

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF DEPARTMENT OF COMMUNICATION SCIENCES AND DISORDERS

NATURE OF ROMANTIC RELATIONSHIPS IN YOUNG ADULTS WITH AUTISM
SPECTRUM DISORDER COMPARED TO NEUROTYPICAL PEERS

CARLY REBECCA ROSSMAN
SPRING 2015

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Communication Sciences and Disorders
with honors in Communication Sciences and Disorders

Reviewed and approved* by the following:

Erinn H. Finke
Assistant Professor of Communication Sciences and Disorders
Thesis Supervisor

Ingrid M. Blood
Professor of Communication Sciences and Disorders
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

This purpose of this study was to investigate the way young adults, ages 18 to 24, with Autism Spectrum Disorder (ASD), make and maintain relationships compared to their neurotypical (NT) peers. The current study focused specifically on relationships of a romantic nature. The data were gathered through an online Qualtrics® survey completed by 200 participants, 100 with ASD and 100 with typical development. The results indicated wide variation in the responses from the two groups. The individuals with ASD reported having significant trouble in making and maintaining romantic relationships compared to the NT group, despite having interest in these types of connections. Results indicated a need for continued research related to effective evidence-based practices to support individuals with ASD in the establishment and maintenance of romantic relationships.

Keywords: ASD, Romantic Relationships, Adolescents

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ACKNOWLEDGEMENTS

I would like to thank first and foremost Dr. Erinn Finke for her consistent support, guidance, and positive attitude throughout the formation and review of this research study. I would also like to recognize and thank Penn State graduate students Nadia Grau, Natalie Sarver, and Kayla Miller for the hard work, dedication and numerous hours spent on this research project. Additionally, I would like to thank my family for their continuous support, endless encouragement, and for always believing in me.

Chapter 1

Introduction

What is a Romantic Relationship

Romantic Relationships, as defined by Collins, Welsh and Furman (2009), are “mutually acknowledged ongoing voluntary interactions” that are “commonly marked by expressions of affection and current or anticipated sexual behavior” (p. 2). They are different from platonic friendships in that these relationships combine the fulfillment of intimacy needs, such as sexual behaviors, as well emotional support (Weiss, 1974). While platonic friendships also require reciprocation, loyalty and the belief they will obtain empathetic support (Kon & Losenkov, 1978), there is no aspect of intimacy involved. Although every relationship is unique, according to Sternberg (1986), there are three main components that must be present in order for it to be considered romantic: passion, intimacy and commitment.

Adolescence and Romantic Relationships

The establishment of close romantic relationships is an important aspect of development during adolescents’ transition into adulthood (Arnett, 2000; Erikson, 1982). Romantic relationships have been shown to encourage adolescents to take on more adult responsibilities and roles (Paul & White, 1990). Individuals involved in romantic relationships have also reported experiencing greater emotional regulation and stability (Meeus et al. 2007). Romantic

experiences have also shown to have an effect on self-esteem, self-confidence, and social competence of people involved in romantic relationships (Pearce et al. 2002). In addition to how romantic relationships affect development, it also affects overall well-being and happiness (Demir, 2007; Dush & Amato, 2005).

Different Types of Romantic Relationships

Romantic relationships and experiences come in many different forms and intensities. They can range from fantasies and “crushes”, to sexual encounters with potential romantic partners, to committed relationships (Collins, Welsh, & Furman, 2009). There is also a spectrum of commitment associated with these relationships. Furman and Wehner (1994) outlined this spectrum, and developed four categories/stages of relationships. These stages included: “(1) simple interchanges between opposite-sex peers that are motivated by pubertal maturation (2) casual dating in short-term partnerships that fulfills early and middle adolescents’ needs for affiliation and passionate feelings, (3) stable relationships in which older adolescence’ needs for intimacy are met alongside those of sexuality and affiliation, and (4) committed relationships in which young adults are more able to be caretakers for all of their partner’s emotional needs” (p. 185, see *Social Development: Relationships in Infancy, Childhood, and Adolescence*). These stages create a clear path of development for romantic relationships, from casual to committed. As the individual matures, both physically and emotionally, they become ready to engage in the next phase of these relationships

As individuals develop and advance into the next phase of life, their relationships follow suit. More serious, intimate, committed relationships begin to develop in late adolescence

(Arnett, 2000). The longevity as well as seriousness of these relationships also tends to increase (McCabe, 1984; Furman et al., 1999). Arnett (2004) found that adolescent individuals begin to look for lifelong partners, rather than casual relationships (Arnett, 2004). In 2003, according to Carver et al., more than 50% of adolescents reported involvement in a significant romantic relationship within the past year and a half.

Prior to this stage, platonic friendships and romantic relationships were of equal importance, however in adolescence there is a shift. Adolescents tend to have a larger focus on romantic relationships than friendships (Zimmer-Gembeck, 2004). According to Gray and Steinberg (1999), this may be because romantic relationships are connected to the development of autonomy and gaining independence from family. These relationships, therefore, not only satisfy emotional and sexual needs, but also the inherent need for independence, which is important to the development of adolescents.

While romantic relationships begin to become more serious, in terms of commitment, in adolescence the majority are still considered casual. According to the U.S. Census, only 12.1% of individuals ages 18-24 are married. The average age of marriage in the United States is 26.5 years for women, and 28.7 years for men. This means, that while adolescent relationships are still considered significant, for the most part, they are not culminating in marriage. Therefore the focus of the current research project is on the experiences of adolescents within casual, romantic relationships.

Demands of Casual/Dating Relationships

A casual relationship is defined as a romantic relationship without long-term commitment (Seiffge-Krenke, 2003). Individuals in casual romantic relationships may or may not see a future with their partners, but there has been no promise of marriage made or expressed between the partners. These relationships are different than open relationships, because there is exclusivity involved and expected. These relationships also differ from marriage as well because they are transient, and the affiliations can be ended relatively easily (Laursen and Bukowski, 1997).

According to Collins and Laursen (2004), individuals participating in casual relationships spend a significant amount of time with their partners. More time is spent with their significant other than either platonic friends or family members and the interactions between significant others differ than those with their friends and family. (Collins, Welsh, & Furman, 2009)

One of the major differences between platonic relationships and romantic relationships is the introduction of the sexual aspect. A study reported by Child Trends' stated that about 31% of young adults reported engaging in sexual intercourse with their significant other within one month of knowing him or her ("Characteristics of Young Adult Sexual Relationships," n.d.).

While there has not been much research on the specific activities individuals in romantic relationships participate in together, there are likely some similarities to the activities platonic friends do together. Mathur & Berndt (2006), reported that some common activities for early adolescent friends include going to the movies, eating meals together, having sleepovers, and playing sports. It is probable that young couples also commonly engage in many of these activities.

Characteristics of Romantic Partners

Individuals in romantic relationships seek out specific characteristics in a partner (Hazan & Shaver, 1987). In 2004, Cann surveyed 300 neurotypical participants on what specific qualities they look for in a romantic partner. The following characteristics ranked highly among the majority of the respondents: sensitive, affectionate, emotional, and tactful. In another study, interpersonal skills such as “well liked by many people” and “gets along with others” were ranked highly (Roscoe et. al.,1987). These qualities listed all are rooted in the social skill abilities and the social understanding of the romantic partner, which do not come easily for those with autism spectrum disorder (ASD).

Autism Spectrum Disorder

Autism spectrum disorder is the diagnosis given to individuals with a wide range of social, communicative, and cognitive processing impairments that impact functioning in various settings (American Psychiatric Association [APA], 2013). People with ASD must exhibit deficits in the areas of social communication as well as restricted and repetitive behaviors, as described in the *Diagnostic and Statistical Manual of Mental Disorders- Fifth Edition*. The conceptualization of this disorder as a spectrum represents the wide range of individuals with ASD. Some people with ASD are exceptionally high functioning and verbal while some individuals with ASD have many severe symptoms associated with their ASD and may be nonverbal. This is a heterogeneous group, however, there are some aspects of this disorder that are consistently observed across the population.

Some characteristic features of the social impairments associated with ASD include avoidance of eye contact, trouble with discussing their emotions and/or the emotions of others, and little awareness of widely accepted personal space boundaries (CDC, n.d.) Other common behaviors are the avoidance or resistance of physical contact, inappropriate facial expressions, and failure to respond to others in their environment (CDC, n.d.). It has also been found that individuals with ASD avoid initiating conversation with other individuals (Curtis, 2012) and may have trouble communicating in general. These difficulties may make it difficult for individuals with ASD to make and maintain all relationships, especially those of a romantic nature.

ASD and Romantic Relationships

There has been little research on the romantic tendencies and desires of adolescents with ASD. The majority of studies in this area that include people with ASD focus on platonic relationships. However, many individuals with ASD wish to pursue relationships of a more romantic nature. Parents of adults with ASD were asked if they felt their child would be interested in having a romantic partner, 44% said yes (Farley et al., 2009). Additionally, in a study conducted by Müller et al. (2008), individuals with ASD expressed a desire for romantic fulfillment. Siebelink et al. (2006) asked individuals with ASD what they would do with a hypothetical significant other. The responses provided by the participants were predominately focused on sexual behaviors (hugging, kissing, and sexual intercourse). Parents of adolescents with ASD have also discussed this interest in physical intimacy by their children. Church and colleagues (2000) reported that parents of young adults on the spectrum felt their children with ASD viewed members of the opposite sex as a curiosity rather than an infatuation. Finally Stokes

et al., (2007) reported that adolescents with ASD who were interested in romantic relationships have little knowledge of how to act upon these feelings and often approached romantic relationships in an atypical fashion; by following, monitoring, and touching their romantic interest.

These studies give insight into the fact that there is a desire on the part of individuals with ASD to pursue romantic relationships. However, there is little known about what emotional rather than physical connections these individuals are seeking through these romantic engagements. Additionally, there seems to be little information regarding intervention efforts aimed at helping adolescents with ASD obtain these connections.

Why it Matters

As stated above, romantic relationships are important for developmental growth in all individuals, including those with ASD. Unfortunately, there is limited information available about the formation of romantic relationships by adolescents with ASD. Further, the research that has been published to date comes primarily from the perspective of parents rather than the individuals themselves (Stokes et al., 2007). Another challenge to investigating the perspectives of individuals with ASD themselves is the limited number of individuals with ASD who have experienced with romantic relationships. This makes it difficult to draw conclusions since there is such a small sample size (Farley et al. 2009).

The need for research in this area is only growing due to the increased prevalence of ASD diagnoses. According to the Center of Disease Control, in 2010, one out of every 68 children was diagnosed with ASD. This is a major increase from only 10 years before where the prevalence

was one out of 150 children. In order to facilitate more intervention and therapy that will aid in the development of romantic relationships more research must be conducted. In order to help these individuals achieve the best quality of life possible, more research needs to be done in this area. The current study focused on the activities young adults with ASD engaged in with their romantic partners, and how does this compared with the activities and actions of young adults without ASD and their romantic partners.

Chapter 2

Method

Participants

This study focused on the responses of 200 participants out of a larger study. The participants ranged in age from 18-24 years old. Out of the 200 participants 100 were individuals who are typically developing, the other 100 have a diagnosis of ASD. The participants with diagnosis included Autism, Asperger's Syndrome, Pervasive Developmental Disorder (not otherwise specified), Rett's Disorder, or Childhood Disintegrative Disorder. Of the participants from the general population 71.8% were female and 28.2% were male. Of the participants from the diagnosed population, the majority (71.2%) was male. This is to be expected due to ASD being five times more common in males than females (Center for Disease Control and Prevention, 2012).

Recruitment

To recruit neurotypical participants the link to the survey was posted over various social media platforms including Facebook and Twitter. Investigators also sent out the link to the survey in emails to individuals they know who then shared the survey with others.

For recruitment of the ASD population, the survey was shared though the Interactive Autism Network (IAN), which is an online database of individuals with ASD who are interested

and willing to participate in research projects to promote advancements in the field of ASD. The IAN database was established at Kennedy Krieger Institute in 2006 and assists researchers in the recruitment of participants by identifying qualified participants and then emailing them the study's IRB approved recruitment letter. In this study, participants recruited through IAN were compensated with a \$10 gift card to Amazon.

Procedure

An online survey was created through Penn State Qualtrics®. Questions were developed following a review of the literature in the area of concern. The questions developed were aimed to bridge the gap in the lack of knowledge currently available. The questions focused on the experiences and perceptions of making and maintaining social and romantic relationships for adolescents with ASD.

The survey was piloted prior to being distributed more widely. For the purposes of the pilot, 15 adolescents with ASD and 15 adolescents without ASD completed the survey. Feedback was collected from these participants. The information gathered was used to improve the survey. Specific changes were made to the instructions for the survey (e.g. there was no option to return to a previous question), the grouping of the questions, as well as the skip pattern within the survey. Subsection instructions were also added.

The survey consisted of a range of question types. The majority of questions were forced choice between two response options. There were a not many questions with multiple response options. There were a handful of four and five-level likert scale questions included. At the end of

each set of questions there was an open ended question where the participant can include any relevant information they wanted to share (see Appendix B). This provided the research team with additional insight into the perspective of how individuals with ASD feel about making and maintaining relationships compared to neurotypical peers.

In total, the ASD Friendship Survey took approximately 20 minutes to complete from start to finish. After opening the link, the participant was directed to the Qualtrics website to begin the survey. The first screen gave a brief overview of the survey. The overview included the intent of the survey, contact information of the principal investigator, as well as general instructions on how to complete the survey. In this section of the survey, the participant was informed that by starting the survey he or she was providing informed consent to participate. Additionally, the participant was informed that the survey was being conducted through Penn State University as part of a research study. Upon agreeing to the information provided the participant was redirected to the survey, starting with questions on their demographics. The current paper discusses the data collected from one section of the survey, making and maintaining romantic relationships.

Demographic Information

Demographic information was obtained from 200 individuals. Demographic information collected included their age, contact information, sex, academic standing (i.e., degree pursuing; major, if applicable; and anticipated graduation date, if applicable), ethnicity and racial background information. The next section of the demographic questions focused on whether or not the participant has ever received an ASD diagnosis. If the participant replied no, the skip

pattern redirected them to the next section. If the participant responded yes, they were asked further questions about their diagnosis. Questions included their age at the time of diagnosis, subjective ratings of the severity of their ASD characteristics, what type of professional presented them with the diagnosis, as well as their feelings about the effects associated with the diagnosis. They were also asked to explain their communication modality (speech, AAC, sign languages, etc.; see Appendix A).

Friendship Information

Following the demographic section, participants were asked to reflect on their experiences and perceptions of making and maintaining friendships. First, the participants were asked about their perception of friendship. Specifically, the participants were asked about their personal satisfaction with friendships as well as feelings concerning closeness and disclosure. Next, the participants responded to questions pertaining to meeting new people, such as where the participants would go to meet new people, and what qualities they looked for in a friend. Finally, the participants were asked about establishing and maintaining friendships. Questions covered the number of friends the participants had, approaches to conflicts, similarity to friends, importance of opinions of others, etc. These questions were included for the larger project, however the findings from this section will not be included nor discussed in this paper.

Romantic Information

The final section of the survey focused on romantic relationships. The first question in the section asked the participants to select their current relationship status. The response options

ranged from “I have a boyfriend or girlfriend” to “I’m not interested in having boyfriend or girlfriend right now”. If the participant selected the latter option, the skip pattern directed them to the end of the survey. The participants who selected one of the other four options continued on to the next question. These individuals were believed to have the capability to respond to the remainder of the questions based on their current and past personal experience or their hypothetical future experience.

Once the relationship status of the participants was established the remaining questions focused on whether or not the relationships were long-distance, the purpose of phone conversations, and whether the relationships were more focused on activities or emotional connections. There were also four questions that discussed the way the individual would approach solving conflicts. Additionally, there were two four-level likert scale questions. These questions probed about the similarity of the participant compared to his or her significant other in question. At the end of this section, as with the others there was an open-ended question. The question asked the participant to include any additional thoughts or feelings towards making and maintaining romantic relationships that were not covered within the survey.

Data Preparation

Before the data could be analyzed to determine the patterns of results, the data had to be prepared for analysis. In the original sample, there were 150 ASD responses and 143 NT responses. Upon exporting the results into two separate Microsoft Excel documents the data were cleaned and incomplete cases were removed. Responses from individuals who were not 18 or older were removed from the study due to the fact that they are not able to legally consent to

research participation. Additionally, individuals who did not complete the questions of interest for the current project were removed. Additionally, in the NT data set there were three surveys completed by individuals with an ASD diagnosis. The data from those surveys were removed from the NT data set, and added to the ASD data set.

Data Analysis

T-Tests.

T-tests were used in the current study to compare the data collected from the ASD group and the NT group, using IBM SPSS software. T-tests are a way to analyze data between two means. Since there are two different groups being compared, independent t-tests were used rather than one-sample t-tests. The purpose of these tests is to determine if there is a significant difference between the responses of the two groups. A significance value equal to, or less than .05, determines that there is statistical significance.

Descriptive Data.

Information regarding participants' demographic information was analyzed through descriptive data diagnostics. These tests provide the mean, median, mode, standard deviation, range and percentages for the responses of each question analyzed. This information provides a summary of the information collected, which helps point out patterns in responses.

Chapter 3

Results

Numbers of Surveys Included

A total of 150 ASD and 143 neurotypical surveys were submitted through Qualtrics® online survey software. Prior to data analysis, survey responses from participants outside the target age range (18-24) or that were incomplete (no response for information regarding questions on making and maintaining romantic relationships; see Appendix B) were removed from the data set. After this process, data from 104 ASD and 103 neurotypical respondents remained for further analysis.

Respondent Demographics

Demographic data were collected from each survey respondent including age, gender, level of education, ethnicity, and racial background. There was additional information gathered by those who indicated they have an ASD diagnosis. These questions included their specific ASD diagnosis, their age at diagnosis, as well as self-report of their ASD symptom severity in three different domains (language and communication, social interaction, and restricted interests and behaviors). The results from these questions are presented in Table 1 for individuals with an ASD diagnosis, and Table 2 for the neurotypical respondents.

ASD Demographics

The average age of the ASD participants was 20.98 years (the range was 18-24 years). The majority of the respondents were male (74%), which is representative of the general ASD population, as there are three diagnosed males for every one female (Centers for Disease Control and Prevention, 2014). The majority of participants in this group were pursuing some type of degree (62%), with the highest concentration being a high school diploma or an equivalent (28%). Additionally, the majority of participants in this group are Caucasian (86%), and not Hispanic or Latino (93%).

Characteristics

The participants with ASD varied in terms of their specific diagnosis, as self-reported. Specific diagnoses included Autistic Disorder (34%), Asperger's Disorder (52%), and Pervasive Developmental Disorder (PDD-NOS; 14%; see Table 1).

Individuals further reported their subjective opinion on the severity of their ASD symptoms. Individuals provided rankings of their overall ASD characteristics on a scale (mild, moderate, severe). Based on the reports provided, the majority of individuals could be divided into two categories: mild ASD characteristics (40.4%) or moderate ASD characteristics (46.2%). Additionally, individuals were asked to report on how they view their abilities in the categories of language and communication, social interaction, and restricted interests and behaviors compared to their neurotypical peers (not affected, mildly affected, moderately affected, severely affected). In language and communication, the majority of individuals classified themselves as mildly affected (42.3%); in social interaction the majority classified themselves as moderately

affected (44.4%); in restricted interests and behaviors, most responded that they are moderately affected (39.4%; see Table 1).

Table 1. ASD Participant Demographic Information

Participant (n=103)			
<i>Sex</i>	<u>Percentage %</u>	<i>Diagnosis</i>	<u>Percentage %</u>
Male	71		
Female	29	Autistic Disorder	34
		Asperger's Syndrome	52
<i>Degree Pursuing</i>		Pervasive Developmental Disorder (Not otherwise specified)	14
High School Diploma or equivalent	28	Rett's Disorder	0
Associate's Degree	10	Childhood Disintegrative Disorder	0
Bachelor's Degree	20		
Master's Degree	3		
Doctoral Degree	1		
Not currently pursuing a degree	38		
<i>Ethnicity</i>		<i>Self-Reported Severity of ASD Characteristics</i>	
Hispanic/Latino	6	Mild	40
Not Hispanic/Latino	94	Moderate	46
<i>Race</i>		Severe	14
American Indian/Alaska Native	2		
Asian	2		
Asian, Native Hawaiian, and White	1		
American Indian, Black, and White	1		
Black or African American	3		
White	86		
Asian and White	2		
Black and White	1		

NT Demographics

Of the neurotypical participants, the average age was 21.91 years (range 18-24 years), and the majority (72%) was female. Of these respondents, the majority (69%) was currently pursuing a degree, and of these, the most common degree pursued (39%) was a bachelor's. The majority of respondents stated they were Caucasian (88%), and not Hispanic or Latino (97%; see Table 2).

Table 2. NT Participant Demographic Information

Participant (n=103)	
<i>Sex</i>	<i>Percentage %</i>
Male	28
Female	72
<i>Degree Pursuing</i>	
High School Diploma or equivalent	0
Associate's Degree	3
Bachelor's Degree	38
Master's Degree	25
Doctoral Degree	3
Not currently pursuing a degree	31
<i>Ethnicity</i>	
Hispanic/Latino	2
Not Hispanic/Latino	97
<i>Race</i>	
Asian	6
Black or African American	2
White	88
Asian and White	1
Black and White	2

Romantic Relationships.

The focus of this study was to compare the activities and behaviors in romantic relationships for people with ASD to their neurotypical peers. The following sections report the findings of the different between groups comparisons (see Table 3).

Table 3. T-Test Comparison for Patterns of Behavior in Romantic Relationships

Variable	ASD		NT		t
	M	S	M	S	
Romantic Interest					
Phone Purpose	3.61	1.43	2.68	1.76	4.16**
Meeting Purpose	1.55	.50	1.80	.40	3.45**
Role of Individual	1.29	.46	1.58	.50	3.47**
Problem Solving	1.35	.48	1.15	.36	2.82**
Interests	1.45	.50	1.36	.48	1.22
	2.97	.73	2.88	.65	.766

Note. n= 55 ASD; n= 90 NT.

*p <.01. ** p<.001.

Romantic Interest.

The establishment and maintenance of romantic relationships is the focus of the current study. Of the 104 participants with ASD, fourteen percent (14%) stated they were in a romantic relationship at the time of the study, and one percent (1%) stated they were dating multiple people. Thirty-nine percent (39%) stated they did not have a boyfriend or girlfriend, but would like one, whereas forty-five percent (45%) replied they were not interested in having a boyfriend or girlfriend at that time.

Neurotypical individuals were asked the same question. Forty-six percent (46%) stated they were in a romantic relationship at the time of the study, and four percent (4%) stated that they were dating multiple people. Nineteen percent (19%) stated they did not have a boyfriend or girlfriend, but would like one, while thirty-one percent (31%) reported they were not interested in a romantic relationship. The survey terminated at that point for individuals who reported they were not interested in romantic relationships.

An independent-samples t-test was conducted to compare the romantic interest of individuals with ASD and the respondents who were NT. There was a significant difference in the scores between the ASD ($M=3.61$, $SD=1.43$) and NT ($M=2.68$, $SD=1.76$) conditions; $t(205)=0.001$, $p=0.00$. These results suggest there is a statistically significant difference between romantic interest between the ASD and NT groups.

Purpose of Phone Calls.

The participants of the study were also asked to report on their phone conversation behaviors when talking with a romantic partner. This survey item required the respondents choose whether they would be more likely to speak on the phone with their boyfriend or girlfriend to make arrangements or to chat. In the ASD group, forty-five percent (45%) reported they usually talk on the phone to make arrangements, while fifty-four percent (55%) enjoy chatting on the phone. In the NT group, only twenty percent (20%) use the phone to make arrangements, whereas eighty percent (80%) use the phone to chat.

An independent-samples t-test was conducted to compare phone use behaviors of individuals with and without ASD. There was a significant difference in the scores for ASD

($M=1.55$, $SD=.503$) and NT ($M=1.8$, $SD=.399$) conditions; $t(145)=-3.449$, $p = 0.001$. These results indicate there is a statistically significant difference in the purpose of phone conversations between the ASD and NT groups.

Purpose of Meeting.

Participants were additionally asked to state whether they would prefer to do a specific activity or to chat with their romantic partners when they are together in person. In the ASD group, seventy percent (70%) stated that they would prefer to do a specific activity, while the remaining thirty percent (30%) preferred to chat. In the NT group, fifty-eight percent (58%) of the participants stated they would rather chat, and forty-two percent (42%) would rather do an activity.

An independent-samples t-test was conducted to compare the preferred activities during in-person meetings between the ASD and NT respondents. There was a significant difference in the scores for ASD ($M=1.29$, $SD=.458$) and NT ($M=1.58$, $SD=.497$) conditions; $t(143)=-3.473$, $p = 0.001$. These results illustrate there is a statistically significant difference between the preferred in-person activities between the ASD and NT groups.

Role of Partner.

Another question focused on whether the participants felt their significant other valued them more as someone who is a support to them, or as someone to have fun with. In the ASD group, sixty-five percent (65%) of the respondents felt as though they were valued more as a support, whereas only thirty-five percent (35%) felt they were more valued as someone to have

fun with. In the NT group, eighty-five percent (85%) felt that they were valued more as a support, while fifteen percent (15%) felt they were more valued as someone to have fun with.

An independent-samples t-test was conducted to compare role of partner in ASD and NT conditions. There was a significant difference in the scores for ASD ($M=1.35$, $SD=.48$) and NT ($M=1.15$, $SD=.36$) conditions; $t(141)=2.817$, $p = 0.006$. These results indicate there is a statistically significant difference between the assumed role of romantic partners between the ASD and NT groups.

Problem Solving.

Participants were also asked how they would deal with their partner when he or she was upset. They were asked to decide if they would discuss their partner's feelings, or try to find a solution to the problem. In the ASD group, fifty-five percent (55%) stated they would discuss their partners' feelings, while forty-five percent (45%) would try to find a solution to the problem. In the NT group, sixty-four percent (64%) stated they would discuss their partners' feelings, and thirty-six felt that they would try to find a solution.

An independent-samples t-test was conducted to compare problem solving in ASD and NT conditions. There were no significant differences in the scores for ASD ($M=1.45$, $SD=.50$) and NT ($M=1.36$, $SD=.48$) conditions; $t(152)=1.22$, $p=.225$. These results suggest there is no difference between how individuals in the ASD and NT groups would deal with a predicament.

Similar Interests.

Questions about participants' perceptions about sharing common interests with their romantic partners were also examined. Within the ASD group almost half of the respondents (48%) stated they felt they had quite similar interests to their significant other, while twenty-eight percent (28%) stated they felt they did not share very similar interests with their significant other, and the remaining twenty-four percent (24%) stated they had very similar interests. No participants in the ASD group felt they had very dissimilar interests from their partner. In the NT group, sixty percent (60%) of the respondents reported they had quite similar interests as their significant other, while twenty-five percent (25%) felt they did not have very similar interests, and fourteen percent (14%) felt they had very similar interests. Only one percent (1%) of participants in the NT group stated they felt they had very dissimilar interests compared to their significant other.

An independent-samples t-test was conducted to compare similarity of interests in ASD and NT conditions. There were no significant differences in the scores for ASD ($M=2.97$, $SD=.73$) and NT ($M=2.88$, $SD=.65$) conditions; $t(146)=-.77$, $p=.445$. These results indicate that the individuals with ASD experience the same rate of similarity in interests with their romantic partner as the neurotypical individuals.

Chapter 4

Discussion

The purpose of this study was to determine how young adults with ASD, ages 18-24, view romantic relationships compared to their same age NT peers. In particular, this study examined the patterns of behaviors used for social interactions with romantic partners.

The results of this study suggest individuals with ASD have limited experience with romantic relationships compared to their NT peers. Only fourteen percent (15%) of the participants with ASD reported that they are currently in or have previously been in a romantic relationship compared to about half of the participants with typical development (50%). However, when examining which group is more interested in starting a new romantic relationship, about forty percent (40%) of the participants with ASD were interested compared to only nineteen percent (19%) of the comparison group. These results indicate that while individuals with ASD may not have as much experience, they have similar, if not more, desire for romantic relationships.

There were several areas in which the responses provided by the two groups of participants differed significantly. Results indicated individuals with ASD and those considered NT approach romantic relationships in very different ways. Individuals with ASD are more focused on performing activities (70%) with their significant others than making conversation or having discussions (29%) when compared to their peers without ASD (42% and 58%, respectively). Additionally, the majority of individuals with typical development (85%) felt they were viewed as a support system by their significant other, compared to sixty-five percent (65%) of individuals with ASD. Individuals in both groups remained consistent in their views of degree of similarities between themselves and their romantic partners. In both groups more than seventy

percent (70%) of respondents reported they felt their interests were either quite similar or very similar to the interests of their partners.

Data collected from this study are consistent with much of the previously published literature. The data from the current project indicated individuals with ASD had much less experience in romantic relationships than their NT peers. This is to be expected as some of the most prominent characteristics of individuals with ASD are rooted in deficits in social functioning, which impairs the ability to make and maintain platonic relationships, let alone romantic relationships (Travis & Sigman, 1998). Additionally, Stokes et al., (2007) reported individuals with ASD are interested in romantic relationships, but have little knowledge of how to approach potential partners. This was reinforced through the data collected in the current study, which indicated a significant difference in the way young adults with and without ASD approach romantic relationships.

Clinical Implications

The data gathered in this study are valuable to speech-language pathologists (SLPs) providing clinical services to young adults with ASD. Speech-language pathologists frequently target the hidden rules of social interactions in intervention with this population. The information gathered in this study highlights potential barriers for young adults with ASD who are in the pursuit of romantic relationships. Almost forty percent (39%) of the ASD population stated they are not currently in a romantic relationship but would like to be, which is a substantial proportion of the overall sample and is likely representative of the greater American ASD population, since the sample size is relatively large and includes people from around the country. With such a

large percentage of individuals desiring romantic relationships, it is important for skills that may promote success with these relationships to be accounted for in therapy practices.

Evidence-based practice is paramount in the field of speech –language pathology, and as a result SLPs frequently use information gathered in research studies to make decisions about what to teach in intervention. The data collected in this study shows several discrepancies in the romantic behaviors of individuals with ASD compared to their peers. This information could be helpful to SLPs because it highlights a specific intervention need in an area that is clearly a priority for young adults with ASD. For example, SLPs may consider providing direct instruction about dating behaviors specifically related to making conversation and being emotionally supportive of a romantic partner. Teaching young adults with ASD about the full range of interactions that people in romantic relationships experience could increase success in this aspect of their lives. Young adults with ASD may not understand their partner may want to simply chat about how their day went, a movie they recently saw, or even the weather. They may need explicit practice and instruction to understand it is not expected that a couple participate in some sort of activity each time they spend time together. Teaching skills like this directly in the intervention context may aid the development and maintenance of romantic relationships in this population.

Another aspect of the data that should inform therapy decisions when working with young adults with ASD is providing instruction related to the nature of a romantic relationship. While the majority of individuals with ASD felt their partner valued them as a support, about thirty-five percent felt their partner valued them more as someone to have fun with. This disparity between the responses of the participants with ASD and the participants without ASD demonstrates a potential lack of knowledge regarding the complex and multifaceted nature of a

romantic relationship. SLPs may want to explain to their clients what makes romantic relationships different from platonic relationships, apart from the sexual component.

Limitations

As with all research studies, there are several limitations that should be considered while examining the data collected from this survey. One limitation is the age range of the participant population. While individuals who are 18-24 are representative of the broader population who participate in casual dating relationships, individuals outside of this age range may be interested in pursuing casual relationships as well. It is not known if the information collected in the current research project can generalize to individuals in other age groups and stages of life.

Another limitation is the online survey methodology. Since the survey was only accessible online, only individuals who have access to a computer as well as the Internet were able to participate. Additionally, since the individuals with ASD were recruited through IAN, they must have been member to the organization to receive the link to the survey.

Further in comparison of the two groups of individuals, there was a discrepancy between sex proportions. In the ASD group about seventy percent (70%) of the participants were male, and in the NT group about seventy percent (70%) of the participants were female. This difference may affect the outcome of the data due to innate differences in perceptions and experiences in romantic relationships between the sexes.

Future Research

There is a great need for future research in the area of romantic relationships for individuals with ASD. This research should focus on gathering data related to the pragmatic approaches individuals with ASD use to facilitate romantic relationships. Specific information that would be beneficial for better understanding this aspect of development for individuals with ASD would be more knowledge about where individuals with ASD go to meet new romantic partners, how they initiate conversations and interactions with romantic partners, as well as understanding how individuals with ASD differentiate between a friend and a romantic partner.

Appendix A

Qualtrics® Survey: Demographics Questions

Penn State University

You have chosen to participate in a study being conducted by researchers at Penn State University. The purpose of this study is to investigate how young adults with autism spectrum disorders (ASD) establish and maintain various types of social relationships including acquaintanceships, friendships and romantic relationships. We understand establishing new social relationships and keeping them over a period of time can be difficult. Any information you may be able to provide by completing the survey will be helpful in better understanding this process and the challenges that are associated with it.

If you choose to complete this survey we will be asking you to answer a series of questions requiring approximately 20 minutes. Participation in this research study is voluntary. By completing the survey you are providing your implied consent to participate in this investigation. There is no anticipated risk to you in participating in this research.

You will have the opportunity to provide contact information at the beginning of the survey. This information may be used to contact you for a follow-up interview based on your responses as well as to delivery your \$10 gift card for participation. Not everyone who completes this survey will be contacted for further participation, but everyone will be sent a \$10 gift card.

All identifying information provided will be kept strictly confidential and will be known only by the investigator, Dr. Erinn Finke. If you have questions or concerns please contact Erinn at 814-867-4340/enh109@psu.edu.

Finally, we would like to make you aware that there is no "back" button to return to previous pages or survey responses once you have progressed to a new page. Please ensure you are satisfied with your responses before moving to the next page.

- I agree to participate in this research study
- I do not agree to participate in this research stud

Are you over 18 years of age?

- Yes
- No

Please provide your contact information (e-mail and/or phone number), so we may send you your gift card and potentially follow-up with you regarding your responses to the questions in this survey.

What is your age?

What is your sex?

Which degree are you currently pursuing?

- High School Diploma or Equivalent
- 2-year College (Associate's Degree)
- 4-year College (Bachelor's Degree)
- Graduate Studies (Master's Degree)
- Post-Graduate Studies (Doctorate)
- I am not currently pursuing a degree

What is your major?

In what month and year do you expect to finish your academic program (i.e., anticipated graduation date)?

What is your ethnicity?

- Hispanic or Latino
- Not Hispanic or Latino

What is your racial background (please check all that apply).

- American Indian/Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Black or African American
- White

Have you been diagnosed with Autism Spectrum Disorder (ASD)?

- Yes
- No

What is your specific ASD diagnosis?

- Autistic Disorder
- Asperger's Syndrome
- Pervasive Developmental Disorder- Not Otherwise Specified
- Rett's Disorder
- Childhood Disintegrative Disorder

How old were you when your ASD was diagnosed?

Who made your diagnosis (E.g., physician, psychologist, psychiatrist, school team)?

Which criteria were used to make your diagnosis (e.g., DSM-III, DSM-III-R, DSM-IV, DSM-IV-TR)?

How would you classify your ASD characteristics?

- Mild
- Moderate
- Severe

Please describe the characteristics associated with ASD that are affecting you most at the current time.

Compared to neurotypical peers, how personally affected are you by each of the following characteristics?

Language and Communication:

- Not affected
- Mildly affected
- Moderately affected
- Severely affected

Social Interaction:

- Not affected
- Mildly affected
- Moderately affected
- Severely affected

Restricted Interests and Behavior:

- Not affected
- Mildly affected
- Moderately affected
- Severely affected

Which communication modes do you use? Please check all that apply.

- Speech and/or vocalizations (e.g., words and/or word approximations)
- Sign language/system (e.g., American Sign Language, Signed Exact English)
- Gestures (e.g. conventional gestures: pointing, thumbs up; idiosyncratic gestures: unique movements that are understood by familiar people)
- Communication board or book (e.g., alphabet/picture board or book)
- Picture Exchange Communication System (PECS)
- Computer with speech output (e.g., computer that speaks when a message/picture is chosen)
- Tablet or smartphone (e.g., iPad, iPod, iPhone, Android)

Appendix B

Qualtrics® Survey: Establishment and Maintenance of Romantic Relationships Survey Questions

The questions in this section of this survey will ask you about establishing and maintaining romantic relationships.

We understand this can be difficult. Any information you may be able to provide will be helpful in better understanding this process and the challenges that are associated with it.

You can stop and come back to this survey at any time as long as you log in from the same computer each time you return.

Further, you also do not have to answer any questions you do not want to answer. Please answer the questions to the best of your ability.

Select the statement that **most applies** to you:

- I have a boyfriend or a girlfriend
- I am dating several people right now.
- I don't have a girlfriend or boyfriend, but I would like one.
- I don't have a girlfriend or boyfriend right now, but have had one in the past.
- I'm not interested in having a boyfriend or girlfriend right now.

Is your relationship with your boyfriend or girlfriend a long-distance relationship (i.e., you don't live near each other)?

- Yes
- No

Select the statement that **most applies** to you:

- When I talk with my boyfriend or girlfriend on the phone, it is usually to make arrangements rather than to chat.
- When I talk with my boyfriend or girlfriend on the phone, it is usually to chat rather than make arrangements

Select the statement that **most applies** to you:

- I prefer meeting my girlfriend or boyfriend for a specific activity, e.g., going to the movies, playing golf.
- I prefer meeting my girlfriend or boyfriend for a chat, e.g., at a pub or at a cafe.

Select the statement that **most applies** to you:

- My boyfriend or girlfriend values me more as someone who is a support to them than someone to have fun with.
- My boyfriend or girlfriend values me more as someone to have fun with than as someone who is a support to them.

Select the statement that **most applies** to you:

- If my boyfriend or girlfriend had a problem, I would be better at discussing their feelings about the problem than coming up with practical solutions.
- If my boyfriend or girlfriend had a problem, I would be better at coming up with practical solutions than discussing their feelings about the problem.

Select the statement that **most applies** to you:

- If my boyfriend or girlfriend was having personal problems, I would wait for them to contact me as I wouldn't want to interfere
- If my boyfriend or girlfriend was having personal problems, I would contact them to discuss the problem.

Select the statement that **most applies** to you:

- If I have something critical to say to my boyfriend or girlfriend, I think it's best to broach the subject gently.
- If I have something critical to say to my boyfriend or girlfriend, I think it's best to come right out and say it.

If I fell out with my boyfriend or girlfriend and I thought that I hadn't done anything wrong, I would:

- Do whatever it takes to repair the relationship
- Be willing to make the first move as long as they reciprocated
- Be willing to sort out the problem, if they made the first move
- Not feel able to be their close friend anymore

Do you work harder at your career than at maintaining your relationships with your significant other?

- Yes
- No
- Equal
- Not applicable

Select the response that **most applies** to you:

In terms of personality, how similar to your boyfriend or girlfriend do you tend to be?

- Very dissimilar
- Not very similar
- Quite similar
- Very similar

In terms of interests, how similar to your boyfriend or girlfriend do you tend to be?

- Very dissimilar
- Not very similar
- Quite similar
- Very similar
-

Please describe any other thoughts or feelings you have about **establishing and maintaining romantic relationships**. Is there anything you think we should know that we did not ask about specifically? Share your thoughts here:

Would you like the researchers to use your contact information to send you information regarding the findings that result from this study?

- Yes
- No

Would you be interested in being contacted about future research studies at Penn State?

- Yes
- No

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ACADEMIC VITA

Carly Rebecca Rossman
CarlyRossman@gmail.com

EDUCATION

The Pennsylvania State University, State College, PA August 2011 – May 2015
Bachelor of Science, Communication Sciences and Disorders
Minor, Special Education

- **Schreyer Honors College**
- **Dean's List**, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014

RESEARCH EXPERIENCE

Communication Sciences and Disorders Research Lab, State College, PA January 2013 – May 2015
Undergraduate Research Assistant

- At 2013 ASHA Conference, in Chicago, IL, prepared information for poster session materials
- Cultivate specialized knowledge of how individuals with Autism Spectrum Disorder make and maintain friendships
- Gather, analyze, and interpret data for two studies involving personal testimonies and online surveys

WORK EXPERIENCE

Princeton Speech-Language & Learning Center, Princeton, NJ Summer 2014
Therapist Assistant, Social Skills Group Mentor for Teens and Young Adults

- Gathered, prepared, and organized therapy treatment materials for therapists
- Participated in activities as a typical peer mentor for teens and young adults with social learning challenges and executive function difficulties
- Performed administrative assistant responsibilities

Student Teaching Assistant, State College, PA Fall 2013

- Assisted students with questions on class material, homework and papers
- Graded students' homework assignments and quizzes
-

LEADERSHIP

Alpha Delta Pi Sorority, State College, PA September 2011 – Present
New Member Coordinator

- Coordinated the education of sorority information for all new members
- Planned Bid Day activities such as creating ice breakers, ordering sorority-themed clothing and decorations, and organized meals
- Coordinated the Diamond Sister Program, which pairs initiated members with new members to serve as their mentors
- Submitted appropriate forms and payments to Executive Office

- Attended District Leadership Conference for specific job training (March 2013)