 2004; Tantam, 2000; Venter, Lord, & Schopler, 1992). Orsmond et al. (2004) investigated peer relationships and participation in social and recreational activities among 235 adolescents and adults with autism. Overall, 46.4% of the participants were reported to have no peer relationships. Of those individuals who were reported to have one or more peer relationships and friendships, the frequency of such relationships was inversely related to the strength of social impairment. While some traits associated with autism may ameliorate with age, social dysfunction appears to persist (Frith, 2004; Howlin, 2000; Mesibov & Handlan, 1997; Orsmond et al., 2004).

As in the domain of social relationships, problems have been reported in the area of socio-sexual development and functioning among ASD individuals. It has been shown that their sexual desires and fantasies are similar to those found in the general population, in that they are neither reduced nor deviant, and they attempt to initiate, pursue and maintain intimate relationships (Henault & Attwood, 2002; Mesibov & Handlan, 1997; Ousley & Mesibov, 1991; Stokes & Kaur, 2005). Henault and Attwood suggested that the decreased level of information on sexuality that was found in AS and HFA individuals was due to their limited number of sexual and social contacts stemming from their lack of interpersonal skills.

Stokes and Kaur (2005) found that sexual behaviour and knowledge was dependant on age and level of social skills among 23 HFA adolescents. Both HFA and typical adolescents displayed similar developmental trends, however, poorer social skills resulted in more inappropriate behaviours among HFA adolescents, and about a 5 year delay in the HFA group's developmental trajectory for sexual behaviour. Sexual functioning was found to develop more slowly in older ASD individuals, supporting the developmental trend in delayed social development reported by Volkmar, Carter, Sparrow, and Cicchetti (1993). Ruble and Dalrymple (1993) found individuals with autism (9–39 years) displayed more inappropriate sexual behaviours and reduced sexual functioning, even though many had been involved in normal social and formal sex education programs. Both Stokes and Kaur (2005) and Ruble and Dalrymple (1993) reported that parents of individuals with ASD expressed concerns about how others may misconstrue their child's sexualised behaviours.

In society, there is a blurry distinction between what constitutes acceptable and inappropriate relationship behaviours. To initiate a relationship, it is not unusual for a person to ask the target of their interest out on a date, telephone them, send them letters, wait for them outside work, or make other attempts to initiate social contact. There is a subtle distinction between these appropriate and inappropriate forms of these behaviours. Persistent unwanted attention via any of these behaviours is typically utilised to distinguish between harassment and appropriate courting (Ravensberg & Miller, 2003). Stalking involves repeated or persistent unwanted attempts to communicate with or associate with another (Mullen, Pathé, Purcell, & Stuart, 1999). The fine line between these two is not often clearly drawn. Most particularly, it may be unclear to a person who has experienced considerable social rejection and exclusion over their whole life, learning that associations with others are only available with persistence. Confusion, or lack of awareness, of what is and is not regarded as appropriate courtship behaviour, together with the desire for intimate relationships, limited socialisation, and inadequate overall social and sexual functioning, may likely lead to what is considered as stalking (Stokes & Newton, 2004). Considerable anecdotal evidence exists illustrating ASD individuals engaging in stalking behaviour when seeking contact with others for friendship or intimacy (e.g., Church, Alisanski, & Amanullah, 2000; Clements & Zarkowska, 2000; Green, Gilchrist, Burton, & Cox, 2000; Howlin, 1997; Myles & Simpson, 2002; Stokes & Newton, 2004).

To date, there are no known studies available that have investigated which learning sources (e.g. parents, formal skills education, peers) individuals with ASD utilise to acquire social and interpersonal skills, and what degree of influence such sources may have on their levels of social competence. Nor are there any known studies addressing the specific behaviours employed by individuals with ASD in their attempts to initiate social or intimate relationships (e.g. telephoning, asking out on a date). As such, we focused on the influence of learning sources on the level of social and sexual functioning in adolescent and adults with ASD, and the nature of behaviours employed by older ASD individuals in attempts to initiate social and intimate relationships. Due to the nature of ASD, individuals typically lack insight into their behaviours, it was decided that parents would be surveyed for a more objective report of their child's observable behaviours. It was hypothesised that when compared to typical adolescents and adults, those with ASD would: (1) differ in their sources of learning social and romantic knowledge and skills,

specifically they would have less access to peers and friends; (2) that level of social functioning would predict romantic functioning; (3) engage in more intrusive or unacceptable behaviours in attempting to initiate a social or romantic relationship; and (4) persist in pursuit of a romantic interest for a greater length of time in the face of a negative or no response from the person.

## Method

### Participants

Participants included parents of 25 high-functioning ( $IQ > 70$ ) adolescents or adults with an ASD diagnosis of HFA or AS, and 38 typical adolescents or adults. Participants in the typical group were recruited by approaching parents from the Australian general population, from places such as sporting clubs, local shopping centres, and school and community groups. Participants whose children had an ASD diagnosis were recruited by approaching various Autism support networks and organisations in Australia. All participants were selected on the criteria that their child was aged between 13 and 30 years, and had a confirmed diagnosis of either HFA or AS. Two of the returned questionnaires concerned adults with ASD who were aged 32 and 36 years. Due to the nature of this study, these data were included in the sample; these were not exceptionally older than other ASD adults included in the study, 6 other ASD adults were between 25 and 30, with two aged older than 29. Age range of the control subjects reported upon ranged from 13 to 30 years ( $M = 20.83$ ,  $SD = 4.83$ ), and consisted of 32 males and 6 females. The ASD group was comprised 16 males and 9 females, who ranged in age from 13 to 36 years with a mean age of 22.21 years ( $SD = 6.13$ ). The difference in numbers of males and females across groups was not significant ( $\chi^2 = 3.40$ ,  $df = 1$ ,  $p = .07$ ). A total of 120 questionnaires were distributed to parents of typical adolescents or adults, with a response rate of 32.5%, and 130 to parents of those with ASD, with a response rate of 19.2%. It should be noted that this return rate for the ASD group is the general experience of researchers from our research group, and is believed to reflect the continual requests for participation in research of this group.

### Material

A self-administered questionnaire was designed for this research; the Courting Behaviour Scale (CBS see

Appendix), and items were constructed in accordance with previous research that identified specific issues and behaviours relevant to this research (cf. Stokes & Kaur, 2005; Haugaard & Seri, 2004; McCann, 2000; Spitzberg & Cupach, 2003). The CBS examined parents' reports of their child's knowledge and behaviours related to social and intimate relationships. The first section of the questionnaire contained basic demographic questions (e.g. gender, age, diagnosis, level of education). The second section addressed social relationship issues. Items in the third section addressed intimate romantic relationship issues and formed the social and intimate behaviour subscales. These items examined 20 behaviours employed in attempts to initiate or pursue a social or romantic interest, in relation to the type of person targeted (e.g. stranger, friend, colleague), and the frequency with which the behaviours occurred. The final section was optional as it covered sensitive issues that some parents may not have wished to divulge, such as contact with the justice system in relation to courtship behaviours (e.g. "are you aware of any requests to your child to refrain from any behaviour directed toward the target of interest?"; "has your child ever had any contact with the justice system due to their behaviour?").

### Social Functioning Subscale

This subscale consisted of seven items, and examined responses regarding socialisation and peer relationships. It assessed overall level of social functioning in terms of interest in social relationships outside the family, level of meaningful social relationships, and knowledge about how social relationships are initiated. Most of the items included in the subscale required a response on a 5-point Likert type scale ranging from 0 (never) to 4 (always).

### Romantic Functioning

This subscale included six questions regarding intimate and romantic relationship functioning. It was designed to examine the adolescent's or adult's desire for an intimate relationship, level of knowledge surrounding intimate relationships and sexually related behaviour, and experience in intimate relationships. Most items on this subscale required a dichotomous yes/no rating (0 = no, 1 = yes).

### Procedure

Upon receiving ethical approval for the research from Deakin University Human Research Ethics Committee

(DUHREC-H 58/04), individuals were approached to participate. Those interested were asked to complete a questionnaire and were provided with a reply-paid envelope to return it. Upon return of the completed questionnaires scores were calculated for both constructs for each participant by dividing the item score by the maximum possible score for the item, then averaging the total score over the number of items in the scale. Maximum scores were thus set to 1, indicating a normal response, while lower scores were indicative of poorer functioning in that area.

## Results

Prior to analysis, the data was screened for missing values, normality, homogeneity, linearity, outliers, multicollinearity and singularity, and transformed where necessary as per procedures outlined in Tabachnick and Fidell (1996). Where multivariate or univariate assumptions were violated, a more stringent  $\alpha$  of 0.01 was employed.

### Sample Characteristics and Demographics

Sample characteristics and demographic data are presented in Table 1. The ASD group was slightly older on average than the control group, however, an independent samples *t*-test showed that this difference was not significant ( $t = 0.32, p > .05$ ). The ASD group had a greater number of diagnoses other than that of a Pervasive Developmental Disorder, than did the control group, with only one participant in the control group having any diagnosis (i.e., eating disorder). High school attendance levels across groups were of a comparable level, as was that of the frequency of participants in both groups who were currently undertaking university study. There were more control participants in current employment than in the ASD group, with 24% of the ASD group being unemployed, whilst all control group participants were involved in daily activities.

### Internal Consistency of Measure

Instrument Reliability was obtained using Cronbach's  $\alpha$ . The Cronbach  $\alpha$  levels for the subscales can be seen in Table 2. The Cronbach  $\alpha$  levels indicate a high reliability for the Social subscale and good reliability for the Romantic subscale in the CBS. Improvement statistics indicated no significant improvement in

**Table 1** Sample characteristics

	ASD ( <i>n</i> = 25)		Control ( <i>n</i> = 38)		<i>t</i> -test
Age (years)					
Mean	22.21		20.83		0.32
SD	6.13		4.83		
Gender					
Male	16	64.0%	32	84.2%	
Female	9	36.0%	6	15.8%	
Diagnosis					
Autism	3	12.0%	0	0.0%	
High functioning autism	3	12.0%	0	0.0%	
Asperger syndrome	19	76.0%	0	0.0%	
ADHD	2	8.0%	0	0.0%	
Learning disability	1	4.0%	0	0.0%	
Language disorder	1	4.0%	0	0.0%	
Eating disorder	0	0.0%	1	12.0%	
Borderline intellectual disability	3	12.0%			
Educational/employment status					
High school	9	36.0%	14	36.8%	
Undergraduate university	4	16.0%	8	21.1%	
Apprenticeship	0	0.0%	1	2.6%	
Employed	5	20.0%	15	39.5%	
Unemployed	6	24.0%	0	0.0%	
Other	1	4.0%	0	0.0%	

reliability of either subscale by deletion of any subscale item.

### Sources of Social and Romantic Learning

Multivariate Analysis of Variance (MANOVA) was used to investigate the different sources of learning available to typical and ASD individuals in relation to social and romantic knowledge and skills. Group response frequencies are presented in Table 3. Following logit transformation of frequency data, a significant overall effect of group (e.g., Control or ASD) was found ( $F_{(12, 48)} = 3.48, p = .001, \text{partial } \eta^2 = .47$ ) with sources of social and romantic learning differing by whether an ASD diagnosis was present or not. Univariate analyses revealed that the groups differed in their acquisition of social knowledge and skills from

**Table 2** Cronbach  $\alpha$  levels for the social and romantic functioning subscales

Subscale	Number of items	Cronbach $\alpha$
Social functioning	7	0.90
Romantic functioning	6	0.72

**Table 3** Sources of social and romantic knowledge and skills within groups

Source of learning	ASD ( <i>n</i> = 25)		Control ( <i>n</i> = 38)		OR	Cohen's <i>d</i>	SE
	Freq	%	Freq	%			
<b>Social learning</b>							
Parents	20	80.0%	30	78.9%	0.94	-0.04	0.35
Formal sex education	5	20.0%	7	18.4%	0.90	-0.06	0.36
Siblings	12	48.0%	22	57.9%	1.49	0.22	0.29
Social observation	13	52.0%	24	63.2%	1.58	0.25	0.29
Peers and friends**	15	60.0%	38	100.0%	52.16	2.18	0.82**
Media	12	48.0%	16	42.1%	0.79	-0.13	0.29
<b>Romantic learning</b>							
Parents	10	40.0%	18	47.4%	1.35	0.17	0.29
Formal sex education	8	32.0%	5	13.2%	0.32	-0.62	0.35*
Siblings	7	28.0%	18	47.4%	2.31	0.46	0.30
Social observation	10	40.0%	22	57.9%	2.06	0.40	0.29
Peers and friends**	8	32.0%	36	94.7%	38.25	2.01	0.47**
Media*	8	32.0%	20	52.6%	2.36	0.47	0.30

\**p* < .05, \*\* *p* < .01, OR: Odds Ratio [where a group had a frequency of less than 1, 0.5 was added to all frequencies to obtain valid OR (cf. Hasselblad & Hedges, 1995)]

peers and friends ( $F_{(1, 59)} = 12.05, p = .001$ , partial  $\eta^2 = .17$ ). The groups also differed in their sources of romantic knowledge and skills, with significant differences found for learning from peers and friends ( $F_{(1, 59)} = 20.96, p < .001$ , partial  $\eta^2 = .26$ ), and for media ( $F_{(1, 59)} = 5.95, p < .05$ , partial  $\eta^2 = .09$ ). Typical participants received more social knowledge and skills from their peers and friends than the ASD participants. The ASD group obtained less knowledge and skills relating to romantic relationships from their peers and friends or from the media than did the control group.

As expected, age may have influenced these results, therefore effects of age were controlled by a multivariate analysis of covariance (MANCOVA). There was still a significant overall difference found between ASD and typical adolescents' social and romantic learning sources due to group ( $F_{(12, 47)} = 3.35, p = .001$ , partial  $\eta^2 = .46$ ). Irrespective of age, the groups differed again on social learning from peers and friends ( $F_{(1, 58)} = 11.53, p = .001$ , partial  $\eta^2 = .17$ ), and differed on romantic learning from their peers and friends ( $F_{(1, 58)} = 21.78, p < .001$ , partial  $\eta^2 = .27$ ). Individuals with ASD received less social and romantic knowledge and skills via their peers and friends than typically developing individuals.

**Social and Romantic Functioning**

Level of social and romantic functioning were assessed by participants' total scores on the social and romantic subscales, respectively. Means and standard deviations are presented in Table 4. As learning sources were found to differentiate between the groups, a MANCOVA was employed to examine levels of social and romantic functioning in typical and ASD individuals, whilst controlling the effects of learning sources. MANCOVA

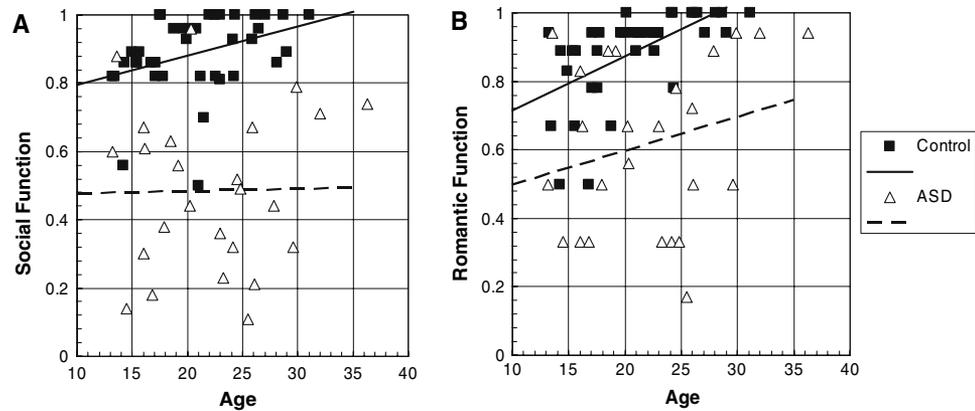
**Table 4** Level of social and romantic functioning in typical and ASD adolescents and adults

	ASD <i>n</i> = 25		Control <i>n</i> = 38	
	Mean	SD	Mean	SD
Social functioning	0.49	0.24	0.89	0.12
Romantic functioning	0.62	0.25	0.89	0.13

revealed that independent of where individuals obtained social and romantic knowledge and skills, the ASD and control groups differed significantly in their overall level of social and romantic functioning ( $F_{(2, 48)} = 9.22, p < .001$ , partial  $\eta^2 = .28$ ). Typical and ASD individuals differed significantly on their level of social functioning ( $F_{(1, 49)} = 18.82, p < .001$ , partial  $\eta^2 = .28$ ) but not on their level of romantic functioning, ( $F_{(1, 49)} = 3.17, p > .05$ , partial  $\eta^2 = .06$ ). ASD individuals had a significantly lower level of social functioning than did typical individuals. Results indicated no significant differences between the two groups in their level of romantic functioning.

A second MANCOVA was performed using only age as a covariate. Even though age was not found to have an effect on learning sources, it may influence social and romantic functioning (see Fig. 1). When the effect of age was controlled, a significant difference was still found between groups in their overall level of social and romantic functioning ( $F_{(2, 59)} = 41.18, p < .001$ , partial  $\eta^2 = .58$ ). Univariate analyses revealed that when age was accounted for, the ASD and control groups still differed in their level of social functioning ( $F_{(1, 60)} = 82.95, p < .001$ , partial  $\eta^2 = .58$ ), however, they now differed significantly in their level of romantic functioning ( $F_{(1, 60)} = 39, p < .001$ , partial  $\eta^2 = .40$ ). Age contributed significantly to the level of romantic functioning ( $F_{(1, 60)} = 9.61, p < .01$ , partial  $\eta^2 = .14$ ) but

**Fig. 1** Social (A) and romantic functioning (B) across age for both control and ASD groups



did not contribute to level of social functioning ( $F_{(1, 60)} = 1.89, p > .05$ , partial  $\eta^2 = .03$ ). The difference in level of social functioning was accounted for by diagnosis alone, and the difference between groups on romantic functioning was accounted for by differences in age and ASD diagnosis.

A third MANCOVA was employed using age and social functioning as covariates for level of romantic functioning across groups. Both age ( $F_{(3, 59)} = 7.79, p < .01$ , partial  $\eta^2 = .12$ ) and social functioning ( $F_{(3, 59)} = 35.30, p < .01$ , partial  $\eta^2 = .37$ ) contributed significantly to romantic functioning, irrespective of group. When age and level of social functioning were accounted for, there was no significant difference found between groups in their level of romantic functioning ( $F_{(3, 59)} = 0.33, p > .05$ , partial  $\eta^2 = .01$ ).

**Factors Covarying with Social and Romantic Functioning**

Hierarchical regression analysis was used to investigate the individual variables covarying with social functioning level within ASD and typical participants. The results of the hierarchical regression predicting social functioning for each group are presented in Table 5. For typically developing participants, age predicted having a higher level of social functioning, and with gender and constant, had a contribution of 14% to the variance in social functioning ( $B = 0.01, sr = .36, p < .05$ ). Age was not a significant covariate in the ASD group, however, social learning via peers and friends made a significant contribution of 36% to the variance in social functioning after all other variables

**Table 5** Predictors of social functioning within ASD and control groups

Adjusted R <sup>2</sup>	Step removed	Variable	b-weight	SE	$\beta$	p	-95% CI	+95% CI	sr
<b>Control</b>									
0.08	1	Learning—Sibling	0.00	0.04	-.02	.94	-0.07	0.07	-.01
0.11	2	Learning—Media	-0.01	0.03	-.04	.87	-0.07	0.06	-.03
0.14	3	Learning—Sex education	-0.01	0.03	-.06	.74	-0.07	0.05	-.05
0.16	4	Learning—Observation	0.02	0.03	.11	.62	-0.05	0.08	.08
0.18	5	Learning—Peers	0.11	0.09	.27	.25	-0.08	0.30	.17
0.17	6	Learning—Parents	-0.04	0.03	-.23	.14	-0.09	0.01	-.22
0.14	7	Age	0.01	0.00	.36	.02	0.00	0.02	.36
		Gender	-0.08	0.05	-.25	.12	-0.17	0.02	-.25
		Constant	0.80	0.10		<.01	0.60	0.99	
<b>ASD</b>									
0.29	1	Age	0.00	0.01	.03	.89	-0.02	0.02	.02
0.33	2	Gender	-0.13	0.09	-.27	.15	-0.31	0.05	-.25
0.29	3	Learning—Sex education	0.01	0.06	.03	.87	-0.12	0.14	.03
0.32	4	Learning—Parents	-0.04	0.09	-.12	.66	-0.24	0.15	-.08
0.35	5	Learning—Observation	0.03	0.06	.10	.67	-0.10	0.16	.07
0.37	6	Learning—Media	-0.03	0.06	-.12	.60	-0.16	0.09	-.09
0.39	7	Learning—Sibling	-0.08	0.05	-.28	.14	-0.18	0.03	-.25
0.36	8	Learning—Peers	0.18	0.05	.62	<.01	0.08	0.27	.62
		Constant	0.32	0.06		<.01	0.20	0.44	

were removed ( $B = 0.18, sr = .62, p < .01$ ). Typical adolescents and adults increase in their level of social functioning with increased age, whereas ASD adolescents and adults increase in their level of social functioning with increased learning of social knowledge and skills from their peers and friends.

A second hierarchical regression analysis was performed to investigate the individual variables predictive of level of romantic functioning within ASD, and typical adolescents and adults. As social competence is assumed to be present for success in more complex intimate and romantic relationships, social functioning was used as a covariate in these analyses. The results of the hierarchical regression predicting romantic functioning for each group are presented in Table 6. For the control group, age ( $B = 0.01, sr = .41, p < .01$ ), sources of romantic learning from parents ( $B = -0.06, sr = -.26, p < .05$ ), siblings ( $B = -0.06, sr = -.29, p < .05$ ), social observation ( $B = -0.06, sr = -0.25, p = .05$ ), and peers and friends ( $B = 0.26, sr = .45, p < .01$ ), contributed to 48% of the variance in romantic functioning, and were all predictive factors for level of romantic functioning. In the ASD group, level of social functioning contributed 53% of the variance in romantic functioning ( $B = 0.79, sr = .74, p < .001$ ). Romantic functioning in typical adolescents and adults increases with increasing age, and by romantic learning from peers and friends. However, when typical individuals learn romantic knowledge and

skills from parents, siblings, or social observation, their level of romantic functioning decreases. For ASD adolescents and adult, romantic functioning increases with higher levels of social functioning.

Behaviours Engaged to Initiate and Pursue Social and Romantic Relationships

Group differences on the behaviours individuals engage in when attempting to pursue and initiate social and romantic relationships, and the type of person targeted by such behaviours (e.g., stranger, acquaintance, colleague, celebrity, friend) were calculated using  $\chi^2$  analyses. For each  $\chi^2$ , the expected value was the proportion the behaviour was displayed by control participants multiplied by the number of ASD participants. The relative probability for control and ASD groups displaying each behaviour is presented in Fig. 2. Relative probability is the probability of a behaviour ( $i$ ) displayed by a group ( $g$ ) oriented to a particular target ( $t$ ) relative to the probability of the behaviour(s) being displayed for all targets by the group (see Eq. 1)

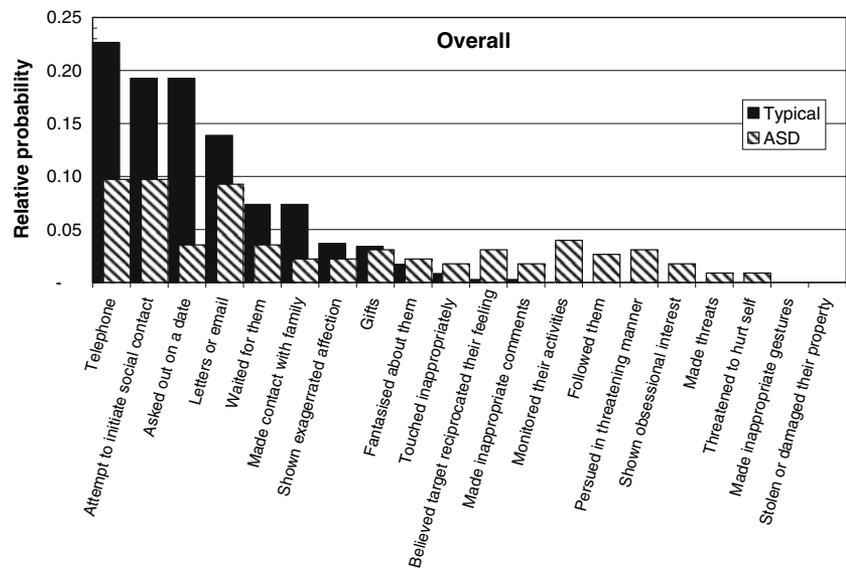
$$\sum_{i=1}^K x_{itg} / \sum_{i=1}^K x_{ig} \tag{1}$$

A Chi Square ( $\chi^2$ ) analysis was undertaken comparing the relative probability of behaviours displayed by

**Table 6** Predictors of romantic functioning within ASD and control groups

Adjusted $R^2$	Step removed	Variable	b-weight	SE	$\beta$	$p$	-95% CI	+95% CI	sr
Control									
0.43	1	Gender	0.01	0.06	.24	.88	-0.11	0.12	.02
0.45	2	Social functioning	-0.05	0.18	-.04	.28	-0.41	0.31	-.03
0.46	3	Learning—Sex education	0.02	0.03	.07	.61	-0.05	0.08	-.06
0.48	4	Learning—Media	-0.03	0.03	-.96	.34	-0.08	0.03	-.11
0.48	5	Learning—Peers	0.26	0.07	.86	<.01	0.12	0.40	.45
		Age	0.01	0.00	.45	<.01	0.01	0.02	.41
		Learning—Siblings	-0.06	0.02	-.35	.02	-0.11	-0.01	-.29
		Learning—Parents	-0.06	0.03	-.36	.04	-0.11	0.00	-.26
		Learning—Observation	-0.06	0.03	-.36	.05	-0.12	0.00	-.25
		Constant	0.42	0.09		<.01	0.24	0.60	
ASD									
0.44	1	Gender	-0.02	0.09	-.03	.86	-0.21	0.18	-.03
0.47	2	Age	0.01	0.01	.22	.24	-0.01	0.02	.18
0.46	3	Learning—Sex education	-0.02	0.10	-.07	.81	-0.23	0.18	-.04
0.49	4	Learning—Media	0.02	0.07	.05	.82	-0.13	0.16	.03
0.51	5	Learning—Siblings	-0.02	0.07	-.06	.81	-0.17	0.14	-.04
0.53	6	Learning—Peers	-0.05	0.08	-.15	.57	-0.21	0.12	-.08
0.54	7	Learning—Observation	0.05	0.07	.15	.48	-0.09	0.18	.10
0.56	8	Learning—Parents	0.08	0.05	.25	.14	-0.03	0.18	.21
0.53	9	Social functioning	0.79	0.15	.74	<.01	0.48	1.09	.74
		Constant	0.24	0.08		.01	0.07	0.40	

**Fig. 2** Relative probability of ASD and typical individuals displaying behaviours in attempting to pursue a social or romantic interest

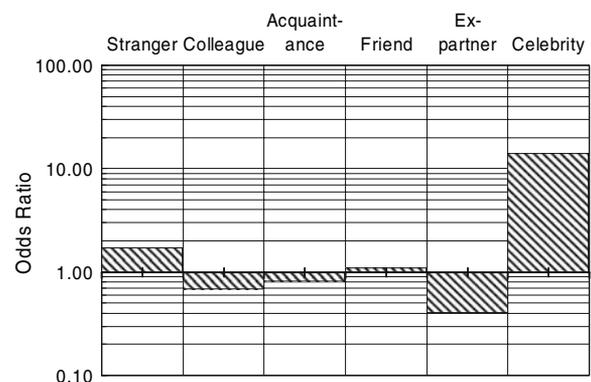


the ASD group against the expected value of those displayed by the control group. A main effect of behaviour was found ( $\chi^2 = 3168.74, df = 19, p < .001$ ), behaviours among the ASD group were significantly different from that which would be predicted from the control group. Overall, behaviours were less evident in the ASD group than the control group, and behaviours were directed less discriminately. The ASD group displayed a number of courtship behaviours that none of the control group did. Parents reported that “difficulties with making small talk”, “not fully understanding the concept of a girlfriend or boyfriend”, and their children’s “lack of empathy”, “lack of understanding in social contexts” or “difficulty reading social cues” were major contributing factors to their children’s relationship difficulties.

The odds ratio of ASD individuals compared to neurotypical individuals targeting certain types of people (e.g., stranger, friend, celebrity, etc.) for social or romantic relationships is presented in Fig. 3. There was a significant difference between the ASD and control groups in the type of target they pursued ( $\chi^2 = 2335.40, df = 5, p < .001$ ). While not apparent in Fig. 3, overall the ASD group initiated contact less as they have fewer behaviours, but when they do attempt relationship pursuit, they direct behaviours disproportionately towards inappropriate targets. One parent reported that their child would “ask a girl out if he thought she was pretty, thin, and kind to him”. Figure 3 reveals celebrities ( $\chi^2 = 19.45, df = 1, p < 0.001$ ) were more likely to be targeted by persons with ASD, this nonetheless was a rare event in the data, occurring in only 20% of cases. Non-significant

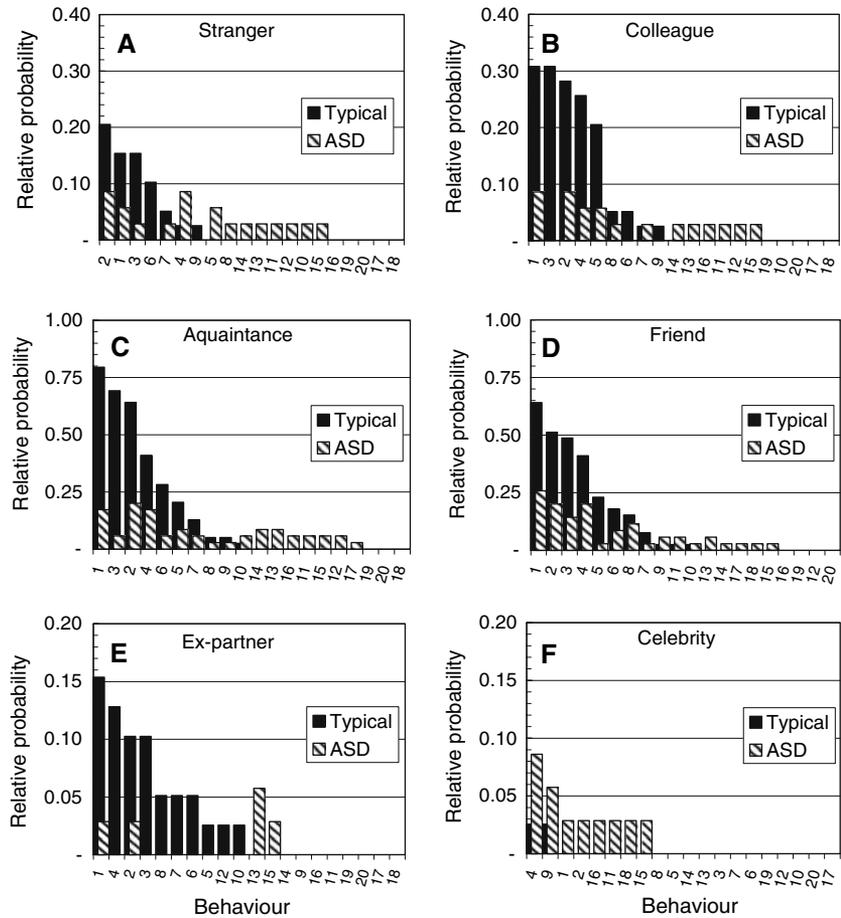
trends apparent in Fig. 3 suggest strangers were more likely to be targeted, while colleagues and acquaintances were less likely to be targeted.

The relative probability of ASD and typical adolescents and adults engaging in certain behaviours towards certain types of people for social or romantic relationships are presented in Fig. 4A–F. Analysis revealed a significant interaction effect of behaviour by target ( $\chi^2 = 1004.62, df = 95, p < .001$ ). The ASD group differed significantly from the control group in the types of behaviours they expressed to each type of



**Fig. 3** Odds ratio of individuals with ASD approaching different types of targets in an attempt to pursue a romantic relationship. ASD are compared to neurotypical individuals. Scores above 1 indicate persons with ASD more likely to approach, scores below 1 indicate persons with ASD less likely to approach. The odds ratio is plotted over a log scale to present differences above and below 1 that are of similar magnitude, yet different numerical value

**Fig. 4** Relative probability of 20 various courting behaviours expressed towards six various targets for both typical and ASD. Behaviours are sorted by probability of the behaviour in typical adolescents and adults with ASD behaviours overlaid. Behaviours are towards: **A.** Strangers, **B.** Acquaintances, **C.** Colleagues, **D.** Friends, **E.** Ex-partners, **F.** Celebrities. Behaviours are: 1, telephone; 2, attempt to initiate social contact; 3, asked out on a date; 4, letters or e-mail; 5, waited for them; 6, made contact with family; 7, shown exaggerated affection; 8, gifts; 9, fantasized about them; 10, touched inappropriately; 11, believed target reciprocated their feelings; 12, made inappropriate comments; 13, monitored their activities; 14, followed them; 15, pursued in threatening manner; 16, shown obsessive interest; 17, made threats; 18, threatened to hurt self; 19, made inappropriate gestures; 20, stolen or damaged their property



target. ASD individuals had a wider array of behaviours with all targets than typical individuals.

Persistence in Attempts to Establish Romantic Relationships

To examine whether the ASD group pursued a romantic interest longer than control subjects in the event of no response or varying negative response, two-tailed *t*-tests were employed. The length of time relationships were pursued was measured ordinally in four categories: “never”, “days”, “weeks”, and “months”. Subjects were asked to endorse the response reflecting the duration of pursuit of romantic interest. The response frequencies were converted to location scores (see Eq. 2), rendering a parametric distribution (cf. Bond & Fox, 2001; Tabachnick & Fidell, 1996)

$$\hat{Y}_{\text{Location}} = -\text{Log}\left(\frac{n_c/N}{1 - (n_c/N)}\right). \tag{2}$$

Within Eq. 2, the location score for each category (*c*) is the natural log of the proportion of cases

choosing a particular category (*c*) divided by one minus this proportion. The natural log score is negated to return the original direction of scores, such that higher ordinal categories are assigned a more positive location score. If both groups are from the same distribution, then mean location scores will be equivalent, and an independent *t*-test will reveal no differences. Further, these scores can be converted to a range 0–1, where the minimum location score is subtracted from the location score, and the total is divided by the range (Eq. 3). Location scores are normally distributed, adopt a parametric distribution, and may be analysed by normal parametric techniques, thus preserving the power of these techniques (Bond & Fox, 2001; Tabachnick & Fidell, 1996). Location scores have a normative mean of 0, however, following conversion here the normative mean would be 0.5

$$\hat{Y} = \frac{\hat{Y}_{\text{Location}} - \text{Min}(\hat{Y}_{\text{Location}})}{\text{Max}(\hat{Y}_{\text{Location}}) - \text{Min}(\hat{Y}_{\text{Location}})}. \tag{3}$$

Means and standard deviations of location scores are presented in Table 7. Because the homogeneity of

**Table 7** Mean location score reflecting the length of time neurotypical and ASD adolescents and adults pursue a romantic interest in the event of no response or negative responses

Length of time pursue if	ASD <i>n</i> = 25			Control <i>n</i> = 38			<i>t</i>	<i>p</i>
	Mean	<i>SD</i>	<i>SEM</i>	Mean	<i>SD</i>	<i>SEM</i>		
No response from person	0.53	0.03	0.00	0.57	0.06	0.01	-2.23	0.04
Negative response from person	0.46	0.06	0.01	0.54	0.11	0.03	-2.67	0.02
Negative response from person's family or friends	0.47	0.06	0.01	0.54	0.10	0.03	-2.35	0.03

See text for explanation of location score. Larger scores indicate that the relationship was pursued for greater time. Scores range between 0 and 1 and are normally distributed with a normal mean of 0.5

variance test indicated heterogeneous variances the less powerful technique of independent *t*-tests assuming unequal variances was used. Results revealed that the groups significantly differ in the length of time they pursue a romantic interest when there was no response from the person ( $t = -2.23$ ,  $df = 18.79$ ,  $p < .05$ ), when there was a negative response from the person ( $t = -2.67$ ,  $df = 18.64$ ,  $p < .05$ ), and when there was a negative response from the person's family or friends ( $t = -2.35$ ,  $df = 19.86$ ,  $p < .05$ ). ASD adolescents and adults persisted in pursuing the target for longer than typical adolescents and adults across when no response or a negative response from the person of interest or their family or friends. Parents reported that it was often difficult for their child to "understand when to cease persisting in their relationship attempts" and not "harass the person". They also reported that their children "did not believe they were doing anything wrong" and that "they could not understand why the person was not responding to them as they wanted".

## Discussion

It was hypothesised that when compared to typical adolescents and adults, those with ASD would: (1) differ in their sources of learning social and romantic knowledge and skills, specifically they would have less access to peers and friends; (2) that level of social functioning would predict romantic functioning; (3) engage in more intrusive or unacceptable behaviours in attempting to initiate a social or romantic relationship; and (4) persist in pursuit of a romantic interest for a greater length of time in the face of a negative or no response from the person. The results of the present research supported these hypotheses.

Not surprisingly, ASD individuals were reported to have less access to their peers and friends as sources of learning to acquire social and romantic skills and knowledge. This is likely a reflection of the core deficits characteristic of ASDs itself, as impairments in communication and social reciprocity lead to greater

difficulties in socialisation and development of meaningful social relationships. Although not surprising, this is problematic in that social learning from peers and friends is a significant predictor of overall social functioning. This, of course, is a noted "vicious circle" which individuals with ASD have long suffered leaving the desire for social relationships generally unfulfilled. Consequently, they are prevented from the typical development of overall social competence. Level of social competence was expected to increase with increased age, which would in turn increase the ASD individuals' ability for meaningful interpersonal relationship, however, this was not found. In typically developing individuals, social functioning was reported to increase as a function of age, as would generally occur given the typical developmental trajectory and acquisition of new skills, knowledge, and experience. Their level of romantic functioning also increased as a function of age. Confounding these impairments is that social functioning is the only significant influence on level of romantic functioning in ASD adolescents and adults that we found. As they have not developed an appropriate level of social functioning, they are without the foundation required in acquiring the skills or experience necessary for more complex intimate and romantic relationships. In line with the assumed developmental trends associated with ASDs, the results of this study showed that when the effect of age was controlled, ASD individuals' reported level of romantic functioning was significantly lower than that reported of their typical peers. This indicates a developmental lag, whereby, they may actually gain higher levels of social and romantic functioning with age, but it may occur at a slower rate than that found in normal developmental trends. This result concurs with Stokes and Kaur (2005), who reported that typically, sexual behaviour is a function of age and social skills, and that at the same age as that of their normal peers, adolescents with ASD are shown to have significant deficits in their social and sexual behaviour.

In line with the second hypothesis we found the only significant predictor of romantic functioning among

those with ASD was level of social functioning which was itself dependent upon learning from peers. Individuals with ASD were not reported as obtaining any learning of romantic skills from parents, siblings, observation, the media, sex education, or peers. This suggests, as many working in the field would suspect, that interventions based upon social skills would impact upon and improve romantic functioning.

An interesting result of the analysis in relation to typically developing adolescents and adults was that the contribution to romantic learning from parents, siblings, and social observation as reported actually negatively affected the young person's level of romantic functioning. The more these various sources contributed, the worse skills became among these individuals. Studies investigating the association between familial relationships and social and romantic functioning in typical adolescents and adults have generally concentrated on the nature of the familial relationships (i.e., conflict, closeness, attachment, support) and how these past experiences influence current functioning (Furman & Wehner, 1997; Shulman & Scharf, 2000), rather than treating the relationships as a potential learning source for knowledge and skills. It is not unusual for people to hold a belief that parents generally teach their children, or the child learns from their siblings, many of the skills required for adequate romantic functioning, and that this would have a positive effect. This was not the case in this study. These sources reduced romantic function, which is interesting, and it may have implications for future research in regards to how and where typical individuals acquire the skills and knowledge to function adequately in more complex romantic relationships.

Although ASD individuals lack social competence and have deficits in romantic functioning, many still possess a desire for social and romantic relationships, and actively seek out such relationships. It is natural for many individuals with ASD to desire a romantic partner, and this is often heightened by the belief that it is normal to have a boyfriend or girlfriend as "everyone else has one" (Howlin, 1997; Stokes & Newton, 2004). Examination of relationships the individuals were reported to have had with the target of their social or romantic interest, indicated that ASD adolescents and adults sought to initiate fewer social and romantic relationships but across a wider variety of people, such as strangers, colleagues, acquaintances, friends, ex-partners, and celebrities. This was also seen in their typically developing peers, however, these individuals were more likely to target colleagues, acquaintances, friends, and ex-partners in their relationship attempts, whilst the ASD group

targeted these less frequently than expected, and attempted to initiate relationships significantly more frequently than is typical, with strangers and celebrities.

In attempting to pursue and initiate social and romantic relationships, the ASD group were reported to display a much wider variety of courtship behaviours than the typical group. Typical adolescents and adults were reported to generally engage in a high frequency of appropriate behaviours directed towards a specific person of social or romantic interest. It was expected that a similar pattern would be seen for ASD adolescents and adults, however they were reported to engage in acceptable behaviours much less frequently and engaged in numerous inappropriate courtship behaviours that typical individuals did not. ASD adolescents and adults were more likely to touch the person of interest inappropriately, believe that the target must reciprocate their feelings, show obsessional interest, make inappropriate comments, monitor the person's activities, follow them, pursue them in a threatening manner, make threats against the person, and threaten self-harm. ASD individuals displayed the majority of the behaviours indiscriminately across all types of targets. The results indicate that adolescents and adults with ASD do not know how to discriminate between appropriate and inappropriate behaviours, or to be discerning in their choice of target. The complexity of addressing both only exacerbates this situation. It appears that individuals with ASD tend not to engage in behaviours that require interpersonal contact (e.g., asking on a date, telephoning, attempting social contact). This may be due to a lack of awareness that such strategies are usually how people initiate relationships, or it could be due to a lack of confidence in their reduced social competence.

In displaying such indiscriminate strategies to initiate social and romantic relationships, ASD individuals appear to be crossing the blurred line between normal courtship behaviour and stalking. The behaviours that they display, as opposed to those engaged in more frequently by typical adolescents and adults, are quite intrusive, and constitute what is considered to be stalking. This supports the suggestion by Stokes and Newton (2004) that those with ASD may have an unrecognised preponderance towards intrusive and stalking behaviours. ASD adolescents and adults were also found in this present study, to persist in their relationship pursuits for significantly longer periods of time than typical adolescents and adults when they received a negative or no response from the person or their family.

Conversely, typical adolescents and adults appeared to be aware that their interest was not reciprocated and ceased their attempts.

Due to ASD individuals' lack of empathy and awareness of social norms, they have difficulty understanding that the strategies they employ to pursue relationships are inappropriate and might be distressing to the person of interest. These factors may be important in explaining why ASD individuals do not accept rejection by the person of interest, and persist in their pursuits for much longer periods than their typical counterparts. Considering both the indiscriminate and intrusive nature of their relationship attempts, and their tendency to continually persist, for weeks or months, in their pursuit of a relationship, ASD individuals may be seen as annoying or harassing in many cases due to their social ineptness. However in more serious cases, such behaviours would be classified as stalking. Individuals with ASD are at considerable risk of negative consequences and punishment due to such indiscriminate and intrusive social and romantic relationship behaviours. The inherent lack of social functioning and understanding may cause significant problems for the individual attempting to engage in social interaction and initiate relationships, as well as for other individuals in the general community who are targeted. Society tends to criminalize such behaviours, and in some cases, serious legal repercussions may ensue. To prevent this, intensive socio-sexual interventions are required to improve social interaction skills and provide experiences so that they are able to develop better social and romantic functioning without encountering serious problems.

There are several limitations of the study that must be noted. First, all of the data were obtained from the parents. Due to the nature of ASDs, self-report sources of information are often restricted and unreliable, particularly in the cases of the individual with more impaired social/cognitive skills (Realmuto & Ruble, 1999). As such, parental ratings were employed for a more objective measure of behaviours and functioning. Being the parent of an adolescent or adult *with* or *without* an ASD diagnosis does not render one necessarily privy to the whole reality of their child. A parent may not know much about the number or type of social or romantic relationships, let alone what behaviours are engaged in when their child is in pursuit of a relationship. This data may be reflective of underreporting due to lack of knowledge of their child's social life, or conversely, some parents may have confabulated and answered in hypothetical terms of what they thought their child might do. Further, where learning from parental sources was negative, it is entirely

possible that the reduced score was because increased parental involvement led to child increasingly hiding their behaviour from the parent. Second, the instrument developed for this current study may not have been sufficiently specific or well defined to elicit full influences on social and romantic functioning, as other variables not included in this study could play significant roles. Further development of this instrument is required. Counterbalancing these limitations is the fact that this is the first study of its kind to specifically address the contribution of learning sources for social and romantic functioning, the influence of social functioning on future romantic functioning, and specific behavioural strategies ASD individuals employ when attempting to initiate interpersonal relationships. The results have highlighted an important, yet overlooked area in ASD research with older individuals, and one that is becoming of increasing importance.

The present findings provide empirical support for previously untested assumptions regarding the impact of social functioning on subsequent romantic functioning (Stokes & Kaur, 2005), and that ASD individuals may possess a strong preponderance toward behaviours that may be interpreted as stalking in their attempts to initiate social and romantic relationships (Stokes & Newton, 2004). It is apparent from the data, that peer relationships and friendships are the most important influence on social functioning, and subsequently, romantic functioning. The implication of this has been highlighted in the literature, and illustrates the necessity for the development of social skills programs that promote and include peer interaction for individuals with ASDs (Ousley & Mesibov, 1991; Realmuto & Ruble, 1999; Stokes & Kaur, 2005). As the level of social functioning predicts romantic functioning, the development and facilitation of formal programs in sex education and intimate relationship issues must contain a significant social skills component that encourages active socialisation with peers and initiation of friendships. If social skills and knowledge are not of an adequate level, the more complex sexual knowledge will not have a basis to build from, and may be extraneous at that point. As there is a risk of legal contact due to ASD individuals' frequent inappropriate and intrusive courtship behaviours, enforcement and judicial agencies must become familiar with the symptoms and deficits of ASD in older adolescence and adulthood, as it does cause significant social difficulties and individuals' behaviours are often in conflict with prevailing societal and legal norms. An awareness and recognition is required, that the contribution of the social

impairments of ASD combined with a strong desire for attachment and relationships could lead to illegal behaviour, therefore appropriate interventions need to be employed (Howlin, 1997; Stokes & Newton, 2004).

The present study revealed that there is a difference between typical adolescents and adults and those with ASDs in social and romantic learning sources, and level of social and romantic functioning, which is consistent with the nature of the condition and its developmental implications. In addition, it was found that relationships and friendships are integral to the development of adequate social functioning, and that in turn, social functioning plays an important role in the development of romantic functioning for ASD individuals. ASD individuals are indiscriminate in the types of people they target to pursue interpersonal relationships with, and in the types of behaviours they display in such attempts. They tend to display a higher than expected level of inappropriate and intrusive behaviours, consis-

tent with stalking, across all types of targets of interest. This research has empirically identified issues of concern that have not yet been addressed in the literature, and provided clarity as to specific influences on ASD individuals' social and romantic functioning and behaviours. The significant role of peer relationships and friendships in the development of adequate social functioning indicates that this is an aspect to be emphasized in social skills programs, and that these should also be present in any sexual education program as social functioning is indicative of level of romantic functioning. As the prevalence of ASD is increasing (Fombonne, 2003; Prior, 2003), researchers, clinicians, the general community, and the legal system will come across more and more individuals with ASD in the course of their daily work and personal lives. Thus, an awareness and understanding of the inherent lack of social competence and often inappropriateness is necessary to effectively manage these individuals without being punitive.

Appendix

Courting Behaviour Scale

This is an anonymous questionnaire.  
Please do not write your name or any identifying marks.

Before completing this questionnaire, carefully read the attached Plain Language Statement as it explains the purpose of this research. By completing and returning this questionnaire, you are indicating your consent to participate in this research.

1. \_\_ How old is your child? \_\_\_\_\_ Years \_\_\_\_\_ Months
2. What is your child's gender?  Male  Female
3. You are your child's...  
 Mother  Father  Step-mother  Step-father  Other/Guardian
4. Does your child have a developmental disorder?  
 Yes  No  
  
If yes, please specify the diagnosis (eg., Autism, Aspergers Syndrome, PDD, PDDNOS, etc) and at what age the diagnosis was received.  
Diagnosis \_\_\_\_\_ Years \_\_\_\_\_ Months
5. Has your child been diagnosed with any other disorder(s) (e.g., Attention Deficit Hyperactivity Disorder, Learning Difficulties, Schizophrenia, Conduct Disorder, etc)?  
 Yes  No  
  
If yes, please specify which disorder(s), and at what age the diagnosis was received.  
Diagnosis \_\_\_\_\_ Years \_\_\_\_\_ Months  
Diagnosis \_\_\_\_\_ Years \_\_\_\_\_ Months  
Diagnosis \_\_\_\_\_ Years \_\_\_\_\_ Months
6. Is your child currently:  
 In pre-school \_\_\_\_\_ Level  In primary school \_\_\_\_\_ Level  
 In secondary school \_\_\_\_\_ Level  In tertiary education \_\_\_\_\_ Level  
 Undertaking apprenticeship  Employed  
 Unemployed  Other

## Appendix continued

## SOCIAL RELATIONSHIPS

Please mark (X) the most appropriate response

7. Apart from members of your family, does your child socialise with others?  
 Never     Rarely     Sometimes     Often     Always
8. Does your child show interest in social relationships with people outside the family?  
 Never     Rarely     Sometimes     Often     Always
9. Apart from members of your family, does your child socialise with members of the opposite sex?  
 Never     Rarely     Sometimes     Often     Always
10. Does your child show interest in social relationships with members of the opposite sex?  
 Never     Rarely     Sometimes     Often     Always
11. Does your child know how to initiate social relationships (e.g., friendship, work colleague)?  
 Never     Rarely     Sometimes     Often     Always
12. Does your child have any meaningful social relationships (e.g., close friends)?  
 None     1     2 to 3     More than 3
13. How did your child learn to initiate social relationships? (Please mark all that apply)  
 From you (parents)     By social observation  
 From formal sex education     From their peers and friends  
 From their siblings     From the media (e.g., TV, movies, magazines, etc)  
 Other \_\_\_\_\_
14. Do you think your child has any knowledge about sexually related behaviour?  
 Yes     No
15. Is your child aware of the different kinds of intimate/romantic relationships (e.g., dating, marriage, etc)?  
 Yes     No

## INTIMATE/ROMANTIC RELATIONSHIPS

Please mark (X) the most appropriate response

16. Does your child desire to have an intimate/romantic relationship?  
 Yes     No
17. Does your child know how to initiate intimate or romantic relationships (eg. ask for a date, resume a relationship)?  
 Yes     No
18. Has your child ever attempted to pursue a romantic interest?  
 Yes     No

Appendix continued

19. Is your child currently in an intimate relationship?  
 Yes  No If yes, for how long? \_\_\_\_\_ Years \_\_\_\_\_ Months

20. How many intimate or romantic relationships has your child had?  
 None  1  2 to 3  More than 3

21. How long has your child maintained an intimate or romantic relationship (on average)?  
 Less than 1 month  1-6 months  6-12 months  1-2 years  More than 2 years

22. How did your child learn how to initiate romantic relationships? (Mark all that apply)  
 From you (parents)  By social observation  
 From formal sex education  From their peers and friends  
 From their siblings  From the media (e.g., TV, movies, magazines, etc)  
 Other \_\_\_\_\_

23. When your child pursues a romantic interest, is that person usually:  
 A stranger  An acquaintance  
 A work colleague  A friend  
 A celebrity  An ex-boyfriend or ex-girlfriend  
 Other \_\_\_\_\_

24. Does your child have difficulty understanding what is and is not appropriate (e.g. persistently calling someone of romantic interest even after that person asked them not to)?  
 Yes  No

If yes, what is difficult for your child to understand?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

25. How long would your child usually continue to pursue a person of romantic interest when:

	Never	Few days	Few weeks	Few months
There was no response from person _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There was negative response from person _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There was a negative response from person's friends or family _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There was involvement of criminal justice system _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix continued

**PLEASE NOTE THIS QUESTION REFERS TO BEHAVIOURS THAT MAY NEVER HAVE OCCURRED.**

26. If your child has attempted to pursue a romantic interest, has your child engaged in any of the following behaviours toward strangers, colleagues, acquaintances, friends, celebrities, or ex-partners:

Please mark (X) all that apply

	Stranger	Colleague	Acquaintance	Friend	Celebrity	Ex
Telephoned them _____	<input type="checkbox"/>					
Sent letters or email _____	<input type="checkbox"/>					
Sent gifts _____	<input type="checkbox"/>					
Waited for them outside home or work _____	<input type="checkbox"/>					
Followed them home or to work _____	<input type="checkbox"/>					
Monitored their activities _____	<input type="checkbox"/>					
Attempted to initiate social contact with the person of interest _____	<input type="checkbox"/>					
Asked the person of interest out on a date _____	<input type="checkbox"/>					
Shown exaggerated affection _____	<input type="checkbox"/>					
Fantasised about them _____	<input type="checkbox"/>					
Shown obsessional interest _____	<input type="checkbox"/>					
Displayed a strong belief that the person of interest must reciprocate their feelings _____	<input type="checkbox"/>					
Made contact with the person's friends or family _____	<input type="checkbox"/>					
Made inappropriate gestures _____	<input type="checkbox"/>					
Made inappropriate comments _____	<input type="checkbox"/>					
Touched inappropriately (e.g. Try to kiss or fondle) _____	<input type="checkbox"/>					
Stolen or damaged their property _____	<input type="checkbox"/>					
Made threats _____	<input type="checkbox"/>					
Threatened to hurt self _____	<input type="checkbox"/>					
Ever persistently pursued a person in a way that could be perceived as threatening _____	<input type="checkbox"/>					
Other more serious behaviours _____	<input type="checkbox"/>					

If other, please detail \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**PLEASE NOTE THIS QUESTION REFERS TO BEHAVIOURS THAT MAY NEVER HAVE OCCURRED.**

27. If your child has attempted to pursue a relationship (social or romantic), with what frequency has your child engaged in any of the following behaviours:

Please mark (X) all that apply

	Never	Rarely	Sometimes	Often	Always
Telephoned them _____	<input type="checkbox"/>				
Sent letters or email _____	<input type="checkbox"/>				
Sent gifts _____	<input type="checkbox"/>				
Waited for them outside home or work _____	<input type="checkbox"/>				
Followed them home or to work _____	<input type="checkbox"/>				
Monitored their activities _____	<input type="checkbox"/>				
Attempted to initiate social contact with the person of interest _____	<input type="checkbox"/>				
Asked the person of interest out on a date _____	<input type="checkbox"/>				
Shown exaggerated affection _____	<input type="checkbox"/>				
Fantasised about them _____	<input type="checkbox"/>				
Shown obsessional interest _____	<input type="checkbox"/>				
Displayed a strong belief that the person of interest must reciprocate their feelings _____	<input type="checkbox"/>				
Made contact with the person's friends or family _____	<input type="checkbox"/>				
Made inappropriate gestures _____	<input type="checkbox"/>				
Made inappropriate comments _____	<input type="checkbox"/>				
Touched inappropriately (e.g. Try to kiss or fondle) _____	<input type="checkbox"/>				
Stolen or damaged their property _____	<input type="checkbox"/>				
Made threats _____	<input type="checkbox"/>				
Threatened to hurt self _____	<input type="checkbox"/>				
Ever persistently pursued a person in a way that could be perceived as threatening _____	<input type="checkbox"/>				
Other more serious behaviours _____	<input type="checkbox"/>				

If other, please detail \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Appendix continued

The following questions ask about sensitive issues that you may believe are irrelevant to your child, if so please simply ignore them.

However, some people may have experienced events that these questions ask about. If you have experienced these events, and are willing to provide answers to these questions, these answers would be very helpful.

28. If yes, are you aware of any requests to your child asking them to refrain from any behaviour directed toward target of romantic interest?

- Yes  No

If yes, from who?

- The person they are or were interested in  
 A family member of the person they are or were interested in  
 A teacher or school principal  The police  
 Their employer  Other \_\_\_\_\_

29. If there has been any involvement of the police/justice system in relation to this behaviour, what was the legal outcome for your child?

- Official warning  Intervention order  
 Apprehended violence order  Charged with an offence  
 Remanded or found guilty of an offence  Community treatment order  
 Referred for treatment (e.g., psychologist or psychiatrist)  
 Other \_\_\_\_\_

30. Please describe your child's response to these situations. For example, "they did not believe they were doing anything wrong", or "they could not understand why the person was not responding to them as they wanted".

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

31. Has your child ever had any contact with the justice system due to their behaviour?

- Yes  No

If yes, what age was your child when this incident(s) occurred? \_\_\_\_ Years \_\_\_\_ Months

32. Details of this incident, and subsequent contact with the justice system would be very helpful and useful. If you felt comfortable, would you provide some detail of this event?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Thank you for your participation!

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