

**Intimacy, Romance, and Sexuality in Early Psychosis:
A Mixed-Methods Investigation of Needs, Barriers, and Associations with Psychiatric and
Cognitive Symptoms**

by

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Abstract

People experiencing psychosis identify intimate relationships as integral to their well-being and recovery. However, psychiatric symptoms, cognitive deficits, and stigma experienced in early psychosis may disrupt the formation and maintenance of these relationships. Although early psychosis intervention (EPI) programs are effective at improving symptomatic and functional outcomes, issues related to intimacy and sexuality are often overlooked, receiving little clinical or academic focus. The objective of the current dissertation was to explore how functioning in intimate, sexual, and romantic relationships are related to symptoms and impairment experienced in early psychosis, and how these areas of life are conceptualized as part of recovery. In Chapter 2, data from qualitative interviews highlight how people with early psychosis navigate and derive meaning in areas relating to intimacy, romance, and sexuality in their lives. Across four themes, participants described their experiences and aspirations, and reflect on the value of addressing these topics in EPI programs as important aspects of recovery. Chapter 3 presents data examining differences between early psychosis and control participants on measures related to intimacy, romance, and sexuality. Results demonstrate that individuals with early psychosis report more negative outcomes related to social, romantic, and sexual functioning, and that these areas are often insufficiently addressed in healthcare settings. Chapter 4, data are presented that show that individuals with psychosis demonstrate greater impairment on a novel task assessing social cognition specific to sexual and romantic interactions. Performance on this novel task was associated with romantic and sexual functioning above and beyond the effects of psychiatric symptoms, cognition, or traditional measures of social cognition. These findings inform a sparse literature base on intimacy, romance, and sexuality in early psychosis, highlight the value of addressing these topics in EPI programs, and support their role in recovery from psychosis.

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Table of Contents

Abstract	ii
Acknowledgements	iii
List of Tables	ix
List of Figures	x
Chapter 1: General Introduction	1
1.1 Early Psychosis and Psychotic Disorders	1
1.2 Functional Impairment and Predictors of Social Functioning in Psychosis	2
1.3 The Role of Social Relationships in Recovery	4
1.3.1 Intimate and Romantic Relationships	6
1.3.2 Sexuality and Sexual Relationships	8
1.4 Barriers to Intimate, Romantic, and Sexual Relationships in Early Psychosis	9
1.5 Early Psychosis Intervention and Recovery from Psychosis	12
1.6 Addressing Intimacy, Romance, and Sexuality in Healthcare Settings	15
1.7 Qualitative and Mixed-Methods Approaches	18
1.8 Goals of the Proposed Research	19
Chapter 2: A Qualitative Exploration of Intimacy, Romance, and Sexuality in the Context of Early Psychosis: Needs, Barriers, and the Pursuit of a Meaningful Life	22
2.1 Introduction	22
2.2 Method	25
2.2.1 Participants and Recruitment	25
2.2.2 Procedure	27
2.2.3 Reflexive Thematic Analysis	28
2.3 Results	30
2.3.1 Theme 1: Addressing Intimacy, Romance, and Sexuality in Healthcare Settings	32
2.3.1.1 Experienced or anticipated benefits of healthcare conversations	32
2.3.1.2 Stipulations surrounding healthcare conversations	34
2.3.1.3 Limitations of healthcare approaches	35
2.3.1.4 No desire or need to discuss intimacy/sexuality in healthcare settings	40
2.3.2 Theme 2: Recovery	40
2.3.2.1 Recovery before relationships	40
2.3.2.2 The value of close relationships in recovery	42

2.3.2.3	Goals regarding future relationships	44
2.3.2.4	Intimacy and sexuality as part of growth and identity	45
2.3.3	Theme 3: Relationships in the Context of Mental Health Symptoms	47
2.3.3.1	Stigma and self-stigma.....	47
2.3.3.2	Symptom interference	50
2.3.3.3	Fear as a barrier.....	53
2.3.3.4	The negative influence of past experiences	54
2.3.3.5	Loss of relationships and opportunities	55
2.3.4	Theme 4: Self-Definition	57
2.3.4.1	Romance	58
2.3.4.2	Intimacy	59
2.3.4.3	Sexuality	60
2.4	Discussion.....	62
2.4.1	Intimacy, Sexuality, and Recovery.....	62
2.4.2	The Relationships between Mental Health, Sexuality, Intimacy, and Romance.....	65
2.4.3	Healthcare Experiences.....	66
2.4.4	Identity, Self-Definition, and Meaning Making.....	69
2.4.5	Limitations	70
2.4.6	Conclusions.....	72
Chapter 3: Understanding Experiences of Intimacy, Romance, and Sexuality in Early Psychosis		73
.....		73
3.1	Introduction.....	73
3.2	Method	75
3.2.1	Participants.....	75
3.2.2	Procedure	76
3.2.3	Measures	77
3.2.3.1	Demographic Information.....	77
3.2.3.2	Psychiatric Symptoms.....	77
3.2.3.3	Loneliness	77
3.2.3.4	Belongingness	78
3.2.3.5	Internalized Stigma	78
3.2.3.6	Subjective Recovery	78
3.2.3.7	Relationship Investment.....	79

3.2.3.8	Relationship Satisfaction	79
3.2.3.9	Relationship Functioning.....	80
3.2.3.10	Fear of Being Single	80
3.2.3.11	Attachment Orientation.....	80
3.2.3.12	Sexual Functioning	81
3.2.3.13	Sexual Self-Concept.....	81
3.2.3.14	Sexual Distress.....	82
3.2.3.15	Hypersexuality	82
3.2.3.16	Information from Healthcare Providers	82
3.2.4	Data Analysis	83
3.3	Results.....	84
3.3.1	Demographic Variables	84
3.3.2	Clinical Variables	87
3.3.3	Relationship Variables	88
3.3.4	Sex and Sexuality Variables.....	89
3.3.5	Healthcare Perspectives	90
3.4	Discussion.....	93
3.4.1	Romantic Relationships	93
3.4.2	Sex and Sexual Relationships	95
3.4.3	Healthcare Experiences and Perspectives	96
3.4.4	Limitations	97
3.4.5	Conclusions and Clinical Implications	98
Chapter 4: The Application of Social Cognitive Skills in Sexual and Romantic Situations: Predicting Sexual and Romantic Functioning in Early Psychosis with a Novel Social Cognitive Task.....		
4.1	Introduction.....	100
4.2	Method	105
4.2.1	Participants.....	105
4.2.2	Procedures.....	105
4.2.3	Measures	105
4.2.3.1	Demographic Information.....	105
4.2.3.2	Psychiatric Symptoms.....	106
4.2.3.3	Romantic Relationship Functioning	106

4.2.3.4	Sexual Functioning	107
4.2.3.5	Cognition.....	107
4.2.3.6	Subjective Cognitive Impairment	107
4.2.3.7	Social Cognition.....	108
4.2.3.8	Sexual/Romantic Cognition	108
4.2.4	Data Analysis	111
4.3	Results.....	112
4.3.1	Demographics	112
4.3.2	Cognitive and Social Cognitive Variables	112
4.3.3	Predictors of Social Cognition and Sexual/Romantic Cognition.....	114
4.3.4	Predictors of Romantic and Sexual Functioning	116
4.4	Discussion	117
4.4.1	Social Cognition and Sexual/Romantic Cognition	118
4.4.2	Sexual/Romantic Cognition and Functional Outcomes.....	120
4.4.3	Clinical Implications.....	121
4.4.4	Limitations	122
4.4.5	Conclusions.....	123
Chapter 5:	General Discussion.....	124
5.1	Summary of Findings.....	124
5.2	Theoretical and Research Implications.....	126
5.3	Clinical Implications.....	129
5.3.1	Incorporating Intimacy, Romance, and Sexuality into Healthcare	129
5.3.2	The Development of Novel Interventions Targeting Intimate, Romantic, and Sexual Functioning.....	134
5.4	Limitations	136
5.5	Conclusions.....	139
References	.....	140
Appendix A:	Qualitative Interview Protocol	183
Appendix B:	Research Ethics Board Approval (Qualitative Study).....	185
Appendix C:	Research Ethics Board Approval (Quantitative Studies)	186

List of Tables

Table 2.1	30
Table 3.1	84
Table 3.2.....	86
Table 3.3.....	87
Table 3.4.....	88
Table 3.5.....	89
Table 3.6.....	92
Table 3.7.....	92
Table 3.8.....	93
Table 4.3.....	112
Table 4.4.....	114
Table 4.5.....	115
Table 4.6.....	117
Table 4.7.....	117

List of Figures

Figure 1.1	21
Figure 3.1	91
Figure 4.1	109
Figure 4.2	109

Chapter 1

General Introduction

1.1 Early Psychosis and Psychotic Disorders

The term “psychosis” refers to a condition in which an individual has difficulty distinguishing reality from their internal experience. An episode of psychosis is typically characterized by positive symptoms (e.g., delusions and/or hallucinations), disorganized speech, grossly disorganized or abnormal motor behaviour (e.g., catatonia), and negative symptoms (e.g., alogia, anhedonia, flattened affect; American Psychiatric Association, 2013). Together, these symptoms cause marked distress and functional impairment. The most recognizable psychotic disorders are schizophrenia-spectrum disorders (e.g., schizophrenia, schizoaffective disorder, delusional disorder). However, psychosis, which is not a formal diagnosis in and of itself, is a condition that can occur during the course of other clinical disorders, such as major depressive disorder and bipolar disorder (Goes et al., 2007). As such, an experience of psychosis can be transdiagnostic.

The typical onset for a first episode of psychosis is between the ages of 16 and 35 (Liu et al., 2013), but can occur even earlier in adolescence and childhood (Schulz et al., 1998; Hollis, 2000). Impairments across several behavioural domains often emerge gradually in those who later develop psychosis, and may be present for weeks, months, or even years before the onset of psychotic symptoms (Owen et al., 2011). This initial phase of psychosis, known as the prodrome, may involve less apparent symptoms, such as reduced concentration and attention, social withdrawal, anxiety, or depressed mood (Yung & McGorry, 1996). The first psychotic episode

that follows is characterized by more severe symptoms and greater functional decline that dramatically interferes with a person's quality of life (Lasalvia et al., 2014).

1.2 Functional Impairment and Predictors of Social Functioning in Psychosis

Psychotic disorders are associated with frequent relapses, increased mortality, cognitive deficits, and impairment across functional domains, such as vocational functioning, adaptive and everyday functioning, and social functioning (Emsley et al., 2013; Robinson et al., 1999; Saha et al., 2007; Świtaj et al., 2012). In early psychosis, symptom onset during the critical developmental periods of adolescence and early adulthood can interrupt one's ability to develop the skills needed to integrate socially and vocationally, as well as delay key markers of the transition to adulthood, including financial and residential independence, educational attainment, and involvement in romantic and sexual relationships (Roy et al., 2013). Functional impairment poses a significant barrier to recovery from psychosis, often persisting even after symptom remission (Harvey & Strassnig, 2012; Hegarty et al., 1994). Research attempting to address this gap in treatment success has pointed to cognitive deficits as the largest predictor of most dimensions of everyday functioning (Bowie & Harvey, 2005), and has identified the persistence of negative symptoms as contributing factors to functional impairment (Mitra et al., 2016).

In schizophrenia, cognitive impairment is recognized as a ubiquitous and defining feature of the illness (Heinrichs & Zakzanis, 1998; Bowie & Harvey, 2005; Fioravanti et al., 2012; American Psychiatric Association, 2013). Cognitive deficits in attention, verbal fluency, working and verbal memory, processing speed, and executive functioning are persistent throughout the illness course and are often observed in the prodromal period, even prior to the first episode of psychosis (Bowie & Harvey, 2005; Fusar-Poli et al., 2012; Aas et al., 2014; Bora & Murray, 2014). Improvements in cognitive functioning via targeted interventions (e.g., cognitive

remediation or cognitive training) are successful at improving vocational and everyday functioning (McGurk et al., 2007; Twamley et al., 2003; Wexler & Bell, 2005). However, while neuropsychological domains are robust predictors of functional impairment in several domains (e.g., community activities, activities of daily living, work skills), this relationship is less consistent when exploring predictors of interpersonal and social competence (McClure et al., 2007; Bowie et al., 2008; Laes & Sponheim, 2006).

To better understand predictors of social functioning specifically, researchers have explored social cognition as a more proximal predictor of social functioning and social impairment. Social cognition refers to the set of cognitive processes that contribute to the accurate identification and interpretation of the thoughts, beliefs, and intentions of others in social situations (Couture et al., 2006). These processes assist individuals in navigating complex social interactions, recognizing social cues, and guiding socially appropriate behaviours (Savla et al., 2012). Social cues are often subtle, requiring attention to nuanced facial expressions and slight changes in body language. Furthermore, there are a large number of implicit social rules, norms, and expectations that apply across different social settings (Harvey & Penn, 2010). Green and colleagues (2008) have identified five domains of importance within social cognition: 1) emotion perception; 2) social perception; 3) social knowledge; 4) theory of mind; and 5) attributional styles and biases.

Social cognition has been found to account for greater variance in functioning compared to neurocognition (Pijnenborg et al., 2009). Social cognition and negative symptoms have been found to account for approximately a third of the variance in social competence, and these three variables together account for a third of the variance in social functioning (Kalin et al., 2015). In particular, theory of mind has been found to be a stronger predictor of social and community

functioning than neurocognition (Fett et al., 2011; Roncone et al., 2002). Theory of mind, which refers to the ability to reason about the intentions and beliefs of others, has been consistently found to be impaired in people with schizophrenia, including among those whose acute symptoms of psychosis have remitted (Bora & Pentelis, 2013; Sprong et al., 2007). Deficits in theory of mind are also present in early-episode psychosis (Betrand et al., 2007; Kettle et al., 2008). As such, theory of mind appears to be a specific component of social cognition that is related to real-world social functioning.

Social functioning deficits interfere with one's ability to engage socially in educational or vocational activities, build and maintain friendships, and develop intimate relationships. For many people with psychosis, these types of social relationships play a significant role in their mental health recovery. Understanding deficits in social cognition and social functioning is thereby crucial for informing the development of interventions that may support individuals with psychosis in developing and maintaining supportive social relationships.

1.3 The Role of Social Relationships in Recovery

Social support and relationships have been found to be a facilitator of recovery for people with severe mental illnesses, and are associated with improvements in mental health, life satisfaction, and coping ability (Mizock et al., 2019; Boucher et al., 2016). For individuals with early psychosis, higher levels of social support are related to lower levels of positive symptoms and fewer hospitalizations at a three-year follow-up (Norman et al., 2005) and predict better psychological well-being (Uzenoff et al., 2010). These gains extend to other areas of life as well, as people with psychosis who are supported by friends and family are more likely to be employed and to have better self-care (Evert et al., 2003). There also appears to be a unique role of friendships, rather than familial relationships, as sources of support, with friendship networks

and more frequent interaction with friends being associated with clinical recovery over a two-year period, while interaction with family members was not significant as a predictor of recovery (Bjornestad et al., 2017).

Unfortunately, individuals with psychosis tend to experience a reduction in social networks and social support in the prodrome and first-episode phases of illness (Gayer-Anderson et al., 2013). The lack of intimate, social, or relational connections has been shown to be related to stigma and a lack of empowerment, which is associated with depression, and, in turn, poor quality of life (Sibitz et al., 2011). Loneliness, described as a subjective discrepancy between a person's idealized and actual social relationships, is associated with negative mental health outcomes (e.g., depression, suicidality, anxiety), perceived discrimination, and internalized stigma (Alasmawi et al., 2020; Lim et al., 2018). In one study, loneliness was identified as a predictor of symptom severity, affective symptoms, self-rated recovery, and health-related quality of life over time (Wang et al., 2020). Loneliness has been identified as a significant barrier to recovery that is rarely addressed in the treatment of other cognitive, emotional, and social difficulties associated with psychosis (Badcock et al., 2020). One study reported the prevalence of loneliness among individuals with psychotic disorders as up to 75%, and even higher among those with comorbid depression and psychosis (94%; Badcock et al., 2020). Elevated loneliness is also common in the first episode and even prodromal stages of psychosis, leading some researchers to hypothesize that it may be associated with the later development of psychotic symptoms, such as paranoia, heightened threat sensitivity, and negative symptoms (Badcock et al., 2020). This notion has been supported by other research finding that reduced social networks are associated with increased loneliness, negative self-perception, and low self-worth, leading to increased anxiety and paranoia (McGuire et al., 2020; Świtaj et al., 2015).

Interestingly, there is only a weak correlation between social isolation and subjective experience of loneliness, suggesting that simply having more social contacts (the focus of many social skills trainings and interventions) is insufficient to see improvements in outcomes; rather, improvements require more intimacy and subjective interpersonal connectedness (Badcock et al., 2020).

1.3.1 Intimate and Romantic Relationships

Regardless of diagnostic status, relationships are a source of emotional and physical intimacy. Close relationships are associated with improvements in mental health symptoms, life satisfaction, coping abilities, and overall quality of life (Boucher et al., 2016; McGuire et al., 2020; Mizock et al., 2019). While close relationships with family are valued in recovery, people with psychosis often cite the attainment of friendships and intimate relationships as more associated with their subjective ideas of recovery (Bjornestad et al., 2017; Windell et al., 2012). An intimate relationship is defined as one in which two partners express and share their feelings, thoughts, and experiences, both verbally and nonverbally, in order to learn more about themselves and each other (Reis & Shaver, 1988). Intimacy involves self-disclosure, which refers to communicating information about oneself, and responsiveness, which refers to a partner reacting to the self-disclosure, ideally with understanding, care, and validation (Reis & Shaver, 1988). Through repeating this process, an intimate relationship may develop. In one study, over 70% of respondents spontaneously identified romantic relationships, intimacy, and sexual activity as influential in their recovery (Boucher et al., 2016). For people with psychosis, romantic relationships have been associated with reduced positive and negative symptoms of psychosis (White et al., 2021a). Married individuals with schizophrenia have been shown to have fewer hospitalizations and more successful community integration than unmarried or divorced

individuals, as well as higher self-image, self-confidence, and sense of normalcy (Doron et al., 2014). Findings suggest that romantic relationships may be a protective factor related to mental health outcomes.

The sensitive periods of adolescence and young adulthood, during which psychosis typically firsts manifests, are also critical for consolidating secure relational internal working models and unlearning insecure internal working models. Adolescents may begin to turn to peers rather than parents to fulfill attachment needs, with friendships laying the foundation for later intimate relationships by promoting the development of social and emotional competence (Nickerson & Nagle, 2005). Dating relationships during this time are often of significant importance in the lives on young people, and are involved in the development of identity, independence, and autonomy (Redmond et al., 2010). The sense of social belonging created through these relationships is a need shared universally, and deficits in one's ability to pursue and maintain meaningful relationships represent a threat to general health and well-being (Baumeister & Leary, 1995). For young people whose psychotic symptoms developed during this critical period, difficulties with clinical symptoms and social functioning may pose substantial barriers to the development and maintenance of romantic relationships. The subsequent lack of intimate relationships may result in social isolation, fear, loneliness, and sadness (de Jager et al., 2017), contributing to poor prognoses and delays in achieving recovery goals. Findings from this limited area of research indicate that single relationship status in is associated with lower quality of life and poorer prognosis among individuals with psychosis (de Jager & McCann, 2017). For those in relationships, these relationships tend to be rated as lower in intimacy, commitment, and passion compared to a normative control group (Doron et al., 2014).

1.3.2 Sexuality and Sexual Relationships

Research on sex and sexuality in psychotic disorders has typically taken a narrow focus on sexual dysfunction, risk factors, and vulnerability (Boucher et al., 2016). Overall, between 70-85% of people with schizophrenia report sexual dysfunction, compared to 35-50% of the general population (Harley et al., 2010; Van Sant et al., 2012). Sexual dysfunction is reported early in the illness course, and is experienced by up to 50% of individuals at ultra-high risk for psychosis and 65% of individuals with first episode psychosis (Marques et al., 2012). Notably, sexual dysfunction is higher among those at high risk who subsequently developed psychosis compared to those who did not (Marques et al., 2012).

Existing research being disproportionately focused on sexual function and dysfunction is in contradiction with well-established conceptualizations of sexuality. According to the World Health Organization (2006), sexuality is “a central aspect of being human that encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy, and reproduction.” While sexuality can be expressed physically through sexual activity, it is also recognized to be experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, practices, roles, and relationships (WHO, 2006). This definition recognizes the interaction of psychological, social, economic, political, cultural, legal, historical, religious, and spiritual factors in the expressed and experience of sexuality. Limited research in psychotic disorders has explored other aspects of sexuality outside of sexual functioning, such as sexual satisfaction, desire, attitudes, motivation, and self-efficacy. This represents a failure to acknowledge that having fulfilling sexual and/or intimate relationships is a fundamental need that can directly enhance one’s quality of life (McCann et al., 2019). For many people with schizophrenia, sexuality is integrated into their sense of self, just as it is for their unaffected peers (Volman &

Landeem, 2007). Despite experiencing higher rates of sexual dysfunction, people with psychosis report desires for intimacy and sexual activity equivalent to their unaffected peers (Barker & Vigod, 2020; Huguelet et al., 2015; McCann, 2010a). However, they report less frequent sexual activity, lower sexual satisfaction, and lower sexual self-esteem (Huguelet et al., 2015; McCann, 2010a). Compared to 15% of the general population, 64% of people with psychosis report dissatisfaction with their sex life (de Jager et al., 2018). In fact, in one sample of 1404 patients with psychotic disorders, satisfaction with one's sex life was significantly lower than satisfaction in any other life domain, including mental health (Laxhman et al., 2017). People with greater sexual self-esteem and perceived importance of sexual activity are more likely to be sexually active (Bonfils et al., 2015). Conversely, feelings of sexual worthlessness were found to decrease social functioning and thereby reduce opportunities for sexual engagement, creating a negative cycle of withdrawal (de Jager & McCann, 2017).

1.4 Barriers to Intimate, Romantic, and Sexual Relationships in Early Psychosis

Individuals with psychosis face considerable barriers to the development and maintenance of intimate, romantic, and sexual relationships. Symptoms and impairments associated with psychosis, such as medication side effects, mental health symptoms, stigma, self-esteem, cognitive deficits, and social functioning impairments, may directly and uniquely impact one's ability to initiate and engage in intimate, romantic, and sexual relationships (de Jager et al., 2017; Padgett et al., 2008; Van Sant et al., 2012). Frequent hospitalizations, challenges with independent living, and fears and anxiety about relationships all may also interfere with the trajectory and success of a relationship (Barker & Vigod, 2020).

Deficits in social cognition and social functioning are widely recognized to affect the initiation of dating and romantic relationships (Van Sant et al., 2012; Padgett et al., 2008).

Navigating intimate, romantic, and sexual encounters requires identifying, interpreting, and acting on specific behavioural and social cues, as well as incorporating contextual information and knowledge of specific social and sexual scripts (Hall, 2016). Sexual problems in psychosis have been hypothesized to be tied to social impairments and deficits in social functioning (Verhulst & Schneidman, 1981). Often, family members and mental health support staff make up the majority of the social networks of people with psychosis (Harley et al., 2012; McGuire et al., 2020), resulting in limited social networks and a lack of opportunity to meet prospective partners. Relationships may also become oriented around the person's mental illness, thus maintaining the role of "being ill" and associated stigma and lack of autonomy. The lack of reliable and positive social relationships may contribute to chronically unmet belongingness needs which negatively influences a person's health and well-being.

Stigma has emerged as a central barrier for people with psychosis seeking intimate relationships. This experience is predominant among young people with psychosis, who report experiences of stigma within relationships, messages that they are undesirable partners or unable to choose their partners, and internalized self-stigma regarding their perceptions of themselves as partners (Elkington et al., 2013). These greater stigmatizing experiences also reduce positive sexual experiences (Bonfils et al., 2015). Self-stigma is associated with lower self-esteem, withdrawal, depression, and hopelessness (Segalovich et al., 2013), as well as poorer neurocognitive functioning (Chan et al., 2019). Notably, internalized stigma may be more of a barrier to engagement with relationships than external stigma; Cechnicki and colleagues (2011) found that while 27% of individuals with psychosis experienced discrimination in intimate relationships, up to 60% of people anticipated experiencing discrimination. This anticipated discrimination may also lead people to stop seeking close relationships (Lasalvia et al., 2014).

Regarding barriers to sexual functioning, research has demonstrated that antipsychotic medication can cause sexual dysfunction in several domains (e.g., arousal, orgasm; for a review see Kelly & Conley, 2004). Importantly, sexual dysfunction in psychotic disorders is not limited to its relationship with antipsychotic medication. In one study, non-medicated men with first-episode psychosis experienced significantly more sexual dysfunction than healthy controls, which was associated with a longer duration of untreated psychosis and more severe negative and depressive symptoms (Sabry et al., 2017). These findings are consistent with past research that has hypothesized that depressive and negative symptoms, such as anhedonia and impaired anticipatory pleasure, are closely related to sexual dysfunction (Barker & Vigod, 2020; Fan et al., 2007) and sexual satisfaction (Laxhman et al., 2017). More severe psychotic symptoms have also been associated with higher sexual dysfunction and dissatisfaction (McMillan et al., 2017). These findings highlight the prevalence of sexual dysfunction even among drug-naïve patients, suggesting that sexual dysfunction is related to aspects of the illness outside of solely antipsychotic medication.

Health and mental health conditions that are commonly comorbid with psychosis and schizophrenia, such as diabetes, obesity, substance abuse, or depression, all may impact romantic and sexual functioning to some degree (Barker & Vigod, 2020). Many of these conditions may be indirectly associated due to their effect on self-esteem, confidence, and body image (de Jager et al., 2018). For men, unmet sexual needs were associated with medication side effects, social stigma, social skills deficits, psychiatric symptoms, and low sexual self-esteem (de Jager et al., 2018). Other obstacles to meeting one's sexual needs included lack of sexual education, stigma, low self-esteem, and barriers to safe sex (McCann, 2010b).

In summary, although fulfilling and satisfying intimate, romantic, and sexual relationships are associated with well-being and recovery for people experiencing psychosis, individuals face various clinical, social, and functional barriers to the attainment of these relationships. Addressing these barriers in treatment represents an opportunity to bolster the interpersonal skills and relationships of young people experiencing psychosis, thereby promoting positive outcomes associated with recovery.

1.5 Early Psychosis Intervention and Recovery from Psychosis

Early psychosis intervention (EPI) programs have been developed as a response to research that has identified early intervention as critical to symptomatic and functional recovery for individuals with psychosis. EPI programs have demonstrated promising effectiveness for symptom reduction, improving outcomes, and reducing relapse in early psychosis (Catts et al., 2010; Malla et al., 2005; Marshall & Rathbone, 2011). Since specific diagnoses are unclear in the context of a psychotic episode, programs that specialize in early psychosis intervention are necessarily transdiagnostic, non-specific, and multidimensional. The rise in popularity of these programs reflects the growing recognition of the strengths of practical preventative strategies and systematic early delivery of treatments, and a shift away from the historical perspective that symptoms experienced in first episode psychosis are untreatable or irreversible. Indeed, although early views of schizophrenia and other psychotic disorders held that these illnesses had inevitably poor prognoses and declines in functioning, recent research has demonstrated that the course of these illnesses is much more malleable and heterogenous (McGorry et al., 2008).

Just as treatment for schizophrenia and other psychotic disorders has shifted from illness management to the treatment of symptoms, recent paradigmatic shifts have also reshaped the concept of “recovery” from severe mental illnesses such as schizophrenia. In clinical psychiatric

research, conceptualizations of recovery often prioritize indicators of recovery that are perceived as objective and quantifiable, such as housing, employment, an absence or alleviation of symptoms, or a return to premorbid levels of functioning (Davidson, 2003). In contrast, definitions of recovery from those with lived experience of psychosis emphasize acceptance, hope, belongingness, and sense of self. For instance, Deegan (1988, p. 5) draws upon her lived experience of schizophrenia to state that “recovery refers to the lived or real-life experience of persons as they accept and overcome the challenge of the disability”. A review of personal accounts of recovery by Davidson (2003) emphasizes the individual nature of recovery as being different across each person, but also highlights common aspects of the recovery process, such as overcoming stigma, renewing hope, resuming control and responsibility for one’s life, exercising one’s citizenship, managing symptoms, being supported by others, and being involved in meaningful activities and expanded social roles. Recent research that centers the voices of people with lived experience of psychosis has emphasized the importance of individuals’ subjective recovery, as defined as the ability to live a full and meaningful life in the community of one’s own choosing, despite limitations imposed by psychiatric illness (Van Sant et al., 2012). Recovery-based approaches focus on self-determination, inclusion, and reclaiming a meaningful life (Van Sant et al., 2012). Factors including hope, courage, belongingness, and a renewed sense of self are seen as central to an individual’s subjective recovery (Davidson, 2003). For some, recovery may be closely tied to symptom remission or vocational rehabilitation. For others, however, recovery may be more closely tied to one’s personal sense of identity and potential to influence their own lives and futures (Lysaker, 2012).

Intimacy, as an expression of humanity, is, for many people, closely tied to perceptions of recovery and living a meaningful life. When exploring client perspectives of recovery from

psychosis, patients in EPI programs have also identified that the scope of these programs neglects several key areas that are important for their subjective recovery, namely: 1) intimate and/or romantic relationships; and 2) sexuality and sexual functioning. People with psychosis consistently report that treatment approaches addressing both personal relationships and sexual needs are unsatisfactory, particularly because of the pathologizing of their sexual behaviour or devaluation of their sexual needs (Kelly & Conley, 2004; Östman & Björkman, 2013; Van Sant et al., 2012). Patients in EPI programs describe “personal relationships” as one of the most salient unmet needs in treatment (Kelly & Conley, 2004), and report being overlooked by clinicians as having sexual needs (Östman & Björkman, 2013). In one study, despite up to 90% of patients expressing needs related to both sexual expression and intimacy, only 43% of clinicians recognized intimacy as a need for their patients, and only 10% recognized sexual expression as a need (McCann, 2010b). In another, results showed that up to two-thirds of psychiatrists do not enquire about sexual dysfunction, and only 17% feel competent assessing sexual dysfunction, despite 88% recognizing its importance to their patients (Nnaji & Friedman, 2008). Even in early research on sexuality in psychotic disorders, recommendations were being made to ensure that clinicians are aware of sexual issues and encouraged to inquire about sexual side effects of medication, sexual activity, and safe-sex practices (Assalian et al., 2000). However, these areas remain a peripheral focus in early psychosis treatment – if they are discussed at all. The fact that many clinicians avoid this topic may contribute to the stigmatization that people with early psychosis face in many of these important interpersonal areas (Huguelet et al., 2015).

1.6 Addressing Intimacy, Romance, and Sexuality in Healthcare Settings

Intimate, romantic, and sexual relationships have never been at the forefront of conversations about recovery from psychosis. To understand the present-day failure of healthcare programs to adequately address the intimate needs of people with psychosis, one must look to the past. Since some of the earliest conceptualizations of schizophrenia, eugenicist ideologies have permeated healthcare discussions, with Kraepelin stating that “Lomer has... proposed a heroic prophylactic measure bilateral castration as early as possible, but scarcely anyone will be found who will have the courage to follow him”, and Bleuler writing, “Lomer and von Rohe have again recommended castration, which, of course, is of no benefit for the patients themselves. However, it is to be hoped that sterilization will soon be employed on a larger scale... for eugenic reasons” (Kraepelin [1913] and Bleuler [1911], cited in Read & Dillon, 2013). The eugenics movement advocated by some of the early “experts” in schizophrenia was made into legislation in 1933, when Germany by law allowed for the compulsory sterilization of individuals with schizophrenia and “manic-depressive psychosis”; similar laws allowing for the sterilization of individuals deemed “insane” followed in Norway, Denmark, Finland, the United States, and Canada (Read & Dillon, 2013). The disproportionate sterilization of individuals with schizophrenia was attributed, by some, to the belief that schizophrenia was genetically inherited (Torrey & Yolken, 2010), and thus served to prevent these individuals from procreating or passing on their genes.

Though the vast majority of present-day psychiatrists and psychologists strongly condemn the eugenicist movement, people with severe mental illnesses face enduring barriers to sexual expression and to the pursuit of intimate and romantic relationships. Many of the same ideas that were present in the eugenics movement have persisted into the 21st century, such as discouraging those with schizophrenia and their relatives from reproducing due to fears of

passing on the illness, or encouraging genetic counselling (Hodgkinson et al., 2001, cited in Read & Dillon, 2013). However, on a global scale, sexual rights are recognized as human rights, and the achievement of sexual health and sexual well-being requires an environment that affirms and promotes privacy, sexual-determination, non-discrimination, and access to comprehensive information about sexuality and quality sexual health care (Kismödi et al., 2017). Despite these promising shifts in the provision of appropriate sexual health care, the effects of a history of dehumanization, injustice, trivialization, and silence reverberate to the present day through ongoing stigmatization and entrenched biases about the sociosexual lives of people with severe mental illness. It is abundantly clear that intimacy and sexuality are highly valued by people with psychosis, yet these topics are still rarely discussed within clinical settings (Huggins et al., 2008; Quinn et al., 2011a; Raja & Azzoni, 2003).

Past research has identified several barriers that clinicians face when addressing sexual needs with their patients. These include concerns about being professionally compromised when discussing sexuality with clients of a different gender/sex (van Anders, 2015), concerns that these conversations are not appropriate, fear that these conversations could lead to increased risk for patients, and having a perceived lack of competency in addressing sexuality with their clients (Quinn et al., 2011a; Quinn et al., 2011b; Southall & Combes, 2020). Many mental health clinicians also hold the view that sexuality is a “peripheral issue” in their client interactions, citing various reasons, including that sexuality is hard or embarrassing to talk about, infrequently brought up by clients, or not part of their skill set (Urry et al., 2019). Clinicians may also hold the belief that a lack of sexual drive or motivation is not worth addressing in primary care due to other issues (e.g., psychotic symptoms) being more pressing. In general, psychologists and psychiatrists report insufficient training in sexuality, limited time to address sexual concerns, and

discomfort in discussing sexuality with their clients (Urry et al., 2019). This hesitancy is present across diverse groups of mental health clinicians, creating a diffusion of responsibility that ultimately neglects client sexual issues and concerns. In fact, some research has found that mental health nurses both do not include aspects of sexuality in their work, but also inadvertently engage in strategies to silence discussions of sexuality in clinical encounters (Quinn et al., 2011a; Higgins et al., 2008). These findings are also in direct contrast to research with patients who desire to discuss a range of issues related to sexuality and intimacy, and who find these conversations constructive and informative (McCann et al., 2019).

Certainly, a subset of people experiencing psychosis may not feel comfortable bringing up sexual or intimate issues with their primary care clinicians. However, this number has been found to be relatively small. In a recent study, only 22% of patients reported that they would be fully embarrassed to bring up their sexuality with their psychiatrist (Huguelet et al., 2015). In fact, as early as 1997, studies identified that most patients were willing to address issues related to sexuality with their healthcare providers (Lewis & Scott, 1997). People with schizophrenia are able to communicate their sexual relationship needs, suggesting that this is not one of the barriers to addressing sexuality in primary care settings (McCann, 2010b). Discussions surrounding issues related to sexuality and intimacy are often welcomed by mental health service users when initiated by their clinicians.

It is important to distinguish whether the lack of attention to issues of sexuality and intimacy are related to true client needs and outcomes, or if they are more a result of clinician stereotypes, fears, and stigma, which may unintentionally impede a client's treatment. Though early psychosis programs are undeniably effective at substantially improving outcomes in psychosis and should be commended for their positive impact on the lives of individuals

experiencing psychosis, it is also necessary to continue to challenge and improve current conceptualizations of psychosis treatment and standards of practice. This ensures that the interventions being offered are consistent with clients' personal goals for their own recovery.

1.7 Qualitative and Mixed-Methods Approaches

Despite more expansive and inclusive definitions of recovery, there are ongoing limitations to how these facets of recovery are measured in clinical research. As Davidson points out, even in 2003, our knowledge of recovery from schizophrenia was limited, in part due to lingering beliefs about the inability of people with schizophrenia to recover, but also in part due to our inability as researchers to ask appropriate questions about recovery. Davidson (2003) highlights this in a quote by Estroff:

The challenge for researchers is to develop methods and principles that reflect accurately the experiences, meanings, and needs of people with severe, persistent mental illnesses. The challenge is not to reduce the complexity of the task, but to make it understandable. The reconstitution of lives is a complex process, much of which we fail to find in our outcome research, not necessarily because of the bleak course of schizophrenia, but because of conceptual and methodological shortcomings. (1995, p. 87).

Though almost thirty years have passed since Estroff highlighted this challenge, we still face barriers to understanding and measuring what recovery means and looks like to people with psychosis. It may be that quantitative measures are less well-suited for capturing the highly individual and deeply personal aspects of recovery from severe mental illness. Indeed, much of what we *do* know about recovery from psychosis comes not from quantitative measurements, but rather from qualitative accounts of those who have lived experience of psychosis. It is from these

qualitative accounts that topics related to intimacy, sexuality, and romance consistently arise as important facets of recovery. In these areas, which tend to be particularly stigmatized and nuanced, it is especially crucial to place the voices of those with lived experience at the forefront of research investigations.

1.8 Goals of the Proposed Research

The aims of the proposed research are to build upon the existing literature base to better understand the experiences and perspectives of individuals with early psychosis regarding their intimate, romantic, and sexual relationships. This includes understanding how these topics are navigated in healthcare settings, as well as how functioning in this area of life is associated with psychiatric symptoms, cognition, and social cognition. As a significant proportion of existing research focuses on people with schizophrenia, the present work seeks to better understand how these issues are experienced by young adults experiencing early psychosis, as well as how these needs are addressed in EPI programs.

To ensure that this work is reflective of the lived experiences of people with psychosis, a mixed-methods design was used. Participants were invited to participate in a series of two studies (qualitative and quantitative), with the quantitative study exploring two distinct research questions. Across the three studies, the following research broad questions were explored:

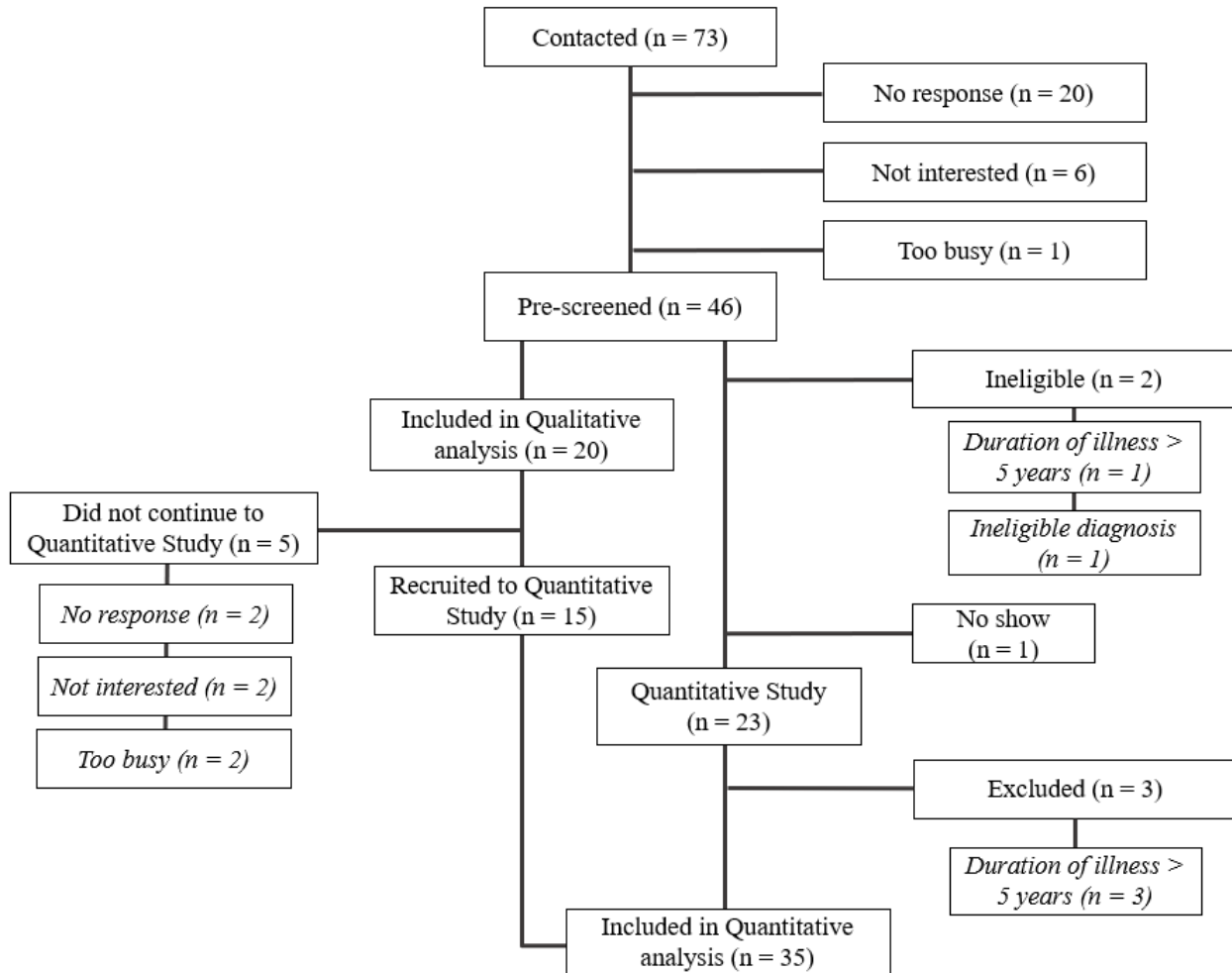
1. How do people with early-episode psychosis subjectively experience, view, and engage with intimacy, romance, and sexuality in their lives, and how are these topics addressed in healthcare settings?

2. What are the differences between healthy controls and individuals with early psychosis in various domains of functioning and well-being related to intimacy, romance, and sexuality?
3. Do individuals with psychosis show impairment on tasks measuring social cognitive abilities specific to romantic and sexual emotions and behaviours, and if so, are these impairments associated with romantic and sexual functioning?

The flow of participant recruitment is presented in Figure 1.1. Chapter 2 presents qualitative data on how people with early psychosis experience, navigate, and view their intimate, sexual, and romantic relationships, the role of their mental health in shaping this aspect of their lives, and how these issues have been addressed in mental health treatment. Chapter 3 presents quantitative data on components of clinical, romantic, and sexual functioning, to provide an overview of specific barriers that persons with psychosis face in these areas compared to control participants. In Chapter 4, data from two novel tasks are presented, which were developed for the present study to assess the application of social cognitive abilities in romantic and sexual situations. These data are presented alongside data on the relationships between romantic and sexual functioning, clinical symptoms, cognition, and social cognitive abilities. Finally, Chapter 5 provides a general discussion about the experience of intimate, romantic, and sexual relationships in early psychosis, and their role in psychosis intervention and recovery.

Figure 1.1

Recruitment Flow Chart for Participants in the Psychosis Group



Chapter 2

A Qualitative Exploration of Intimacy, Romance, and Sexuality in the Context of Early Psychosis: Needs, Barriers, and the Pursuit of a Meaningful Life

2.1 Introduction

The onset of a first episode of psychosis typically occurs between the ages of 16 and 35 (Liu et al., 2013). For many individuals, this occurs in adolescence or early adulthood, a time when individuals are beginning to develop the skills to function independently and transition into adulthood. Close friendships and dating relationships are often of significant importance in the lives of young people (Redmond et al., 2010), and the experience of psychosis during these periods can interfere with one's ability to develop and maintain these close relationships. Individuals may experience clinical symptoms that interfere with their social functioning and may miss opportunities for social engagement due to time spent in hospital or in mental health treatment and recovery. As a result, individuals who experience psychosis tend to see a reduction in their social networks (Gayer-Anderson et al., 2013), which is related to stigma, social isolation, and loneliness (Badcock et al., 2020; de Jager et al., 2017; Gardner et al., 2019). For people with psychosis, loneliness is also a predictor of greater psychotic and affective symptom severity, more internalized stigma, and poorer self-rated recovery and quality of life over time (Alasmawi et al., 2020; de Jager & McCann, 2017; Lim et al., 2018; Sibitz et al., 2011; Wang et al., 2020). These difficulties can pose significant challenges to the development and maintenance of intimate, romantic, and sexual relationships, as well as to one's own personal exploration of their identity and sexuality (de Jager et al., 2018).

For many people with psychosis, intimate relationships, including romantic and sexual relationships, are identified as primary recovery goals (Boucher et al., 2016). Relationships are

seen as normalizing and are viewed by people with psychosis as positive social and personal aspects of their lives and recoveries (Redmond et al., 2010). The emotional and practical resources offered by social support networks help facilitate recovery from psychosis through their association with improvements in mental health symptoms, life satisfaction, coping abilities, and quality of life (Boucher et al., 2016; McGuire et al., 2020; Mizock et al., 2019). However, topics related to intimacy, romance, and sexuality are often underrepresented in clinical research and practice. Patients involved in early psychosis intervention (EPI) programs consistently identify that EPI programs fail to address intimacy, romance, and sexuality as areas that are important for their subjective recovery, and that these topics are stigmatized, pathologized, overlooked or devalued in treatment settings (Kelly & Conley, 2004; Östman & Björkman, 2013; Van Sant et al., 2012). Despite these topics being highly valued by patients and expressed as areas of need, they are still rarely discussed within clinical settings (Huggins et al., 2008; Quinn et al., 2011; Raja & Azzoni, 2003). Research attempting to understand this treatment gap has identified several barriers that clinicians face when addressing romantic and sexual needs with their patients, including concerns that conversations are inappropriate, believing that they lack competency in addressing these issues, seeing these topics as “peripheral issues” in mental health care, lacking the time and resources to address these concerns, or feeling that these topics are uncomfortable or embarrassing to discuss (Quinn et al., 2011a; Quinn et al., 2011b; Southall & Combes, 2020; Urry et al., 2019).

The avoidance or devaluation of topics related to intimacy, romance, and sexuality in clinical settings may contribute to misperceptions that these topics are unimportant for people with psychosis, thereby rendering them less likely to be targets of research. As it stands, topics related to intimacy, romance, and sexuality tend to be understudied compared to other aspects

associated with recovery and relative to their perceived importance for individuals in early psychosis programs. People with psychotic disorders constitute a vulnerable group whose sexuality is frequently overlooked and misrepresented, with few studies presenting these topics from the perspectives of people with psychotic disorders (Volman & Landeen, 2007). Understanding the multidimensional nature of sexuality and intimacy, especially as an understudied area, requires centering the voices of people with lived experience of psychosis. Qualitative research allows for a thorough understanding of the contexts, concepts, and specific issues relating to intimacy and sexuality in the context of a psychotic illness, and is necessary to attain a more complete understanding of the unique and nuanced experiences of people with early psychosis.

Few qualitative studies have explored intimacy, romance, and sexuality among individuals with psychotic disorders. Across existing studies, almost all participants describe sexuality as an important aspect of life, yet report unfulfilled needs in sexual expression (de Jager et al., 2018). Contributors to sexual satisfaction go beyond the physical aspects of sex, and include the quality of intimate relationships and opportunities for sexual expression (Volman & Landeen, 2007). Participants consistently describe that sexuality is more meaningful in the presence of intimacy or in the context of a loving and supportive relationship (Volman & Landeen, 2007; Östman & Björkman, 2013; de Jager et al., 2018). Generally, participants describe their illness as profoundly impacting the sexual and intimate aspects of their lives; common factors impacting sexuality include symptoms, side effects of medication, social stigma, sexual self-image, sexual functioning, sexual trauma, social skills, and the ability to form intimate relationships (Volman & Landeen, 2007; Östman & Björkman, 2013; de Jager et al., 2018; de Jager et al., 2017). Due to the age of illness onset, participants noted that they did not

acquire the skills and knowledge required for the formation of sexual relationships until later in life, and reported feeling insecure and inadequate in intimate settings (Volman & Landeen, 2007; de Jager et al., 2017). Participants also reported difficulty interpreting the ambiguity of sexual messages and signals (Volman & Landeen, 2007).

Although some qualitative research has explored the intimate and sexual experiences of people with psychotic disorders, no studies have examined these topics among individuals in EPI programs, who are just beginning to navigate the complex interpersonal and sociocultural contexts in which intimate, romantic, and sexual relationships form. Further, in qualitative research about sexuality, themes related more to intimacy and close romantic, meaningful relationships tend to be generated. For many people, these close relationships are reported as more important than the actual engagement in sexual activity. As such, it is important that qualitative research also captures aspects of intimacy and romance alongside these discussions of sexuality, as the nature of these relationships is often – though not always – intertwined. The aim of this study is to use qualitative methods to investigate how people with early-episode psychosis subjectively experience, view, and engage with intimacy, romance, and sexuality in their lives, as well as how these topics are addressed in healthcare settings. The research findings reflect the voices of participants, the reflexivity of the research team, a complex interpretation of the problem, and implications for the broader literature base in this important and understudied area (Creswell, 2013).

2.2 Method

2.2.1 Participants and Recruitment

Participants were patients with early psychosis recruited from EPI programs in Ontario, Canada. Patients in these programs are within the first five years of a psychotic illness onset.

Participants who were considered eligible if they had been involved in an early intervention program for the first time within the past five years, spoke English, and were between the ages of 18 and 35. There were no diagnostic requirements outside of a psychotic episode (and therefore, eligibility for an EPI program); as a result, participants had diverse diagnostic profiles. Finally, individuals were eligible if they provided consent to have the interview audio recorded.

Participants were recruited from existing datasets of individuals who had previously participated in research projects at the Cognition in Psychological Disorders Laboratory at Queen's University or the Therapeutic Interventions in Psychosis Lab at the University of Toronto Scarborough and who had agreed to be contacted for future research. Additional recruitment also occurred via advertisement in a local EPI clinic. Initial recruitment was random, with all possible individuals from the datasets being contacted for participation. Later in the recruitment process, the recruitment of males/men was ceased in order to attain a sample that was equally representative of males and females. In line with qualitative research practices guided by Braun and Clarke (2021) and Malterud, Siersma, and Guassora (2015), sample size was determined by an appraisal of "information power". The determination of the requisite information power for a study depends on several factors, including the aim of the study, the sample specificity, the use of established theory, the quality of the dialogue, and the analysis strategy (Malterud et al., 2015). The study aims were relatively narrow (intimacy, romance, and sexuality), the target sample is highly specific (early episode psychosis), and the analysis strategy and interpretation were informed by a theoretical background. Dialogue quality was assessed on an ongoing basis, and recruitment ceased when information power was deemed sufficient. The decision about the final sample size was shaped by the complexity, adequacy, and richness of the data for addressing the research question (Braun & Clarke, 2021).

2.2.2 Procedure

In-depth, semi-structured, one-on-one interviews were conducted over Zoom between July 2022 and May 2023. Semi-structured interviews were selected to allow for describing and classifying participants' experiences while engaging the participant in discussion. The interview used open-ended questions about participants' experiences with intimate, romantic, and sexual relationships to obtain meaning about participants, their worldview, and how they make sense of their environment, illness, and interpersonal experiences. Questions aimed to elicit information about the perceived importance of sexual and intimate relationships, how these relationships may be related to one's subjective recovery, potential barriers to these relationships, and how these topics are addressed in healthcare settings. The interview questions were derived from the literature on intimate relationships in severe mental illness (and, where available, psychotic disorders specifically), with specific emphasis on literature that centers the voices of people with lived experience of psychosis (e.g., de Jager et al., 2017; Huckle et al., 2021; Ma et al., 2023; McGuire et al., 2020; Urry et al., 2019). The interview guide was refined through discussions with researchers and clinical psychologists with experience conducting qualitative research or working with individuals who have experienced psychosis. The interview questions were used as a guide to ensure that all major topics of interest were discussed. Additional probing was used to generate rich data. For a full list of interview questions and prompts, please see Appendix A. Participants were given the opportunity to ask questions at any time. Each interview was transcribed verbatim, and all data were anonymized. To characterize the sample and provide contextual information for the reported experiences, self-report information on the following demographic variables was obtained: age, sex, gender, sexual orientation, ethnicity,

relationship/marital status, educational and employment status, socioeconomic status, and mental health history.

2.2.3 Reflexive Thematic Analysis

The specific method of qualitative analysis employed by the present study is reflexive thematic analysis (TA), which is a method for developing, analysing, and interpreting patterns across a dataset (Clarke & Braun, 2021). TA involves systematically coding data, developing themes, and identifying patterns of meaning. According to Clarke & Braun (2021), the *reflexive* component refers to the recognition that the researcher themselves is a subjective and situated individual, and must critically reflect upon their role as a researcher, their research practices, and their research processes, as they all shape qualitative data analysis. Recognizing that knowledge generation is inherently subjective, reflexive TA emphasizes the role of the researcher in understanding their subjectivity and situation and to “own their perspectives” (Elliot et al., 1999). Situating oneself involves having an awareness of personal and disciplinary standpoints that guide one’s research, such as understanding the philosophical and theoretical assumptions that inform research, as well as the researcher’s own socio-demographic positionality (Clarke & Braun, 2021). Therefore, themes that are discussed in this present study are those that have been generated and developed by the research team, acknowledging the role of the researchers in interpreting and reporting the data (Braun & Clarke, 2022).

The thematic analysis was guided by Clarke and Braun’s (2021) six-step analytic process: 1) dataset familiarization; 2) data coding; 3) initial theme generation; 4) theme development and review; 5) theme refining, defining, and naming; and 6) writing up. This analysis took a predominantly inductive and data-driven approach, in which categories, patterns and common themes were generated to describe a dataset and to understand the phenomenon (Braun & Clarke,

2006; McMillan & Schumacher, 2010). However, the analysis was also deductive, and informed by existing literature and theory on relationships in early psychosis and schizophrenia. All interviews were conducted by the principal investigator, a doctoral student in clinical psychology (S.M.W). All interviews were audio-recorded, and notes on behavioural observations were taken during and after each interview to ensure that context was appropriately considered. Interviews were transcribed verbatim, with identifying information removed from the transcripts. The transcripts were subject to reflexive thematic analysis by a research team of clinical psychology graduate students (S.M.W., L.S., and O.S.), who read the transcripts and listened to the corresponding audio recordings. The analysis team collectively coded one interview to develop a richer and more nuanced understanding of the data coding process (Braun & Clarke, 2019). Following, interviews were randomly assigned to coders, with S.M.W. coding 50% of the data and L.S. and O.S. coding 25% each. Across several collaborative meetings, codes and interview content were reviewed and discussed. NVivo 14 was used by the research team to systematically define, search, visualize and generate codes across data. Data were coded for central ideas, concepts, and patterns, which were then assessed for similarities and differences and combined into themes. The analysis team adopted a collaborative approach to coding, theme generation, theme development and review, and theme refining, defining, and naming. Overarching themes were generated that each consisted of several sub-themes that were derived from the sets of codes. The final conceptualization and writing of the manuscript were completed by S.M.W with input, narrative framing, and theme presentation reviewed and edited by L.S. and O.S.

A number of additional steps were taken to ensure rigour and reflexivity in the collection and analysis of data (Clarke & Braun, 2021). Study processes were monitored through an ongoing recording of memos, reflections, and thoughts that shaped the analytic plan, as well as

through ongoing discussions with team members regarding the codes and themes being generated. In order to ensure a faithful representation of participant accounts, I present the following results both in the form of interview extracts as well as overarching themes garnered from our analytic narrative. Monitoring of how the interviewer and authors' positions, perspectives, beliefs, clinical training, and social location may shape the research process and influence the narratives produced were taken into consideration throughout all stages of the research process (Braun & Clarke, 2019). For instance, the analysis team consisted of White women, which may have limited our interpretations of the data, especially in terms of information shared by men and racialized participants. The analysis team also consisted of both queer and heterosexual persons, which may shape the lens for which data was interpreted, particularly around sexuality. Furthermore, all members of the analysis team work or have worked in an early psychosis intervention program, and are advocates both for these services and for the role of social support and social relationships in the treatment of psychosis. Through our work, we have recognized and heard from clients about the importance of close relationships in their recovery, and therefore our analyses are likely shaped by these perspectives. Our social locations and experience with EPI programs have informed the current analysis, and therefore must be considered alongside the results.

2.3 Results

Twenty individuals completed this study. Please refer to Figure 1.1 for participant recruitment information. The participants were between 20 and 30 years old, with an average age of 25. Ten men and ten women took part. All individuals were living in the community. Demographic information is shown in Table 2.1.

Table 2.1

Descriptive Characteristics of the Overall Sample

		Total Sample (N = 20)
Age <i>M</i> (SD)		25.10 (2.75)
Sex <i>n</i> (%)		
	Female	10 (50.0)
	Male	10 (50.0)
Gender <i>n</i> (%)		
	Man	10 (50.0)
	Woman	10 (50.0)
Sexual Orientation <i>n</i> (%)		
	Bisexual	3 (15.0)
	Gay/Lesbian	1 (5.0)
	Heterosexual	12 (60.0)
	Other	3 (15.0)
	Prefer not to answer	1 (5.0)
Ethnicity <i>n</i> (%)		
	Asian	3 (15.0)
	Black/Afro-Caribbean	2 (10.0)
	Indigenous	2 (10.0)
	Mixed ethnicities	2 (10.0)
	White	11 (55.0)
Highest Education Achieved <i>n</i> (%)		
	High school	4 (20.0)
	Post-high school	14 (70.0)
	Other	2 (10.0)
Education in Years <i>M</i> (SD)		15.57 (3.12)
Occupation <i>n</i> (%)		
	Employed	8 (40.0)
	Unemployed	3 (15.0)
	Student	7 (35.0)
	Other	2 (10.0)
Income <i>n</i> (%)		
	0 - \$29,999	7 (35.0)
	\$30,000 - \$59,999	5 (25.0)
	\$60,000 - \$89,999	4 (20.0)
	\$90,000 - \$119,999	1 (5.0)
	\$120,000 and over	1 (5.0)
	Prefer not to answer	2 (10.0)
Relationship Status <i>n</i> (%)		
	Single	14 (70.0)
	Married/common-law/engaged/committed	6 (30.0)
Age at First Early Psychosis Intervention <i>M</i> (SD)		22.40 (3.35)
Duration of EPI Involvement (months) <i>M</i> (SD)		30.30 (19.21)

Each interview lasted between 45 to 60 minutes. Four main themes were produced by the analysis: 1) Addressing intimacy, romance, and sexuality in healthcare settings; 2) Recovery; 3) Relationships in the context of mental health symptoms; and 4) Self-definition. Each theme incorporated several sub-themes, which are reviewed in the sections below.

2.3.1 Theme 1: Addressing Intimacy, Romance, and Sexuality in Healthcare Settings

Participants' experiences of discussing or receiving support for issues related to intimacy, romance, and sexuality in healthcare settings were individualized. Participants varied in the degree to wish they desired this support, as well as whether or not these topics were discussed with them by healthcare professionals. The greatest concerns tended to come from participants who wished to have this support and who either did not receive it or received inadequate, inappropriate, or stigmatizing care. Participants who reported that these conversations were valuable typically described affirmative, supportive, and direct care addressing their concerns. For many others, the topic was discussed in a limited manner or not at all.

2.3.1.1 Experienced or anticipated benefits of healthcare conversations

Some participants reported positive conversations surrounding issues related to intimacy, romance, and sexuality in some healthcare settings. They reported these conversations as helpful and normalizing.

With my... case manager with the [EPI] program, she was trying to help me with that kind of cognitive behavioral therapy, so that when it does come to like being sexually active that I won't be overthinking, like my mental state won't be in a poor one, that I can't be in the moment. She was fairly supportive. (*Participant 12, Woman, 26 years*)

It was really nice to be able to talk to my psychotherapist about that, and get their opinion about normalizing sexuality and desire and things like that and yeah, aiming for romantic relationships. (*Participant 9, Woman, 26 years*)

Notably, for some participants, their healthcare team represented a safe space to discuss highly personal topics that they did not feel comfortable discussing with other people in their lives.

I've heard my friends having really bad experiences, but overall, I would say it's been pretty positive especially with my therapist. She was very open and recognized the fact that I was coming from a sort of religious upbringing. It's actually something I had help with [from] her because I had come out to her at the time as being bisexual, and... my mom was sort of like religious and she found out about it in a way that I felt was sort of overreaching, and we kind of like some conflict about it. My therapist was really there for me and like very accepting and she was always very open about like sexuality and relationships, and I felt like she was super comfortable addressing it. (*Participant 10, Woman, 25 years*)

For others, although they reported that these issues had never been discussed, they indicated that they had a comfortable and positive relationship with a member of their care team and felt that the conversation would be positive if it was ever required. Often, participants placed the onus on themselves when it came to bringing up concerns related to intimacy and sexuality, making statements like “if I need to talk about it or bring it up, that’s what I’ll do.” (*Participant 20, Woman, 27 years*). Participants who reported being willing and able to bring these topics up in healthcare settings often made subsequent positive comments about the healthcare professionals that they worked with. Examples of these types of statements include “I feel like

my psychiatrist was always there to help if there's a problem" (*Participant 17, Man, 25 years*), "[my treatment team] was awesome" (*Participant 4, Man, 22 years*), and "the social workers I've had, they've been really nice people and accommodating... they're both really good" (*Participant 11, Man, 30 years*).

2.3.1.2 *Stipulations surrounding healthcare conversations*

One of the most common considerations that participants brought up when discussing healthcare settings was the notion that conversations around intimacy, romance, and sexuality should be initiated at appropriate times and with a clinician with whom the patient had built a degree of trust and rapport. In other words, there were stipulations surrounding these conversations that were important to participants' willingness to openly engage.

I think it comes back to that idea of psychological safety and feeling like you're in a position where this is somebody that you trust. It does take time to build trust with people. So, when it was right off the bat of people asking you about romantic or sexual relationships, that can feel anxiety inducing. It just felt like, "I'm supposed to talk to you about this? I barely know you at all." I get that they want to cover all their bases in treating people, but I think they could have had approached things a little differently... Some people I find it really beneficial, other people I find I'd rather not talk about it. So, it really depends on the person, more than the role that they are playing, if that makes sense. If there was the right person, yes, but it's so important that it be the right person. (*Participant 6, Woman, 29 years*)

This sentiment was echoed by several participants who outlined the importance of building rapport with healthcare providers before they felt comfortable discussing sensitive topics. Several people denied that they would want to speak candidly about these topics with

healthcare providers at all, especially those that they do not have strong rapport with. Others outlined that that they did not feel ready to have these conversations due to past negative experiences, or that they were not yet willing or able to navigate their own thoughts and emotions surrounding these topics. Sometimes, these difficult conversations were able to be facilitated through additional support, such as participants' romantic partners encouraging them to seek help or even attending appointments with them. One participant described that their romantic partner attended a doctor's appointment with them to support a conversation around the sexual side effects of medication, and to help advocate for medication support (*Participant 12, Woman, 26 years*). In this example, the onus was on the participant to broach this topic with their healthcare provider, despite the topic (medication side effects) being a well-documented and common problem that people experience when taking antipsychotic medication.

2.3.1.3 *Limitations of healthcare approaches*

The most commonly reported sub-theme centered on limitations and negative perceptions of healthcare approaches to topics related to intimacy and sexuality. This sub-theme included limitations of EPI programs themselves, barriers that participants experienced in discussing these topics in EPI programs and other healthcare settings more broadly, disappointment with the healthcare system, and negative experiences that participants have had when topics related to intimacy, romance, and sexuality have been addressed. Though some participants acknowledged that aspects of intimacy, sexuality, and romance may be outside the scope of specialized EPI programs, they still expressed dissatisfaction with the lack of attention paid to areas of their lives beyond specific symptoms of psychosis.

It probably would have been good to discuss it a bit more – it interacts with my other experiences. With doctors, they're always pretty open, and they always like asking about

your sexual health. I would say, like in general, it's been pretty good, the only thing would be... I feel like at [EPI program], it wasn't really like a priority in the therapy that I was getting, but obviously that relates to what the program is. (*Participant 10, Female, 25 years*)

Even with recognition of limitations of EPI programs in discussing topics related to intimacy and sexuality, participants acknowledged that there were other ways these programs could support sociosexual needs, such as through referrals to experts. However, others expressed frustration with how fragmentation within the healthcare system led to repeated referrals to other professionals, with little success in terms of addressing individuals' treatment goals related to intimacy and sexuality.

Participant: I'm not sure why, if it's just people aren't comfortable with the topics, or they just don't know quite as much on it... nobody really knows the answer to anything, they just kind of play like a guessing game or like it's a hot potato game, just passing it around, until somebody has something to say.

S.M.W: Like, "maybe the next professional will have something to say."

Participant: Exactly, try this one, no you take it, no you take them, and it's like I've been that hot potato passed around. So, at this point, I feel like nobody really knows what they're talking about, and I don't know who to go to anymore. (*Participant 8, Female, 25 years*)

Participants criticized the scope of healthcare programs as being limited to physical health or medicalized approaches, and described how talking about issues related to intimacy and sexuality would allow them to learn, grow, and understand themselves. Participants often

contemplated as to whether there might be relationships between their mental health and aspects of their sociosexual lives, including whether addressing these things in tandem may lead to more effective or appropriate treatment.

I think we have a very medical way of diagnosing people and thinking about their recovery, it's very pathologized. It's very much like, you have your disorder, here's the medicine you can take, and now it's like here's medicine and therapy... and that's all people seem to talk about in terms of psychoeducation. But I think it definitely could be spread into like how much religion affects your recovery, how much romance affects your recovery, how much like your workplace affect your recovery, your family... oh, there's so many different aspects of someone's life that I think could be talked about.

(Participant 9, Woman, 26 years)

Echoing earlier comments, participants also discussed the importance of healthcare providers initiating these conversations, and thus providing patients with a space to bring up concerns.

I feel like it's not addressed enough, like to me, like I feel like there's been, I guess there's been times where like when I was younger, I was like really confused on why am I feeling this way, why am I starting to feel this, or want to do this, but it's I've never been comfortable enough or know how to ask those questions. So and then whenever I go to the doctors or anything, they always just try to get you in and out as quick as possible, they never really, to me, take the time to really find out what's on the mind, so I feel like they should really start to maybe ask more, cause a lot of people don't, for me, at least I won't open up if they don't ask. *(Participant 8, Woman, 25 years)*

In terms of sexual functioning, I do need to bring that up to my doctors... I don't know when it's appropriate to bring it up, sort of thing. And then when I get to the doctors, I have a very bad memory, so I often forget what I want to talk about when I finally get to my doctor's appointment. So um, I should really just start keeping a list. (*Participant 1, Man, 21 years*)

This particular participant highlights how the cognitive symptoms of psychosis, such as deficits in memory and executive functioning, may pose additional barriers for patients when attempting to initiate and navigate these conversations in healthcare settings. Attempting to remember several different topics to bring up at what is often a very brief doctor's appointment can be challenging, and particularly so when some of those topics are regarding more sensitive or uncomfortable topics. For many people, this is yet another barrier to getting their needs met.

Unfortunately, in addition to the failure to initiate conversations on these topics, several participants outlined more overtly negative experiences of discussing these topics with healthcare providers. This included having their needs dismissed, minimized, or ignored, or clinical interventions being limited in scope and dissatisfying to patients (e.g., offering additional medication such as Viagra following complaints of sexual dysfunction, and no other treatment options).

S.M.W: When you started medication, were you told about any sexual side effects or did you kind of just notice them on your own and then ask about them?

Participant: I just noticed them on my own. No, nobody talked about it. Even my doctor said it shouldn't be like too big of an issue, so when it was addressed, I feel like it wasn't taken as seriously, and you know, even my support worker was saying it was a pretty

harsh drug, so yeah.

S.M.W: And were the side effects the reason you ended up switching medication or was there another reason?

Participant: Oh, side effects definitely were the reason I switched, yes... it just made me really numb, not motivated. Beyond the sexuality, like it was very like numb-inducing drug. (*Participant 20, Woman, 27 years*)

At times, experiences of identity invalidation or stigmatization were reported by participants who were part of marginalized gender or sexual groups, outlining the importance of an inclusive, intersectional approach when navigating topics related to intimacy and sexuality. The presence of implicit and explicit biases held by clinicians, such as those associated with heteronormativity, can have detrimental effects on patient outcomes.

Because my psychiatrists were men, and not that there's anything wrong with men, but I don't know... they didn't seem like they had knowledge and training on things like queer resources or queer experiences. And even then, I always felt like any queer relationships I had or queer feelings I had were kind of dismissed as trivial. My psychiatrist, if I talked about a woman or my feelings for a woman, he didn't treat it in the same way that he would treat it if I talked about a man. I just feel like trivialized or like seen as lesser or invalid... If it was a man, we'd talk about it. If it was a girl, it was almost like, "oh that's just like a friend. Just tell her how you would tell your other friends." And I was like, "what? No." (*Participant 15, Woman, 24 years*)

2.3.1.4 No desire or need to discuss intimacy/sexuality in healthcare settings

Finally, some participants reported that they did not require support from healthcare providers in areas related to intimacy, romance, or sexuality. In the interviews, questions around this topic were answered with a simple “no,” with some participants expressing that they had not considered the topic at all, and others reporting that they did not experience any issues in this area of their life that required support. At times, participants alluded to the lack of romantic or sexual relationships in their lives as a reason why they did not feel the need to discuss these topics. While some participants denied the *need* to discuss these topics, others reported that they did not *want* to have these conversations with healthcare providers. Participants reported preferences on receiving support from other people in their lives (e.g., family, friends) in topics related to intimacy, romance, and sexuality.

2.3.2 Theme 2: Recovery

The second theme was centered around the role of intimate, romantic, and sexual relationships as part of one’s recovery from psychosis. Despite the barriers that participants reported in this area of their lives, this theme was characterized by self-reflection, identity, growth, and hope.

2.3.2.1 Recovery before relationships

Several participants emphasized a desire for close relationships but identified other areas of their lives that they believed they needed to prioritize before building intimate relationships.

At the current moment in time, I know that it’s something unrealistic for me, because I’m trying to work through my own struggles I’m having... I just really feel like I need to learn how to love myself, I guess, before I can truly love someone else, because if I’m not

100% for myself, I can't be 100% for others... I definitely think romance is something very important in my life. I think it's something important for everyone's lives and I really, truly believe that there are people out there that really love you and that they'll do anything to help you succeed. And I think everyone should be looking for that person and in terms of recovery, just hopefully when everything stabilizes for myself, that could be part of my plan in the future. (*Participant 14, Man, 24 years*)

Others made comments on wanting to “have better mental health before I get involved... be in better shape and employed before I go into a relationship... I would like to go back to university at some point too” (*Participant 17, Man, 25*), or “I’m more into my career, building up my life... and then once I’m in a stable zone, then I can move ahead with my relationships” (*Participant 3, Woman, 23 years*), or “I’m kind of just focusing on my studies right now, I’m not really looking to get into a relationship or explore romance at all” (*Participant 5, Man, 24 years*). One participant commented on how experiencing and treating mental health symptoms left little room for considering the other facets of their life.

I'm learning that as my mental health gets better, [relationships] are becoming more and more important to me... I haven't actually had like a crush on anyone for about two years, just because I think I just shove them away. But now as I get better and put myself out there, I'm starting to have that. Like, OK, sexuality is more a thing in my life that I'm trying to bring out now... In that time period, it was very like low on the radar, so it has never really crossed my mind and it just kind of almost like forgot about that component of life... As time goes on, especially like I've been noticing like this past month, starting to kind of want that intimacy... again, I've never really had it, but I want to try that out. (*Participant 19, Man, 22 years*)

From some participants, there were indications that this self-betterment was important in order to become more desirable to potential partners. Others voiced a fear of “using” other people to try to improve their mental health (i.e., relying on others to provide emotional and practical supports for their mental health), and therefore preferred to refrain from these relationships until they were able to improve their mental health on their own. Along these lines, relationships were described as a “prize” (*Participant 16, Woman, 26 years*) that one might earn once they were able to achieve their subjective idea of recovery.

2.3.2.2 *The value of close relationships in recovery*

Even though many participants endorsed a feeling of unreadiness for relationships or stated that relationships were not a current priority for them, the majority of participants recognized the value and importance of close, supportive relationships in recovery. Participants who had not yet been in a romantic or sexual relationship expressed their beliefs about how that type of relationship would make a positive difference in their well-being, such as through promoting their own well-being or feeling more positive in their daily lives. On the other hand, participants who had current or past romantic or sexual partners often drew upon examples of how these relationships served as sources of support as they experienced mental health symptoms. Many individuals provided examples of the practical support that they received from close others, such as recognizing mental health symptoms, encouraging treatment, or physically bringing participants to hospitals or doctors appointments.

Because there are people out there that, um, love me, that are going to support me whatever I am going through... I find that whenever I'm with them, my symptoms are almost, um, they are very minimized, because I'm distracted so much by wanting to be with him, that I don't even notice them as much... It's that intimacy that I find that helps

me feel reminded that I'm wanted and everything like that. Definitely keeps a lot of depressive factors away. (*Participant 1, Man, 21 years*)

I see her as like kind of my savior. She was by my side the entire time... I wouldn't leave the house. She like called my family to come over, and then they called an ambulance and uh yeah, I was taken in. She's been like amazing through the whole thing, so I think it's definitely strengthened our relationship, definitely my side of our relationship... My partner was like a godsend for me. (*Participant 2, Man, 27 years*)

Emotional support from a loved one or close other is viewed as a significant contributing factor to emotional well-being, safety, and subjective recovery. Acceptance and love from others were emphasized as providing a sense of normalcy, comfort, and hope for the future. The following quotes illustrate the role that intimate relationships and social bonds play in providing a sense of belongingness and purpose that facilitates personal growth and resilience.

[Sexuality] is a way to kind of remind me of who I am, what I actually like doing. Yeah, 'cause before all that, it was like I really enjoyed like having sex and everything, but then once the mental health deteriorated, that kind of went to the back of my mind. And so having that more in the forefront reminds me of like how I was, but doing it in more healthy way. (*Participant 12, Woman, 26 years*)

Romance was so like key to restoring that to me. Like that sense of life, like liveliness of like vivacity and energy and just like excitement. Like life came back to life. (*Participant 15, Woman, 24 years*)

I see it as pretty important, 'cause you can't do it by yourself. It's nice to know that you have at least one person, doesn't have to be more than that, at least one person who fully

has your back, is willing to walk with you through it all. It makes it a lot easier... It's helped cause it's giving me some hope that there is more, like maybe I can like burst out of this. (*Participant 8, Woman, 25 years*)

Even we had a talk about what our future plans are, like “do you want to be in the future plan, even if, for example, my situation progresses?” He said, “yeah, I want to be there for you in the future no matter what.” So, it gives me a lot of hope in the future that the future will be normal. (*Participant 1, Man, 21 years*)

2.3.2.3 *Goals regarding future relationships*

When sharing their long-term goals around recovery and relationships, participants spoke of their desires for partnership, marriage, and/or children. Like for many young people, the idea of having a family and children were often presented by participants as long-term rather than immediate goals. Occasionally, a more passive approach was taken (e.g., “if it happens, it happens. If it doesn’t, it doesn’t.”). Often, participants spoke idealistically about their romantic goals, expressing a hope that they will find “the one” or “the right person.” Many emphasized an interest in finding more serious, long-term partners, which were desirable due to the degree of intimacy and security that they believe those relationships were more likely to offer. The majority of participants expressed interest in sexual activity predominantly within the context of a loving, supportive, and secure relationship.

Well, I think it's important now that it's not just a physical thing that's short term, but something that has more meaning to it, like being very close with somebody more than friends. You know, because it's as close as you can get in terms of a family... I'm at the age now where I want to start my own. So yeah. it's really about like being that close with

somebody that you're sharing your life, more than just the physical part. (*Participant 11, Man, 30 years*)

I know that I say I'm on this like this kind of like single path right now, but you know, there are moments where I do have that kind of that yearn or that craving to be able to share experiences that I go through with other people. I do that now mostly with friends, which is great. But you know, at the same time I'm getting to that that point where I'm seeing all my friends starting to settle down slowly... There's a trend that I see amongst other people, but I know I don't need to fit into that trend. But when I see it, I can't help but think, well where's my significant other? Where's my partner in this? I can push myself into a defeatist type of mentality where I'm putting myself down because I'm not quote unquote "on the right track." (*Participant 7, Man, 26 years*)

Finally, others expressed some ambivalence towards their future goals regarding intimate, romantic, or sexual relationships. Some people seemed to indicate that this topic was not one that they had spent much time thinking about or planning at this stage in their lives.

2.3.2.4 Intimacy and sexuality as part of growth and identity

This sub-theme highlighted how aspects relating to participants' intimate or sexual lives contributed to the development of their individual identities or personal growth. The ability to express oneself as a sexual being was, for many, part of a broader journey of the discovery of one's sense of self. The following quotes from different participants highlight the common elements of growth and identity that were present throughout the interviews:

I would say that I would like to end up in a relationship again, because it was very fulfilling, it taught me a lot, it let me grow a lot as a person. Beyond sexuality it was really self-fulfilling, you know, so I liked that. (*Participant 20, Woman, 27 years*)

I guess just like really getting to know someone on sort of like a deeper level... Because it was something that I kind of struggled with, and didn't really see myself being able to like be in a healthy relationship, when I was able to have that it made me realize I'm not different from everybody else. This is just kind of part of growing up and experiencing that. So, I would say it kind of changed how I thought about myself, and I would say it helped me grow as a person. (*Participant 10, Woman, 25 years*)

But nowadays, I see [sexuality] as a very freeing subject, where like, you know, it's part of who I am... Sexuality, I found, is a very important aspect in people's life as well. Because it's important to not suppress pieces of ourselves. It's important to make sure that you're expressing every aspect of yourself. (*Participant 1, Man, 21 years*)

But to me, sexuality is kind of like how I relate to the world and how I engage with it. And that filters like kind of what relationships I move towards, and not just romantic relationships, just kind of how I reach towards people and like what things I kind of gravitate towards. (*Participant 15, Woman, 24*)

I think [intimacy and sexuality are] important. I think it's important just as intimacy is important, I think sexual intimacy is another form of self-expression, another form of feeling at peace and with ease with another person and I think those feelings of psychological and physical safety are really important. (*Participant 6, Woman, 29 years*)

These excerpts underscore the importance of close relationships in fostering personal development, self-fulfillment, and a deeper understanding of one's own identities. They demonstrate the potential role of sexuality and intimacy as vehicles for personal discovery and cultivating meaningful interpersonal connections.

2.3.3 Theme 3: Relationships in the Context of Mental Health Symptoms

The third theme highlights how participants navigate intimate, romantic, and sexual relationships in the context of mental health symptoms and experiences. Barriers associated with psychotic illness ranged from the presence of clinical symptoms, the presence of anxiety (generally and in the context of romantic and sexual encounters), societal and self-stigma, and other illness-related factors (e.g., hospitalizations, loss of independence, delays in other markers of the transition to adulthood).

2.3.3.1 Stigma and self-stigma

Participants disclosed facing stigmatizing experiences which, oftentimes, became internalized. Even though many people demonstrated insight into their internalization of these stigmatizing beliefs, they expressed difficulty overcoming them. Stigma towards severe mental illnesses tended to create fears of disclosing information about their diagnoses or mental health experiences, such as positive symptoms, due to fears of being perceived as dangerous, not “normal,” or undesirable as a long-term romantic partner.

I'd be really shy but telling someone what my diagnosis was... I'm afraid that people would think that I'm dangerous because, you know, I'm not one of the “normal people.”

(Participant 17, Man, 25 years)

For me and for somebody I want to get close to, I'd like them to understand. But at the same time, for some people they might not feel comfortable getting that close to me when they hear that sort of stuff... Maybe when I start to get close to somebody and I open up to them about hearing voices, maybe they don't have a very good understanding of that sort of stuff, and then I might freak them out. Or they might think, "you know [he's] a nice guy, but I don't think I want to get into a serious relationship with him until that stuff is dealt with." (*Participant 11, Man, 30 years*)

With my psychotic features, that is the main reason why I'm very anxious about going out. Because I don't really know how to tell someone that I hear a voice that no one else can hear. I feel like that's a big deal breaker with most people. It's kind of a thing that you want to let someone know, not as soon as possible, but relatively early on. I'm so afraid of opening myself to others, especially with my psychotic features, because there's just been a whole lot of bad stigma around schizophrenia and just other psychotic features in that regard. And for me it's a hard pill to swallow, so I couldn't imagine what it's like to just tell someone that I'm trying to love that pill. I don't know, it's just I feel so trapped behind everything all the time. (*Participant 14, Man, 24 years*)

These quotes demonstrate the impact of stigma on one's beliefs about themselves and their ability to navigate intimate relationships in the context of mental health symptoms. For some participants, these experiences left them feeling undeserving of love or unwilling to pursue intimate relationships, fearing the burden that they believed their condition would impose on their partners, and being hesitant to "subject" others to their mental health difficulties. If they were to pursue relationships, some participants expressed that a potential partner would need to

be able to “handle” the realities of being with someone who experiences mental health difficulties.

My mental health will get in the way, and I start to think “well nobody really wants to be with me, I don't really want to be with myself half the time, so why would anybody else?” A lot of the times, I feel like if I disappear, would anybody really notice?

(Participant 8, Woman, 25 years)

People like ask me, like few months ago a girl was asking for my number, and I just turned it down... I don't want to suck someone into this world of mine... I don't want them to get sucked into the chaos and all that. So, a lot of times, when someone came to me, I just turn it down. *(Participant 19, Man, 22 years)*

Yeah, my own self-esteem is another thing that has gotten in the way... Yeah, just me in the way, like how I view myself and if I think it's worthy like, do I think I'm worthy of being loved? *(Participant 9, Woman, 26 years)*

While acknowledging the stigma, self-stigma, fear, and difficulties they experienced as part of their experience of psychosis, participants simultaneously commented on the importance of self-love, focusing on their sources of inspiration and motivation, and believing in the potential for continued personal and interpersonal growth in their sociosexual lives.

I just think that the scary thing is stigma about relapse, that's the stigma around it, you know, like “am I going to take a chance on this person if they might have a relapse?”... But you know, as long as I'm strong and healthy and I'm taking my medication, I know that it's good, and I've seen people in this program who have led regular lives have had

children, and who have made a whole career out of themselves. So that's given me motivation, given me inspiration. (*Participant 20, Woman, 27 years*)

I would say last year being diagnosed with bipolar definitely affected how I carried myself and I presented myself. I think I was definitely a shell of myself, and I didn't really pursue relationships or any romantic flings or anything, because, I don't know, I just was not confident, and I didn't feel like I deserved to be loved or that I was appealing to people. Being diagnosed bipolar was a big let-down in my romantic life, especially last year. But this year I'm trying to deal with it better and learn to love myself despite being diagnosed with bipolar. (*Participant 5, Man, 24 years*)

2.3.3.2 *Symptom interference*

When discussing barriers to intimate and romantic relationships, many participants highlighted specific symptoms, such as positive and negative symptoms, depressive symptoms, cognitive symptoms, and anxiety symptoms as interfering with their ability to engage in these relationships. Participants discussed the way that their symptoms and related experiences interacted from barriers to engagement in close relationships.

I couldn't sleep at night, and like [hallucinations] would mostly bother me throughout the entire day. So, I couldn't focus on like conversations or just about like any normal thing. (*Participant 13, Man, 20 years*)

I've always had like guilt and shame when thinking about having sexual thoughts or desires or fantasies. And so, whenever I'm in those situations with someone else, like we're speaking to each other about our desires or fantasies, I tend to feel that feeling a lot, because it's historically how I've always felt and those are the times where my voice

peaks the most, is when I'm feeling emotions like guilt and shame. And so, my voices will increase and then it will really kill the mood. (*Participant 9, Woman, 26 years*)

Um, occasionally, I don't know if this is generally a symptom, I read somewhere where basically you don't feel emotion and you don't outwardly express emotions. Sometimes I get that, and sometimes it's difficult to read what emotion I am expressing, I suppose. So sometimes, he'll look over me and be like, are you okay, you're just kind of like sitting there, normally you're very talkative. (*Participant 1, Man, 21 years*)

I used to be someone that would be intimate with myself all the time and I don't even know the last time because I have so much intrusive thoughts... it's sad, like it's disappointing. It's sad. (*Participant 16, Woman, 26 years*)

And with my depression, I really don't think I'm the most attractive guy in the world. I really think I'm you know, probably bottom of the barrel kind of guy. I have very low self esteem so that really plays in the role of my self-confidence and I really think that's been one of the biggest challenges I have to overcome. (*Participant 14, Man, 24 years*)

Participants also highlighted tertiary factors associated with their illnesses. Medication side-effects were common complaints, including decreased sexual desire, fatigue, cognitive complaints, and extrapyramidal symptoms. Specific complaints related to sexual dysfunction included vaginal dryness, erectile dysfunction, and difficulties with orgasm. These side effects interfered with engagement in sociosexual aspects of life and contributed to feelings of insecurity and inadequacy. Weight gain, another common medication side effect, and associated symptoms (e.g., comfort with one's body and physical shape, body image) were highlighted by several participants as barriers to intimate and romantic relationships, to the extent that some participants

did not feel comfortable pursuing relationships while they felt dissatisfied with their physical appearance. Low self-esteem and negative body image were often cited as related to symptoms of depression and anxiety, further affecting one's confidence in pursuing or engaging in intimate relationships.

And then there were other like physical side effects of my meds. So, my face was like very masked, my expression... very blunted affect like there was no like movement to my face... Then there were other undesirable extrapyramidal symptoms because I used to be on risperidone. Like my wrists would lock, my gait was very rigid and like it was so gross but sometimes I even drooled. (*Participant 15, Woman, 24 years*)

Symptoms also interfered with one's ability to take the necessary steps to engage socially, such as making and enacting plans for social activities. For example, cognitive symptom interference was often cited as a barrier to social engagement (e.g., planning ahead, keeping up with conversations).

Going out and creating those experiences, going out and socializing with people I've never met before, or making plans with friends to go out and do stuff, I find that my symptoms have gotten in the way of some of that happening. (*Participant 11, Man, 30 years*)

And I'd say like the main thing was I felt like mentally inadequate. I was definitely struggling with a lot of confidence issues regarding like memory and cognition. (*Participant 2, Man, 27 years*)

2.3.3.3 *Fear as a barrier*

Anxiety and fear were commonly reported barriers. Due to the complexities of these emotions for the topic at hand, these experiences are captured in a separate sub-theme outside of other symptom-specific complaints. The source of these anxieties and fears were varied among individuals, and included fears about romantic relationships, sexual relationships, rejection, and other illness-specific concerns. Many of these fears (e.g., sexual performance, rejection) are commonly held even among individuals who have not experienced psychosis, while others (e.g., fear of stigma from schizophrenia, fear of passing on an illness to one's offspring, fear of not being "good enough" due to their mental illness) were more illness specific.

I'm really careful with how I think about sex... I'm afraid of it, I'm afraid of leaving a negative train of thoughts in my mind, because I'm afraid it'll affect me later when I have to talk to somebody... I guess I feel kind of neurotic about sex, like probably more than I should, but yeah, I've been trying to deal with it, but it's kind of hard... I feel kind of crushed, because it weighs on my mind, like sexual things and the anxiety because of my condition, so those are my two biggest problems. (*Participant 17, Man, 25 years*)

I feel like with romance always, there's obviously like really big, fear of rejection. Like you really like someone, and you want them to like you back, but it doesn't always work out. So that's always something that comes up, you know, is this person going to reciprocate my feelings? How do I know if they are into me and I'm into them? I feel like it's really common sort of fear to have and definitely something I've experienced, so that would be like the main. Insecurity, fear rejection, fear of things not working out, like not wanting to lose. (*Participant 10, Woman, 25 years*)

But the risk that I am just thinking about it like, when I have schizophrenia, I just think about it like, if it's hereditary, I'm not so sure, like if I have schizophrenia from my grandfather, then maybe I can pass on to my generation which again, I'm scared of. Like that's why I avoid getting into intimate relationship, right from the beginning.

(Participant 3, Woman, 23 years)

Some participants spoke about their experiences overcoming those fears, which, in some cases, made them feel more self-assured and confident in themselves.

You know, it's scary enough putting yourself out there in front of your friends and seeing how they're going to respond to you and your diagnosis and this new way of living. And it's doubly scary when there's like the added element of this fear of romantic rejection, because friendship rejection is obviously scary, but to me, I always felt safe around my friends. With like the feeling of romantic rejection it was even more scary... vulnerability, and confronting those feelings of shame and self loathing. And the vulnerability of like really being open with someone. Yeah, that was scary. So, I'd say romance has been so, so healing. *(Participant 15, Woman, 24 years)*

2.3.3.4 The negative influence of past experiences

One's willingness to engage with close relationships was shaped by their past experiences. Participants considered how their upbringing, mental health experiences, and dating experiences have shaped and impacted how they approach relationships in the present day. The experiences shared were often negatively valanced and were reported to have lasting effects on participants' understanding of their own intimate and sexual relationships.

I sort of grew up very religious... I was very much taught to be like a very good girl and very strict upbringing in my house. And I remembered like being shamed for like watching porn, and like I got outed for it by my sister, that was like really hard I remember. It happened at like, I want to say a young age, and so after that, it was sort of like, shut down, we're not going to do this ever again or try it. And it would take a long time for me to want to... I get like guilt and shame, like I grew up with like a picture of Christ over my bed, and so like it was hard to think of anything before going to bed and things like that, and so I think voices come [from] a lot of like shame and guilt.

(Participant 9, Woman, 26 years)

I associated any kind of like sexual desire with this like feeling of losing control or with this, you know, really negative, like traumatic part of my life that was this manic episode.

(Participant 15, Woman, 24 years)

Participants also shared past experiences of abuse, sexual abuse, and trauma. This included experiencing infidelity in a relationship, facing homophobia or biphobia, having sexual photos shared without their consent, childhood trauma, rape, and human trafficking. These experiences were reported as creating substantial barriers to one's willingness and comfort in engaging in intimate relationships, as well as the level of anxiety, fear, discomfort, trepidation, or hypervigilance that people experience within the context of close relationships.

2.3.3.5 Loss of relationships and opportunities

The experience of psychosis often led to disruptions in other areas of life, including missed opportunities for sociosexual experiences and developing sociosexual skills. For some participants, this resulted in them feeling "behind" their peers in terms of relationship experience.

It felt like I was two years behind everyone else, in terms of not just sexual experience but knowing how to behave in a romantic relationship. I felt like I had missed these awkward milestones. I needed time to catch up and make these mistakes and be dumb (*Participant 15, Woman, 24 years*).

The lack of indicators of independence that are typically associated with transitions to adulthood (e.g., having a vehicle or a license, having an independent living space) were reported by participants as reducing opportunities for them to develop close relationships. Often, these were related to their illness, such as living with one's parents due to requiring more support or spending more time in hospital. Many also attributed the lack of opportunities to form social relationships to being in rural areas, not leaving the house, not knowing how to make friends, or feeling uncomfortable in social spaces.

More recently, in the past few years, I've been really dependent on family members in terms of support, you know, whether it's financial or emotional, so I just haven't been socializing with people my age as much as I'd like to... Like making plans to go out with friends to actually meet people or to sit down and make like a really good online dating profile. I find that's tough. My own mental health is has gotten in the way of some of that. (*Participant 11, Man, 30 years*)

I don't have a car, so I can't drive... I live with my dad, so it'd be kind of hard to have any kind of sexual activity within that. (*Participant 17, Man, 25 years*)

Other participants described the loss of previously existing or potential relationships as a direct result of their mental health challenges. The majority of time, the decision to withdraw from the relationship came from the other person, but participants also occasionally described

self-isolating, withdrawing, or pushing others away as a result of their experiences of psychosis or the associated symptoms.

When I started working after high school, I met a coworker and I fell head over heels for her. We would hang out all the time like we were non-stop talking to each other...

Eventually, uh, I got hospitalized. And this was my big wake up call with her... I called her, the first time she picked up from the hospital, you know, we talked for a bit. Second time, we talked for maybe 5 minutes, and then after that I tried calling her a few more times and she never picked up. (*Participant 14, Man, 24 years*)

I pushed a lot of friends away, and a lot of my friends they didn't quite understand really well what the symptoms were, because at that point I was really starting to go through psychosis. Especially on the bus or in the mall, I'll just be sitting there, and I would just start talking to some random lady in front of me, and my friends would look at me like I've got three heads because there's nobody there... Or they will catch me like talking to myself periodically and nobody wants to be near the weird person that talks to themselves... I mean symptom wise, they've been getting better, but relationships and all that, my boyfriend's the only one who stuck around. (*Participant 8, Woman, 25 years*)

2.3.4 Theme 4: Self-Definition

The way intimacy, romance, and sexuality were experienced and described by participants varied widely, as did the degree to which they attributed meaning to these experiences. Interview questions prompted participants to consider how they defined intimacy, romance, and sexuality in their lives, as well as the emotions that arose when thinking about

these topics. These concepts were defined physically, mentally, and emotionally, and experiences were described as positively valanced, negatively valanced, and mixed.

2.3.4.1 *Romance*

Emotions associated with romance were often described in physical terms, and associated with feeling “hot”, noticing a “butterfly sensation”, or noticing one’s “heart start to skip” or “flutter”. Participants described numerous positive emotions associated with romance, such as satisfaction, pleasure, admiration, happiness, joy, fulfillment, playfulness, desire, comfort, calmness. Oftentimes, romance was described as separate from “just” sexual intimacy. Other emotions were more negative, such as awkwardness, sadness, betrayal, or discomfort. Participants noted feeling nervousness and excitement when thinking about romance, as well as panic and anxiety. Participants often considered conflicting emotions together.

I'm a bit everywhere when it comes to [romance] because I experience a little bit of everything when it comes to romance. There's a sadness when it comes to it, because of the whole lack of romance, affections, displays and stuff like that. But at the same time there's also like happiness and joy for like, the stuff that I do for myself, like even going out with friends and involving them in this aspect as well. So, there's a great degree of range when it comes to emotions and romantics for me. (*Participant 7, Man, 26 years*)

I would say like, romance kind of does bring up like fears and insecurities in some sense, but in general, I think of it as a positive thing. And, you know, past relationships that haven't worked out, even if it didn't end well, I still got something out of the experience, and it was still really beautiful and something I'm glad I did, I guess. (*Participant 10, Woman, 25 years*)

The manner in which people defined romance was also diverse. Some focused on feelings, while others focused on actions. Aspects related to mutual support and taking care of one another were commonly commented on.

Romance is, I don't know, it's doing nice things for another partner or person that you're interested in, whether that be cooking a nice meal for them, creating a playlist for them, or going out for a walk and just doing things that you two enjoy for each other. I think that's romance, writing poems, writing music. (*Participant 5, Man, 24 years*)

Not necessarily like interpersonal romance in the sense of romantic relationships... but even just like the sense of romance as in like a departure from seeing things as super mundane. Or romance, as in a really, thorough attentiveness to the world around you, and a really deep engagement with everything. So, other people, but also just even like language learning I find so romantic, learning new things like playing the piano, going for a walk outside. I don't know. (*Participant 15, Woman, 24 years*)

2.3.4.2 *Intimacy*

Words that participants used when discussing intimacy included bonding, closeness, connection, safety, loyalty, trust, passion, vulnerability, and openness. People shared examples of intimacy with friends, family members, romantic partners, sexual partners, pets, therapists, and themselves.

Intimacy, I'd say, just showing vulnerability through having sexual relations and emotional connections. (*Participant 12, Woman, 26 years*)

I define intimacy and my own life, like... I would have to think about that. But for example, if I was just thinking about it on the spot, having intimate phone call with the

friend, talking about private topics, that's one implement of intimacy. Being with my social worker talking about private topics, that's another form of intimacy. Being sexual with somebody, that's another form of intimacy. Yeah, it varies. (*Participant 20, Woman, 27 years*)

2.3.4.3 *Sexuality*

Participants often recognized and commented on the multifaceted nature of sexuality, referring to sexual orientation, sexual activity, sexual expression, or sexual identity. However, many participants had difficulty verbalizing descriptions of sexuality (e.g., “it’s just weird” (*Participant 4, Man, 22 years*), “it’s the sort of thing that people do” (*Participant 13, Man, 20 years*), “I guess it’s who you’re into” (*Participant 16, Woman, 26 years*), “I think just about being horny and stuff, I don’t know” (*Participant 2, Man, 27 years*)). Some reflected on their difficulty answering these types of questions (e.g., “I don't even know. I feel like I should have thought of this before.” (*Participant 16, Woman, 26 Years*)).

There was an emphasis on confident and free self-expression, being comfortable in one’s own skin, and integrating one’s sexuality in their broader sense of self. Quotes emphasized sexuality as part of connecting with others, including attracting partners and feeling attracted to others. Participants directly and indirectly challenged societal stigmas surrounding sexuality, sexual expression, and queerness, and emphasized their own sexual autonomy.

Sexuality means that you're comfortable expressing yourself as a sexual being, so you're aware that humans do need to have sex, and it's ok to be sexual... it's not something to be ashamed of. (*Participant 12, Woman, 26 years*)

I see the role of sexuality basically as, you know, there's this word and I'm trying to get into my mind, basically like the female, the female power or something like that, something along those lines... Divine feminine. So, I basically see sexuality as that, and just trying to attract more of that into my life, and, you know, discover what that means to me and discover what that is to me really. Because it's been a journey, and I've been through phases and I've been through different aspects of my life, and I'm still growing, and what I look like now is not maybe what I'm going to look like in five years, right? So, I'm constantly evolving. (*Participant 20, Woman, 27 years*)

Participants who described themselves as members of the 2SLGBTQIA+ community often discussed their experiences with sexuality in that context, commenting on experiences of confusion and self-discovery of their identities growing up, being faced with homophobia or heteronormativity, as well as their pride and positive experiences of self-discovery and self-expression. Often, these experiences intersected with their ethnic, racial, or religious identities. Several participants discussed barriers to sexuality and sexual expression as influenced by religious upbringings; often, these experiences were characterized by guilt and shame.

I'm confused half of the time I feel like, like there's times where like I do want to experiment because like I don't quite know what my sexuality really is... But it's also like I feel kind of scared cause like if I do end up, I do experiment and I realize, what if I'm bi? Would my family actually accept it? Because they're accepting of others, but they're not so accepting of their own kids. (*Participant 8, Woman, 25 years*)

Yes, definitely a journey. When I was younger, it's definitely like you had to be straight and it wasn't really cool to be anything else. So, it was very hard to be young and have fantasies about different people and not feeling like you were straight and not having

anyone to tell. So, it was definitely journey accepting that you could be another letter on the spectrum and that other letters exist, and that different kinds of people exist.

(Participant 9, Woman, 26 years)

2.4 Discussion

This qualitative research explored how individuals experiencing early psychosis navigate, understand, and derive meaning in areas relating to intimacy, romance, and sexuality in their lives. Across four main themes and their sub-themes, participants described their challenges, aspirations, and experiences. The quotes and stories described demonstrate a complex interplay between these areas of life and one's mental health, personal growth, and recovery.

2.4.1 Intimacy, Sexuality, and Recovery

As in previous research, the importance of close, intimate relationships as part of the recovery process was emphasized by participants (Boucher et al., 2016; McGuire et al., 2020; Redmond et al., 2010). Many participants reported that emotional support from their loved ones and close others were cornerstones of their recovery and mental well-being. Though these sources of social support ranged to include family members, friends, and healthcare providers, participants also emphasized the unique role that romantic and sexual partners play in providing the sense of comfort, safety, and normalcy that supported their subjective recovery. Physical intimacy was valued by many participants, though it was overshadowed by the desire for the close companionship, trust, support, and shared life experiences that participants believed was more present in romantic relationships. These quotes support prior research highlighting the importance of intimacy and sexuality in one's well-being, growth, and sense of self (Kerpelman et al., 2012), further demonstrating that sociosexual domains of life are an integral part of the process of recovery from severe mental illness.

Though close relationships were highlighted as key components of recovery, participants also spoke of prioritizing their own self-improvement and mental health stability prior to seeking out or engaging in close relationships. Often, goals around symptom management, career and educational advancement, and financial stability are viewed as precursors to intimate relationships. The choice to focus on career and personal development before pursuing intimate relationships is one made by many individuals with or without mental health challenges. However, for those in the present study who have experienced mental health challenges that may have resulted in disrupted social, educational and career trajectories, there are additional stressors in terms of feeling “behind” their peers in these competing life domains, thus leading to additional pressures to “catch up”. Similar sentiments have been reported in previous research, capturing the notion that individuals with psychosis may find it difficult to engage with intimate relationships when they feel that they have missed the initial opportunities for these experiences, and that they are now “behind” their peers who have already had these opportunities (Redmond et al., 2010).

There is nothing inherently of concern with the pursuit of recovery in different areas of one’s life, or the choice to focus exclusively on one’s individual growth, identity, and well-being. These are highly individual decisions that reflect the many different and important values that people hold. However, the emphasis on achieving a certain level of recovery or mental wellness prior to attempting to pursue close relationships raises some questions about the underlying reasons for this deferral among people with psychosis. The view that one should prioritize symptomatic and functional recovery goals, perhaps above and beyond goals related to intimacy and sexuality, are not novel to the present study and are often promoted – either intentionally or unintentionally – by clinicians and researchers. For example, in seen in research from healthcare

providers, beliefs that intimacy and sexuality are “peripheral issues” that lack priority in treatment, or that clinical recovery would facilitate the recovery of “everything else” (e.g., areas of life related to intimacy and sexuality) were commonly held (Urry et al., 2019). These views are also represented in research relating to treatment outcomes. Although research has begun to shift towards emphasizing the multidimensional nature of recovery (Ponce-Correa et al., 2023), past research has primarily emphasized domains such as symptom remission or functional recovery as primary outcomes of treatment programs. In contrast, the concept of “subjective recovery,” which captures concepts related to personal meaning, hope, sense of self, identity, connectedness, and other individual experiences, can be more challenging for researchers to operationalize and measure, and therefore is more difficult to target with traditional interventions (van Weeghel et al., 2019). As a result, more objective domains of recovery are frequently emphasized as primary outcomes in treatment programs, potentially with the (unproven) assumption that recovery in other, more subjective life domains, including aspects of sociosexual functioning, would follow.

The notion that one must be “recovered” before pursuing close relationships is also in contradiction with a plethora of research, including the present study, outlining the importance of close, supportive relationships throughout the process of recovery (Sibitz et al., 2011; Vázquez Morejón et al., 2018). For some people with psychosis who opt not to pursue intimate relationships despite desiring them, this choice may be influenced by stigma, low self-esteem, and pressures to “make up” for the fact that they have a mental illness by optimizing other areas of their lives to make themselves a “desirable” partner. This may hinder the pursuit of close relationships, thus delaying opportunities for connection and intimacy and overlooking the potential of these relationships to enhance recovery itself. Waiting until one is “recovered” prior

to seeking relationships may also not be fruitful, given that one's ability to create and maintain friendships may not spontaneously improve with age. In fact, research demonstrates that older adults with psychosis continue to face isolation, community disconnection, poorer social functioning, lower social support, a lack of opportunity to develop relationships, and a loss of relationships, despite having desires for social connection and recognizing the importance of these connections, especially when aging (Berry & Barrowclough, 2009; Ogden, 2014; Smart et al., 2021). As such, emphasizing the importance of building and developing interpersonal and social skills as part of early intervention may help circumvent poorer social outcomes in the future. Ultimately, espousing the belief that people must be “recovered” or “mentally well” – which are often subjective concepts – before they can take steps towards creating and reciprocating close, intimate relationships, is to their detriment and to the detriment of those whom they might love.

2.4.2 The Relationships between Mental Health, Sexuality, Intimacy, and Romance

Though participants discussed how the presence of positive and negative symptoms of psychosis interfered with sociosexual domains of their lives, participants often cited symptoms related to anxiety, fear, and depression as primary barriers. It is important to note that despite many participants still experiencing ongoing positive and negative symptoms of psychosis, all participants were living as outpatients in the community and self-selected to participate in this research study. Participants also had some degree of involvement in early psychosis treatment programs, and many were taking medication, which may have rendered psychotic symptoms as less likely to be primary barriers to sociosexual engagement. Other illness-related factors, such as medication side-effects, stigma, and self-stigma, were also described as barriers to forming and maintaining relationships. These factors were complex, intertwined, and often self-

reinforcing; for example, positive symptoms may increase fear and anxiety, thereby contributing to withdrawal and insecurity, which further impacts one's mood and beliefs about their worthiness as sexual or romantic partners. These negative beliefs about oneself persist even when participants report remission of psychotic symptoms. As such, future research aiming to support individuals with psychosis in improving their intimate, romantic, and sexual relationships should also target factors including, but not limited to, self-stigma, negative perceptions about oneself as an intimate partner, relationship insecurities, and self-esteem.

2.4.3 Healthcare Experiences

In healthcare settings, conversations about intimacy, romance, and sexuality can represent opportunities for support and rapport-building, but can also be sources of stigma and invalidation. A supportive, trusting relationships with one's healthcare provider is seen as of central importance when navigating topics of intimacy and sexuality in a healthcare setting. Positive experiences tended to be linked to the strength of the rapport and trust of the existing therapeutic relationship, as well as the therapist's degree of openness and the amount of time they are willing to spend discussing these topics. For some participants, interactions with their healthcare teams represent some of their only opportunities to discuss these more sensitive issues. Unfortunately, participants also reported that sociosexual needs are frequently stigmatized, inadequately addressed, or completely unmet. For example, while it is important to acknowledge psychiatric symptoms in an often time-limited appointment, a strict focus on psychiatric symptoms can leave patients feeling unheard and unsupported in other aspects of their lives. The results of this research echo previous findings outlining the need for health services to better support persons with psychosis in navigating the sociosexual and romantic aspects of their lives (White et al., 2020; White et al., 2021b). Further, some individuals

expressed no need or no desire to discuss these topics in detail in healthcare settings, demonstrating the need for healthcare providers to be adaptive to patient needs and respectful of their preferences.

There are many ways that existing systems could be improved upon to better support the sociosexual needs of people experiencing psychosis; a non-exhaustive list of examples will be reviewed here. In line with previous research, many healthcare providers feel that they lack competence and training in navigating issues related to intimacy and sexuality, and report that they desire and would benefit from further training that encompasses the sociosexual dimensions of mental health care (Berger-Merom et al., 2021; Nnaji & Friedman, 2008; Southall and Combes, 2020; Urry et al., 2019; White et al., 2020;). Training offers the potential to increase clinicians' comfort and self-efficacy in initiating conversations about intimacy, romance, and sexuality, as well as provide psychoeducation and guidance around the management of these conversations. It is important that the clinician takes the responsibility for initiating and making space for conversations around intimacy, romance, and sexuality, as patients may face discomfort and uncertainty around knowing when and how to express concerns related to these topics. Further, additional training would support the implementation of integrative care models that incorporate screening, assessments, and interventions focused on sociosexual well-being alongside traditional methods of care. This may also involve applying already-used CBT models to sociosexual issues, accumulating resources to provide patients, and becoming knowledgeable about referrals that can be offered to patients who desire additional support in these areas. Referral networks could include specialists in sexual health, relationship counselling, and LGBTQIA2S+ care. At an organizational level, providing guidelines around best practices for addressing needs related to intimacy, romance, and sexuality may serve to reduce healthcare

providers' difficult broaching these topics, and would allow for more consistent, comprehensive care to be delivered to service users (White et al., 2020). Ideally, treatment programs or groups that offer support around sociosexual relationships and needs would be beneficial in normalizing experiences, reducing stigma, and providing practical strategies for navigating this area of life. Given that sociosexual needs can vary considerably across clients, it may be beneficial to develop modular interventions that can be flexibly adapted to address specific needs that clients may face (White et al., 2020). Importantly, across all recommendations, healthcare providers would benefit from prioritizing the development of a strong therapeutic rapport with their patients to provide a sense of safety and security for patients to disclose concerns. Healthcare workers should practice in a way that respects the individual's readiness to have conversations around intimacy, romance, and sexuality, recognizing the appropriate timing for these conversations. However, training in topics related to intimacy and sexuality is often limited or inconsistent in health and mental health education (Abbott et al., 2021; Mollen & Abbott, 2022; Reissing & Giulio, 2010; Shindel et al., 2010), and little to no research has explored outcomes of these types of training programs on clinician behaviour. As such, future research that aims to improve clinician competency in sociosexual issues should seek to measure the impact of these programs on subsequent patient care.

The importance of sexual health training and comfort in discussing sensitive topics was apparent in the present study, as it directly impacted the quality and specificity of the information provided by the client. For example, in the present study, specific complaints related to sexual functioning were often only disclosed after prompting. In one example, a participant disclosed that he experienced "decreased libido" as a side effect of medication. The interviewer asked subsequent questions about specific experiences, such as erectile dysfunction. After that query,

the participant disclosed that his concerns were actually surrounding difficulties with erectile function and orgasm, and that he had not experienced any changes to sexual desire. Patients may be unclear about the different components of sexual functioning and sexual response, and thus use “libido” as a catch-all for sexual problems. It is also possible that people feel more comfortable discussing and using terms like “libido” rather than terms like “erectile dysfunction” or “orgasm.” This demonstrates how specific prompting by healthcare providers can be necessary to better understand the specific sexual problems that people are experiencing, and how offering these terms may create the opportunity for patients to speak about related issues.

There are ever-increasing burdens on healthcare providers, such as staffing shortages and high demands on services. Making improvements to healthcare delivery requires support from program management and administration in addition to the efforts made by healthcare practitioners themselves. Continued advocacy and research in this area is necessary to provide individuals with psychosis with appropriate sociosexual support.

2.4.4 Identity, Self-Definition, and Meaning Making

As in the general population, people who have experienced psychosis described diverse definitions of romance, intimacy, and sexuality. Participants’ definitions of, and emotional responses to, these subjects range from joy to trepidation. Intimacy was characterized by trust, connectedness, emotional vulnerability, and support, while sexuality was seen as a multifaceted expression of self and a domain for exploring identity, connection, pleasure, and autonomy. Not all participants verbalized complex and personal meaning attributed to this area of their lives; some had not strongly considered these components of themselves and their lives, and for others, it was reported as less important than other areas of life. This theme highlights the (potentially self-evident) assertion that, although people with psychosis may face unique illness-related

challenges within sociosexual domains of life, their diverse values and needs in these domains are aligned with those experienced and reported by people unaffected by psychosis (Boislard et al., 2016; Scott et al., 2011; Tillman et al., 2019; Watkins & Beckmeyer, 2020).

Common across all themes, diversity characteristics emerged as important to the navigation of intimate, romantic, and sexual aspects of participants' lives. Participants shared how aspects of their culture, ethnicity, gender, sexual orientation, and religion interacted with their sociosexual experiences. In line with research on identity development (Salazar & Abrams, 2005; Sue & Sue, 1999), participants who endorsed being members of non-majority groups (e.g., racialized or 2SLGBTQIA+ individuals) often reflected on how various aspects of their identity shaped their experiences. This may be due, in part, to being forced to question and reflect on one's identity when it does not align with the social majority. In healthcare settings, it is important for healthcare providers to be aware of the many ways that their and their clients' culture, ethnicity, religion, and gender/sex identities may intersect, as well as how this affects their therapeutic relationship. Healthcare workers should be sensitive to and knowledgeable about how cultural, ethnic, religious, and gender/sex identity factors influence perceptions and experiences of intimacy, romance, and sexuality, as well as how to adapt their approaches with an intersectional lens to best suit the needs of the individual patients they are working with (Joiner et al., 2022; Kivlighan et al., 2018).

2.4.5 *Limitations*

The sample diversity, while inclusive of various ages, sexual orientations, and ethnicities, consisted predominantly of cisgender and monogamous or single individuals. Despite recruitment being open to individuals of all identities, recruitment of individuals of diverse gender identities was unsuccessful in the time frame of the study; this may have also been related

to an already-low base rate of individuals in the early stages of psychosis. Limited information was available regarding details of past romantic and sexual relationships outside of what was reported in the interviews, which may limit some of the conclusions drawn. As various diversity characteristics were commonly discussed among participants, it is likely that individuals with diverse gender/sex identities and relationship contexts will face unique experiences in intimate, romantic, and sexual areas of their lives that may not have been captured by the present study. Furthermore, while all participants were engaged in early intervention services for psychosis, there was considerable variability in diagnoses, medication, and current psychotic symptoms. Given the diverse trajectories and neurodevelopmental impacts of various psychotic illnesses (e.g., mood disorders with psychotic features versus schizophrenia), participants may differ considerably in the impact of their illness on the sociosexual aspects of their lives. Future longitudinal research may wish to explore the specific sociosexual outcomes related to different diagnoses following the period of early psychosis to examine if specific barriers or experiences vary by diagnostic status. For example, individuals with schizophrenia, who face high rates of stigma and considerable clinical and cognitive symptoms, may experience unique interpersonal challenges that are distinct from other psychotic illnesses. Related, participants were outpatients living in the community who self-selected to participate in this study. As such, these findings may not be representative of those in acute phases of illness or who are hospitalized. Participants who opted to participate in the study may also be more likely to be those who are interested in the topic area and who are willing to discuss intimate relationships. Individuals who may experience greater levels of stigma, shame, or discomfort with these topics may have opted not to participate. That being said, several participants in the present research indicated that the study represented one of the first times they had discussed these topics in a healthcare or research

settings, indicating some willingness to participate even despite some trepidation, anxiety, or shame around these topics. Lastly, researcher characteristics, such as gender/sex and age, may have influenced participant engagement and willingness to disclose certain information (for instance, being more or less comfortable discussing certain information with a researcher of the same or another gender/sex).

2.4.6 Conclusions

Findings from this study indicate that many young adults experiencing early psychosis see romance, intimacy, and sexuality as central to their well-being and as facilitators and indicators of mental health recovery. Illness-related factors including clinical and cognitive symptoms, medication side effects, stigma, self-esteem, social isolation, and a loss of relationships and opportunities presented as primary barriers to developing and maintaining close relationships. Positive intimate and sexual relationships were associated with hope, optimism about recovery, positive self-image, identity development, emotional and practical support, and a sense of normalcy. The importance of intimacy, romance, and sexuality for participants was viewed as discrepant with the lack of attention these topics received in healthcare settings. Participants shared perspectives on how healthcare providers can better support their sociosexual needs, including initiating relevant discussions, building trusting patient-clinician relationships, and being knowledgeable of relevant sexual and intimate topics and resources (e.g., medication side effects, queer resources). The importance of mental health providers gaining competency in addressing these topics was emphasized. Future research should continue to explore avenues for supporting young people with early psychosis in navigating these complex and personal areas of their lives, thereby supporting their progress towards recovery.

Chapter 3

Understanding Experiences of Intimacy, Romance, and Sexuality in Early Psychosis

3.1 Introduction

Intimate, romantic, and sexual relationships are highly valued by people experiencing early psychosis, yet can also be sources of distress, stigma, and anxiety, and therefore represent areas of need in treatment and recovery. These topics have received insufficient attention in clinical and research settings, especially relative to their perceived importance for individuals with psychosis.

The importance of close, supportive relationships in recovery from psychosis is well-established (Doron et al., 2014; McGuire et al., 2020; Mizock et al., 2019; Norman et al., 2005; Uzenoff et al., 2010). From a recovery-oriented perspective, intimate relationships can be a source of hope, courage, belongingness, and inclusion, which contribute to individuals' abilities to live full and meaningful lives despite experiencing a severe mental illness (Van Sant et al., 2012). Individuals experiencing early psychosis consistently identify intimacy, romantic relationships, and sexual activity as important components of their subjective recovery (Boucher et al., 2016; Bjornestad et al., 2017; Windell et al., 2012). However, psychosis is related to several barriers to the development and maintenance of close relationships. Clinical symptoms, medication side effects, hospitalizations, stigma, cognitive and social cognitive impairments, and difficulty with daily functioning may all interfere with the trajectory and success of a relationship (Barker & Vigod, 2020; de Jager et al., 2017; Padgett et al., 2008; Van Sant et al., 2012). Understanding specific barriers that individuals with psychosis face in these areas of life is crucial for developing interventions that can support individuals in fully engaging with these domains of their lives.

Previous research has found that individuals with psychosis experience reductions in the size of their social networks in the prodrome and early stages of a psychotic illness (Gayer-Anderson et al., 2013). This reduction has been suggested to result from withdrawal from social relationships, perhaps as the result of depressive or psychotic symptoms, as well as from ostracization and exclusion from others, perhaps as a result of symptom interference or societal stigma about psychosis (Baker & Procter, 2015; Giacco et al., 2012). Despite romantic relationships being identified as protective factors in mental health outcomes, the relationships of individuals with psychosis tend to be rated as lower in intimacy, commitment, and passion compared to healthy controls (Doron et al., 2014). In terms of sexuality and sexual relationships, research has typically taken a narrow focus on sexual dysfunction, risk factors, and vulnerability (Boucher et al., 2016), and much research has focused on the sexual side effects of antipsychotic medication (Kelly & Conley, 2004). Indeed, research has identified that up to 65% of individuals with first episode psychosis experience sexual dysfunction (Marques et al., 2012). Of the few studies that have explored other aspects of sexuality, such as sexual satisfaction and self-esteem, findings indicate that individuals with psychosis also experience barriers in these areas (de Jager et al., 2018; Huguelet et al., 2015; Laxhman et al., 2017; McCann, 2010a). Though existing research has emphasized the importance of further investigating these important areas of life, there is still a paucity of research on topics related to intimacy, romance, and sexuality. These areas also receive little attention in early psychosis intervention programs, despite patients in these programs desiring to talk about these areas of life (McCann, 2010b; Östman & Björkman, 2013). Further in-depth research in this area would allow for the identification of specific barriers and treatment targets that would allow early intervention programs to more appropriately and adequately address the needs of patients.

In this relatively understudied area, little is known about the specific and nuanced differences in intimate, sexual, and romantic domains between individuals with and without psychotic disorders, particularly in the context of early psychosis. The aim of the present study is to explore the rates of sexual dysfunction, dissatisfaction with sexual and romantic relationships, and related impairments in an early psychosis population compared to healthy controls. To better understand the specific concerns faced by individuals in early psychosis programs, the present work aimed to investigate numerous facets of romantic relationships, sexuality, and sexual functioning, many of which have been underrepresented in existing research. Based on previous literature, I expect that persons with psychosis will have more difficulties in romantic relationships, including lower relationship satisfaction, a greater fear of being single, and more anxious and/or avoidant attachment styles. I also expect that persons with psychosis will experience higher rates of sexual dysfunction, dissatisfaction, and poorer sexual self-concept. In healthcare settings, I expected that participants would report wanting, but not receiving, information related to intimacy and sexuality in their care, and that these topics would be seen as important for their recovery.

3.2 Method

3.2.1 Participants

Seventy-six participants (38 community controls, 38 early psychosis outpatients) were recruited and completed the study. A total of 35 outpatients were retained in the final analyses. Individuals were removed from the analysis on the basis of having a duration of illness longer than five years ($n = 3$). Please see Figure 1.1 for the participant flow chart for the psychosis group. Eligibility criteria required participants to be involved in an early intervention program for the first time within the past five years, to speak and read English, and to be between the ages

of 18 and 35. There were no diagnostic requirements outside of a psychotic episode (and therefore, eligibility for an early psychosis intervention program); as a result, participants had diverse diagnostic profiles. Community controls matched on age and gender were recruited through community and online advertisement. Advertisements were posted on community social media pages and posters were posted around various community locations. Control participants were screened for past or current psychiatric disorders prior to study enrolment using the Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998).

3.2.2 Procedure

The research proposal received ethical approval from the Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board. Study procedures were explained and verbal and written informed consent was obtained from all participants. Assessments and telephone screeners were completed by doctoral students or Bachelor-level research assistants. Diagnoses were self-reported by participants and/or extracted from medical health records when possible for the early psychosis group. Participants completed all study procedures over Zoom. Study measures were completed verbally and using Qualtrics survey software. A study examiner was present on Zoom with participants for the completion of all measures to answer questions and assist with any technical difficulties that could arise. The study took between 1.5 and 4 hours to complete, varying based on diagnostic status and time required for each participant to complete the study measures; compensation of \$15 per hour was provided to participants.

3.2.3 Measures

3.2.3.1 Demographic Information

A demographics questionnaire collected information including age, self-identified ethnicity, sex, gender, relationship and marital status, educational and occupational history, current medication, and clinical diagnostic history.

3.2.3.2 Psychiatric Symptoms

Psychiatric symptoms were assessed via both self-report and clinical interview. The Modified Colorado Symptom Index (MCSI; Conrad et al., 2001) was used to measure self-rated emotional distress associated with psychological symptoms. The MCSI consists of 14 items rated on a 5-point scale ranging from 0 (*not at all*) to 4 (*at least every day*), where higher scores indicate greater emotional distress. The MCSI demonstrated excellent internal consistency in the present study (Cronbach's $\alpha = .95$). The Brief Psychiatric Rating Scale (BPRS; Overall et al., 1967) is a clinician-rated semi-structured interview capturing clinical symptoms over the past two weeks and behavioural observations made during the interview. The BPRS assesses the frequency and severity of 18 psychiatric symptom domains on a 7-point scale ranging from 1 (*absent*) to 7 (*extremely severe*). This interview is typically completed in 15-25 minutes. Factor analyses have produced a consistent five-factor solution assessing the following domains: Affect, Positive Symptoms, Negative Symptoms, Resistance, and Activation (Shafer, 2005). Mean item scores for each domain are reported, with higher scores indicating greater symptom severity.

3.2.3.3 Loneliness

The UCLA Loneliness Scale (Version 3; Russell, 1996) was used to measure loneliness. The UCLA Loneliness Scale consists of 20 items, each scored on a 4-point scale ranging from 1 (*never*) to 4 (*always*), where a higher total score indicates a greater degree of loneliness. Internal

consistency for the UCLA Loneliness Scale was excellent in the present study (Cronbach's $\alpha = .95$).

3.2.3.4 *Belongingness*

Achieved belongingness was measured using the General Belongingness Scale (GBS; Malone et al., 2012), which is a 12-item measure with two subscales: acceptance/inclusion and rejection/exclusion. Each item is scored on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A score for each subscale was created by averaging the items within the subscale, where higher scores indicate a greater degree of acceptance/inclusion and a lower degree of rejection/exclusion. Both the acceptance/inclusion and rejection/exclusion subscale each demonstrated excellent internal consistency in the present study (Cronbach's $\alpha = .95; .94$).

3.2.3.5 *Internalized Stigma*

Internalized stigma was assessed using the Internalized Stigma of Mental Illness Inventory (ISMI; Ritsher et al., 2003), a 29-item measure with five subscales: alienation; stereotype endorsement; perceived discrimination; social withdrawal; and stigma resistance. Questions are scored on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Scores on each subscale are averaged together (after reversing scores from the stigma resistance subscale) to achieve a mean score, where higher scores indicate greater internalized stigma. Internal consistency for the ISMI was excellent in the present study (Cronbach's $\alpha = .94$).

3.2.3.6 *Subjective Recovery*

The Questionnaire for the Process of Recovery (QPR; Neil, et al., 2009) was used to measure subjective recovery in patients. The QPR consists of 15 items, each scored on a 5-point scale ranging from 0 (*disagree strongly*) to 4 (*agree strongly*), where a higher total score

indicates greater recovery. Internal consistency for the QPR was excellent in the present study (Cronbach's $\alpha = .94$).

3.2.3.7 *Relationship Investment*

The Investment Model Scale (IMS; Rusbult et al., 1998) uses four subscales to assess the four constructs within the investment model of relationships: commitment; relationship satisfaction; quality of alternatives; and investment. Each subscale consists of questions with a 9-point rating system ranging from 0 (*not at all*) to 8 (*completely*), where higher subscale scores indicate greater commitment, relationship satisfaction, quality of alternatives, and investment. This questionnaire was only displayed to participants who reported being involved in a romantic relationship at the time of assessment. The quality of alternatives subscale of the IMS demonstrated acceptable internal consistency in the present study (Cronbach's $\alpha = .75$) and the commitment, relationship satisfaction, and investment subscales demonstrated good internal consistency (Cronbach's $\alpha = .85; .90; .85$).

3.2.3.8 *Relationship Satisfaction*

General relationship satisfaction was assessed using the Relationship Assessment Scale (RAS; Hendrick, 1988). The RAS consists of seven items, each scored on a 5-point scale ranging from 1 (*low*) to 5 (*high*), where a higher mean score indicates greater relationship satisfaction. This questionnaire was only displayed to participants who reported being involved in a romantic relationship at the time of assessment. The RAS demonstrated good internal consistency in the present study (Cronbach's $\alpha = .88$).

3.2.3.9 *Relationship Functioning*

Romantic relationship functioning was assessed using the Romantic Relationship Functioning Scale (RRFS; Bonfils et al., 2016), which is a 22-item measure with three subscales: resources and interpersonal skills, risks, and stigma. Questions are scored on a 9-point scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*), where a higher mean score indicates better romantic relationship functioning. The RRFS demonstrated good internal consistency in the present study (Cronbach's $\alpha = .88$).

3.2.3.10 *Fear of Being Single*

The Fear of Being Single Scale (FOBS; Spielmann et al., 2013) was used to measure participants' concern, anxiety, or distress regarding the current or prospective experience of being without a romantic partner. The FOBS consists of six items, such as "It scares me to think that there might not be anyone out there for me." Items were rated on a 5-point scale from 1 (*not at all true*) to 5 (*very true*), with a higher mean score indicating a greater fear of being single. The FOBS demonstrated good internal consistency in the present study (Cronbach's $\alpha = .84$).

3.2.3.11 *Attachment Orientation*

The Experiences in Close Relationships Scale – Revised (ECR-R; Fraley et al., 2000) was used to measure adult attachment orientation with two 18-item subscales, one assessing attachment avoidance and the other assessing attachment anxiety. Questions within each subscale are scored on a 7-point rating scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), where a higher score indicates greater attachment anxiety and greater attachment avoidance. The 18-item anxiety and avoidance subscales of the ECR-R demonstrated excellent and good internal consistency, respectively (Cronbach's $\alpha = .94; .89$).

3.2.3.12 *Sexual Functioning*

The National Survey of Sexual Attitudes and Lifestyles – Short Form (Natsal-SF; Mitchell et al., 2012) is a 17-item measure that was used to measure an individual’s level of sexual function. This questionnaire takes into account reported sexual function problems experienced for at least 3 months (e.g. felt anxious during sex, felt physical pain as a result of sex). Items also explored the relational context (e.g. “My partner and I share about the same level of interest in having sex”) and levels of satisfaction and distress, which are scored on a 4-point scale ranging from 0 (*agree strongly*) to 4 (*disagree strongly*). Scoring of the Natsal-SF was conducted based on guidelines outlined by Jones and colleagues (2015, Method 2), in which scores for each component are summed to produce a total sexual function score and then standardized. Participants who are not currently in a relationship have their scores standardized for the same scale range as scores for participants currently in a relationship (Jones et al., 2015). Higher scores indicate a higher degree of sexual dysfunction. A separate score measuring one’s overall degree of distress or dissatisfaction with their sex life (“Overall Sex Life”), regardless of relationship status or recent sexual activity, was calculated for the present study given the low number of participants with psychosis currently in relationships or who had not engaged in sexual activity within the past year.

3.2.3.13 *Sexual Self-Concept*

Select subscales from The Multidimensional Sexual Self-Concept Questionnaire (MSSCQ; Snell, 1995) were used to measure eight domains of human sexuality: (1) sexual anxiety; (2) sexual self-efficacy; (3) sexual preoccupation; (4) sexual optimism; (5) sexual problem self-blame; (6) sexual motivation; (7) sexual self-esteem; and (8) sexual self-schemata. Items on the MSSCQ are ranked on a 5-point scale ranging from 0 (*not at all characteristic of*

me) to 4 (*very characteristic of me*). A score for each subscale was created by averaging the items within the subscale, where higher scores indicate a greater amount of that subscale tendency. The internal consistency for the MSSCQ subscales included in the present study was excellent (Cronbach's $\alpha = .94$).

3.2.3.14 *Sexual Distress*

The Sexual Distress Scale-Short Form (SDS-SF; Santos-Iglesias et al., 2020) was used to assess negative feelings (e.g., worry, frustration, concerns) that people have about their sex lives and sexual relationship(s). The SDS consists of five items, each scored on a 4-point scale ranging from 0 (*never*) to 4 (*always*), where a higher total score indicates greater sexual distress. The SDS demonstrated good internal consistency in the present study (Cronbach's $\alpha = .90$).

3.2.3.15 *Hypersexuality*

Hypersexual behaviour was measured using the Hypersexual Behaviour Inventory (HBI; Bóthe et al., 2019), which is a 19-item measure with 3 subscales: coping (e.g., I use sex to forget about the worries of daily life), control (e.g., My attempts to change my sexual behaviour fail), and consequences (e.g., I sacrifice things I really want in life in order to be sexual). Questions are scored on a 5-point scale ranging from 1 (*never*) to 5 (*very often*), where higher scores indicate a greater degree of hypersexuality. The consequences and control subscales of the HBI demonstrated good internal consistency in the present study and the coping subscale demonstrated excellent internal consistency, respectively (Cronbach's $\alpha = .85; .87; .90$).

3.2.3.16 *Information from Healthcare Providers*

The Information from Healthcare Providers survey was adapted for the present study (McInnis, 2018). In this survey, participants are shown a number of topics related to treatment

and recovery for people with first-episode psychosis (e.g., symptom management, return to work, social skills, romantic relationships, sexual functioning, etc.). For each topic, participants were asked several questions: 1) whether they wanted information on this topic; 2) if they received information on this topic; 3) which healthcare provider gave them this information; 4) the quality of the information received; 5) if they had to ask for this information specifically; and 6) how important this topic is for their recovery.

3.2.4 Data Analysis

Descriptive statistics were compared across groups using independent samples *t*-tests and chi-square tests of independence for continuous and categorical variables, respectively. For measures that were completed only by the psychosis group, descriptive information including means, standard deviations, and percentages were computed. Missing data were addressed using mean imputation when the number of missing items was low. Participant data was removed from an analysis if they failed to complete the majority of scale items. Analyses examining group differences between clinical, romantic, and sexual outcome variables were conducted using independent samples *t*-tests. A mixed-model ANOVA was conducted to examine group differences by diagnoses and within-subjects differences in domains of sexual self-efficacy. Given the relatively sparse literature base for this topic, these analyses were selected to provide more nuanced understanding of specific areas of sexuality that affect persons with early psychosis (e.g., specific aspects of sexual self-concept as measured by the MSSCQ).

3.3 Results

3.3.1 Demographic Variables

Demographic variables of the overall sample are presented in Table 3.1. The average age across both groups was 24 years old. Groups did not significantly differ on age, sex, gender, sexual orientation, or employment status. The groups were marginally different in income. Groups did significantly differ on ethnicity, educational attainment, relationship status, and sexual activity. Some of these differences may be attributed to the fact that university students were overrepresented in the community recruitment of healthy controls – as such, control participants were more likely to be educated and to report currently being students. Aligned with my expectations and with previous research, there were significant differences in relationship and sexual activity statuses between groups, such that fewer participants with psychosis were in relationships or had had partnered sexual activity within the past year.

Table 3.1

Descriptive Characteristics of the Sample by Group

	Controls (n = 38)	Early Psychosis (n = 35)	Statistic	<i>p</i>
Age <i>M</i> (SD)	24.61 (4.12)	24.26 (3.32)	$t(71) = .396$	.694
Sex <i>n</i> (%)			$\chi^2(2) = 3.11$	.211
	Female	20 (57.1)		
	Male	15 (42.9)		
	Other	0		
Gender <i>n</i> (%)			$\chi^2(3) = 1.20$	.754
	Man	14 (40.0)		
	Nonbinary	3 (8.6)		
	Trans man	1 (2.9)		
	Woman	17 (48.6)		
Sexual Orientation <i>n</i> (%)			$\chi^2(4) = 6.45$	.168
	Asexual	0		

	Bisexual	5 (13.2)	8 (22.9)		
	Gay/Lesbian	2 (5.3)	2 (5.7)		
	Heterosexual	29 (76.3)	19 (54.3)		
	Other	0	3 (8.6)		
	Prefer not to answer	1 (2.6)	3 (8.6)		
Ethnicity <i>n</i> (%)				$\chi^2(7) = 14.10$	.049
	Asian	17 (44.7)	7 (20.0)		
	Black/Afro-Caribbean	0	4 (11.4)		
	Indigenous	0	4 (11.4)		
	Middle Eastern	1 (2.6)	1 (2.9)		
	Multiple ethnicities	2 (5.3)	2 (5.7)		
	White	16 (42.1)	17 (48.6)		
	Unknown	1 (2.6)	0		
	Prefer not to answer	1 (2.6)	0		
Highest Education Achieved <i>n</i> (%)				$\chi^2(3) = 12.58$	.006
	Grade school	0	1 (2.9)		
	High school	0	9 (25.7)		
	Post-high school	26 (68.4)	17 (48.6)		
	Other	12 (31.6)	8 (22.9)		
Years of Education <i>M</i> (SD)		16.37 (2.69)	14.99 (2.72)	$t(70) = 2.17$	.034
Occupation <i>n</i> (%)				$\chi^2(4) = 6.12$	.190
	Employed	16 (42.1)	15 (42.9)		
	Unemployed	2 (5.3)	7 (20.0)		
	Student	14 (36.8)	7 (20.0)		
	Other	6 (15.8)	5 (14.3)		
	Prefer not to answer	0	1 (2.9)		
Income <i>n</i> (%)				$\chi^2(4) = 8.83$	.066
	0 - \$29,999	7 (18.4)	13 (37.1)		
	\$30,000 - \$59,999	4 (10.5)	7 (20.0)		
	\$60,000 - \$89,999	10 (26.3)	5 (14.3)		
	\$90,000 - \$119,999	5 (13.2)	2 (5.7)		
	\$120,000 and over	8 (21.1)	2 (5.7)		
	Prefer not to answer	4 (10.5)	6 (17.1)		
Relationship Status <i>n</i> (%)				$\chi^2(2) = 6.12$	.047
	Married/Committed	18 (47.4)	8 (22.9)		
	Single	19 (50.0)	27 (77.1)		
	Other	1 (2.6)	0		
Partnered Sexual Activity in Past Year <i>n</i> (%)				$\chi^2(2) = 9.96$	.007
	Yes	29 (76.3)	14 (40)		
	No	7 (18.4)	17 (48.6)		
	Prefer not to answer	2 (5.3)	4 (11.4)		

Descriptive characteristics regarding EPI program involvement, diagnostic status, medication use, psychiatric symptoms, stigma, and mental health recovery are presented in Table

3.2. Many participants had either not received specific diagnoses or were unaware of their psychotic disorder diagnoses; these participants reported a diagnosis or experience of “psychosis”. Comorbid diagnoses were common among participants. The majority of participants (20) were prescribed atypical antipsychotics; six of them were currently prescribed two or more different atypical antipsychotics. For some participants who were not experiencing an episode of psychosis, they reported past, but not current, use of antipsychotic medication.

The sample had a psychiatric symptom sum score in the mild-to-moderately ill range (Brief Psychiatric Rating Scale; $M = 39.89$, $SD = 12.74$) based on cut-offs described by Leucht and colleagues (2005). Mean scores on BPRS factors are presented in Table 3.2. Participants in the present study reported levels of internalized stigma slightly below the midpoint of the scale (2.5). The mean score on participants’ subjective views of their mental health recovery was 39.80, and the range of scores was 7-60 (with a total possible range of 0-60).

Table 3.2

Descriptive Characteristics of the Early Psychosis Sample

	Early Psychosis (n = 35)
Age at EPI Enrolment M (SD)	22 (3.33)
EPI Duration (months) M (SD)	27.76 (16.91)
Psychotic Disorder Diagnosis n (%)	
Psychosis	14 (40)
Schizophrenia	9 (25.7)
Mood Disorder with Psychotic Features	8 (22.9)
Schizoaffective	2 (5.7)
Schizophreniform	1 (2.9)
Substance-Induced Psychosis	1 (2.9)
Comorbid Diagnoses n (%)	
Anxiety Disorder	12 (34.3)
Mood Disorder	9 (25.7)
Borderline Personality Disorder	9 (25.7)
Substance Use Disorder	9 (25.7)

Post-Traumatic Stress Disorder	5 (14.3)
Attention-Deficit/Hyperactivity Disorder	3 (8.6)
Eating Disorder	2 (5.7)
Obsessive-Compulsive Disorder	1 (2.9)
Medication <i>n</i> (%)	
Atypical Antipsychotic	20 (57.1)
Selective Serotonin Reuptake Inhibitor (SSRI)	11 (31.4)
Lithium	3 (8.6)
Benzodiazepine	3 (8.6)
Serotonin and Norepinephrine Reuptake Inhibitor (SNRI)	2 (5.7)
Anticonvulsant	2 (5.7)
Stimulant	2 (5.7)
Typical Antipsychotic	1 (2.9)
Tetracyclic Antidepressant	1 (2.9)
Benzothiazole	1 (2.9)
Cyclopyrrolone	1 (2.9)
No medications reported	4 (11.4)
Unknown	2 (5.7)
Brief Psychiatric Rating Scale <i>M</i> (SD)	
Affect	3.09 (1.48)
Positive Symptoms	2.04 (1.26)
Negative Symptoms	1.90 (.91)
Resistance	2.02 (.90)
Activation	1.44 (.59)
Internalized Stigma of Mental Illness Inventory <i>M</i> (SD)	2.23 (.54)
Questionnaire for the Process of Recovery <i>M</i> (SD)	39.80 (10.85)

3.3.2 Clinical Variables

Clinical variables are presented in Table 3.3. Participants with psychosis reported more negative outcomes than control participants on all clinical variables. In terms of symptoms related to social isolation and integration, participants with psychosis reported significantly more loneliness and a significantly lower sense of belongingness compared to controls.

Table 3.3

Group Comparisons on Clinical Variables

Controls (<i>n</i> = 38)	Early Psychosis (<i>n</i> = 35)	Statistic	<i>p</i>	Hedges' <i>g</i> (95% CI)
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Modified Colorado Symptom Index*	8.72 (7.52)	22.59 (12.10)	$t(54) = -5.76$	<.001	-1.38 (±.52)
UCLA Loneliness Scale	37.62 (9.94)	50.84 (14.03)	$t(68) = -4.60$	<.001	-1.09 (±.50)
General Belongingness Scale*	5.84 (1.06)	4.11 (1.59)	$t(53) = 5.24$	<.001	1.29 (±.52)

*Equal variances not assumed.

3.3.3 Relationship Variables

Data from relationship variables are presented in Table 3.4. Participants with psychosis reported significantly lower romantic relationship functioning and a significantly greater fear of being single compared to controls. Participants with psychosis also reported significantly higher attachment anxiety and attachment avoidance compared to controls. There were no significant differences in relationship satisfaction or relationship investment (satisfaction, quality of alternatives, investment size, and commitment) for those currently in a relationship, which represented a smaller subset of the sample.

Table 3.4

Group Comparisons on Romantic Relationship Variables

	Controls (n = 38)	Early Psychosis (n = 35)	Statistic	<i>p</i>	Hedges' <i>g</i> (95% CI)
Romantic Relationship Functioning Scale	6.29 (1.05)	4.91 (1.37)	$t(69) = 4.83$	<.001	1.14 (±.50)
Fear of Being Single Scale	2.32 (1.04)	2.91 (1.15)	$t(69) = -2.26$	.013	-.53 (±.47)
Relationship Assessment Scale* **	4.32 (.65)	3.78 (1.13)	$t(14) = 1.46$	.168	.62 (±.73)
Experiences in Close Relationships - Anxiety	2.67 (1.29)	4.15 (1.30)	$t(68) = -4.81$	<.001	-1.14 (±.50)
Experience in Close Relationships - Avoidance	2.56 (.91)	3.45 (1.04)	$t(68) = -3.84$	<.001	-.91 (±.49)
Investment Model Scale – Satisfaction* **	6.23 (.84)	5.27 (1.47)	$t(13) = 2.00$	.065	.86 (±.75)

Investment Model Scale – Quality of Alternatives**	3.27 (1.56)	3.42 (1.44)	$t(28) = -.25$	.801	-.096 (\pm .074)
Investment Model Scale – Investment Size**	4.94 (1.38)	5.10 (1.05)	$t(30) = -.33$	.745	-.12 (\pm .71)
Investment Model Scale – Commitment**	4.95 (.60)	4.85 (.38)	$t(30) = .30$	.609	.19 (\pm .71)

*Equal variances not assumed.

**Completed by participants currently in a romantic relationship (21 controls, 11 psychosis).

3.3.4 Sex and Sexuality Variables

Results related to sex and sexuality variables are presented in Table 3.5. Participants with psychosis reported a greater degree of overall sexual distress or dissatisfaction compared to control participants, as measured by the Natsal-SF. Participants with psychosis who had had sex within the past year reported experiencing more sexual dysfunction compared to control participants. Among the subset of participants who had had sex within the past four weeks, there was no significant difference in the degree of sexual distress between groups. Finally, participants with psychosis endorsed significantly more symptoms of hypersexuality compared to controls.

Table 3.5

Group Comparisons on Sex and Sexuality Variables

	Controls (n = 38)	Early Psychosis (n = 35)	Statistic	<i>p</i>	Hedges' <i>g</i> (95% CI)
Sexual Dysfunction (Natsal-SF) z-score ^a	-.26 (.83)	.45 (1.13)	$t(40) = -2.31$	.026	-.74 (\pm .65)
Overall Sex Life – Concerns (Natsal-SF)	4.46 (2.58)	6.87 (2.84)	$t(66) = -3.67$	<.001	-.94 (\pm .50)
Sexual Distress Scale ^b	1.03 (1.15)	1.30 (1.05)	$t(27) = -.58$	.568	-.11 (\pm .57)
Hypersexual Behaviour Inventory*	27.92 (9.38)	40.21 (14.19)	$t(46) = -4.01$	<.001	-1.03 (\pm .51)

**Equal variances not assumed.*

^aCompleted by participants who have had sex in the past year (controls = 28, psychosis = 14).

^bCompleted by participants who have had sex within the past four weeks (controls = 21, psychosis = 8).

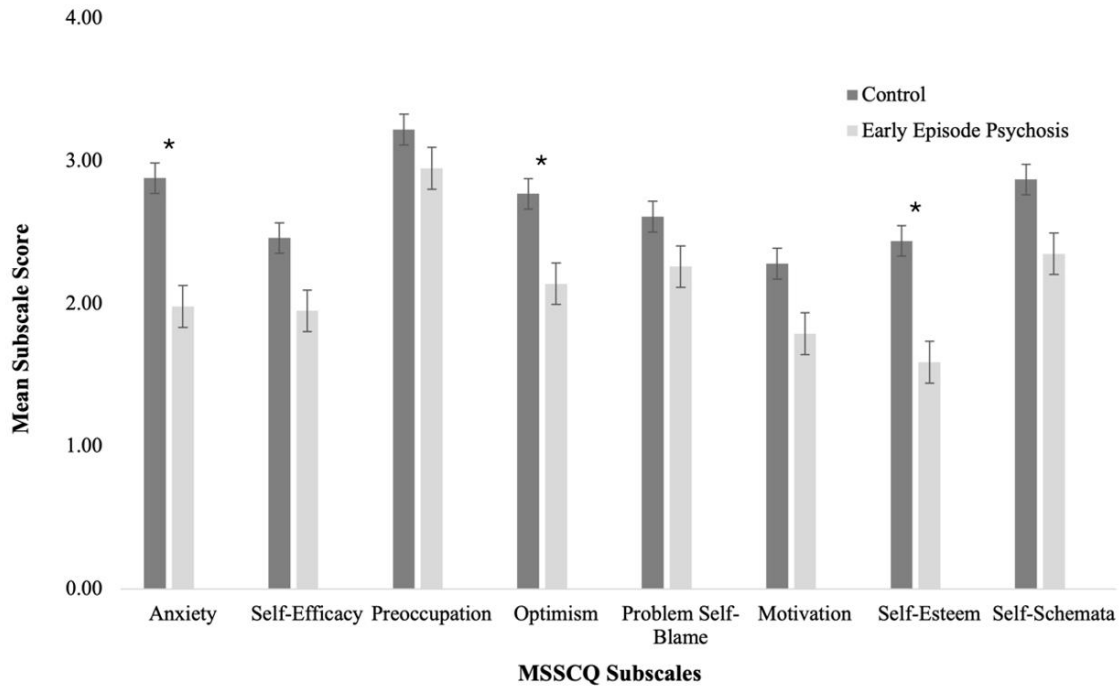
To examine the relationships between diagnoses and subscale scores on the MSSCQ, a 2 between (controls vs. psychosis) by 8 within (sexual anxiety vs. sexual self-efficacy vs. sexual preoccupation vs. sexual optimism vs. sexual problem self-blame vs. sexual motivation; vs. sexual self-esteem vs. sexual self-schemata) subjects mixed model ANOVA was conducted. There was a significant main effect of sexual self-concept, $F(2.9,185.7) = 7.676, p < .001, \eta_p^2 = .107$. There was also a significant main effect of diagnostic group, $F(1,64) = 1197.06, p < .001, \eta_p^2 = .204$. There was no significant interaction between sexual self-concept and diagnostic group, $F(1,64) = 1197.06, p < .001, \eta_p^2 = .012$. Pairwise comparisons are presented in Figure 3.1. Participants with psychosis reported significantly more sexual anxiety and significantly less sexual optimism and sexual self-esteem than control participants. There were no significant differences between diagnostic groups on sexual self-efficacy, preoccupation, problem self-blame, motivation, or self-schemata.

3.3.5 Healthcare Perspectives

Participants were asked about seven topics related to mental health recovery. Across each topic, the number and percentage of participants who wanted and received information on that topic are presented in Table 3.6. Topics that were more frequently desired by participants include symptom management and social skills (>80% of the total sample). Approximately half of the total sample wanted information on friendships and sexual functioning, while one third of the

Figure 3.1

Group Comparisons of Scores on The Multidimensional Sexual Self-Concept Questionnaire



* $p < .005$

Note. Scores on the Sexual Anxiety, Sexual Preoccupation, and Sexual Problem Self-Blame subscales are reverse coded such that higher scores are indicative of less of these variables (e.g., higher scores indicate lower sexual anxiety, preoccupation, and problem self-blame).

sample desired information on changes to sexual desire and sexual risk factors. Finally, approximately one quarter of the sample desired information on romantic relationships. When comparing the percentage of participants who desired information on a particular topic versus who actually received information related to that topic, less than half of participants received information on friendships, social skills, romantic relationships, sexual functioning, and changes to sexual desire, despite wanting this information. Compared to symptom management, the

proportions of participants who desired and received information about sexual functioning and changes to sexual desire were significantly lower.

Table 3.6

Frequency of Participants Wanting and Receiving Information from Healthcare Providers

	Wanted (%)	Received (%)	% Needs Met	Vs. Symptom Management	<i>p</i>
Symptom management	31 (83.8)	25 (71.4)	80.65	--	
Social skills	27 (81.8)	11 (32.4)	40.74	$\chi^2 = 2.36$	.124
Friendships	20 (57.1)	7 (20.6)	35.00	$\chi^2 = 2.69$	.101
Romantic relationships	18 (23.7)	7 (20.6)	38.89	$\chi^2 = 2.00$	.157
Sexual functioning	18 (50.0)	2 (6.1)	11.11	$\chi^2 = 7.72$	.005
Changes to sexual desire	13 (38.2)	3 (9.1)	23.08	$\chi^2 = 3.51$	.061
Sexual risk factors	11 (32.4)	6 (18.2)	54.54	$\chi^2 = .467$	.496

Participants were also asked to rate the quality of the information they received, as well as how important they believed this information is for their recovery. These results are presented in Tables 3.7 and 3.8, respectively. Overall, most participants rated the quality of information they received in the high or very high range. In terms of importance for recovery, topics related to sexuality were rated, on average, in the range of “somewhat important” (rating of 3), whereas other social topics (social skills, friendships, romantic relationships) were rated, on average, in the range of “important” (rating of 2).

Table 3.7

Participants’ Ratings of the Quality of Information Received from Healthcare Providers (for those who received information)

Topic	Mean rating (SD)
Symptom management	2.21 (0.92)
Social skills	2.09 (0.70)
Friendships	1.86 (0.69)
Romantic relationships	2.43 (0.54)
Sexual functioning	1.67 (1.16)
Changes to sexual desire	2.00 (0.00)
Sexual risk factors	2.38 (1.60)

Ratings of quality of information range from 1 (Very High) to 5 (Very Low).

Table 3.8*Participants' Ratings on how Important Information is for Recovery*

Topic	Mean rating (<i>SD</i>)	<i>n</i>
Symptom management	1.75 (0.84)	36
Social skills	2.12 (1.09)	34
Friendships	2.45 (1.44)	33
Romantic relationships	2.88 (1.54)	32
Sexual functioning	3.09 (1.71)	32
Changes to sexual desire	3.53 (1.63)	32
Sexual risk factors	3.39 (1.67)	31

Ratings on importance range from 1 (Very Important) to 6 (Very Not Important).

3.4 Discussion

The results from the present study contribute to a relatively sparse literature base examining the diverse romantic and sexual thoughts, opinions, and experiences of individuals experiencing early psychosis. This work also examines participants' experiences seeking and receiving support related to these aspects of their lives in healthcare settings.

3.4.1 Romantic Relationships

In terms of romantic relationships specifically, participants with psychosis were significantly more likely to be single compared to the control group. The psychosis group also reported poorer romantic relationship functioning and a higher degree of fear of being single compared to control participants. These results are aligned with the findings regarding attachment orientation, with persons with psychosis being significantly more likely to report anxious and avoidant attachment styles than control participants in the present study. Within the early psychosis group, levels of anxious attachment were significantly higher than avoidant attachment. Attachment anxiety is characterized by a fear of rejection, dependence, desires for closeness, and reassurance-seeking, while avoidance is related to discomfort with intimacy and reluctance to seek support, provide support, or depend on others (Mikulincer & Shaver, 2016;

Feeney & Karantzas, 2017). Attachment orientations are also linked to relationship quality, with greater levels of avoidance being linked to poorer satisfaction, support, and connectedness in relationships, and greater levels of anxiety being associated with general conflict in relationships (Li & Chan, 2012; Joel et al., 2020). Attachment difficulties have been linked to childhood trauma and lower levels of parental care, which are more prevalent among individuals with psychotic disorders; these factors may interact to contribute to poorer relational and sexual satisfaction (Barker & Vigod, 2020; Mulligan & Lavender, 2010). Several strategies have been identified to foster the development of secure attachment orientations in adults, including having “surrogate” attachment figures (e.g., parental figures, mentors, friends, spouses, therapists) to model positive and healthy relationships, accessing therapy or self-help, and redefining one’s own identity and self-worth (Olufowote et al. 2019; Virat & Dubreil, 2020). Recommended interpersonal changes included making peace with past negative relationships, and subsequently taking small risks with trust in new relationships (Olufowote et al. 2019). Mental health care settings (e.g., psychotherapy) represent opportunities to build attachment security with a trusted figure, as well as spaces to guide and encourage the cultivation of these relationships in other areas of a person’s life (e.g., close friendships, romantic relationships).

Fears about being single include anxiety about being single for the duration of one’s life, concerns about one’s timeline for getting married and starting a family, or fears about ending up alone (Spielmann et al., 2013). This may be related to anticipated or experienced social rejection or concerns about one’s ability to find and maintain relationships due to the impact of one’s symptoms or stigma about their illness (Sariso et al., 2013). A fear of being single is also associated with remaining in dissatisfying relationships, and, combined with anxious attachment,

is a reason why individuals may choose not to end an unsatisfying relationship (Spielmann et al., 2013).

Among participants who reported currently being in a relationship, which was a small subset of the early psychosis sample ($n = 11$), there were no significant differences in relationship satisfaction as measured by the RAS, but there were significant differences in relationship satisfaction as measured by the Satisfaction subscale of the IMS, with participants with psychosis reporting lower satisfaction. On other relationship factors as measured by the IMS, there were no significant differences between diagnostic groups in terms of perceived quality of alternative partners, commitment, and one's investment size. This suggests similarities between diagnostic groups when people are in committed relationships. However, the small sample size must be considered when interpreting these results, and future research should continue to explore variables associated with relationship satisfaction in the context of early psychosis.

3.4.2 Sex and Sexual Relationships

Regarding sexuality, persons with psychosis reported significantly higher rates of sexual dysfunction and dissatisfaction, including higher rates of hypersexuality compared to controls. This is consistent with past literature identifying higher rates of sexual dissatisfaction and dysfunction in psychotic and schizophrenia-spectrum diagnoses (Harley et al., 2010; Marques et al., 2012; Van Sant et al., 2012), which are often attributed to illness-related factors such as medication side effects, negative symptoms, mood or anxiety symptoms, or reduced social opportunities. Higher rates of hypersexuality may be attributed to certain aspects of one's illness (e.g., as a symptom of mania or hypomania in the context of bipolar disorder; Kopeykina et al., 2016) or may be a strategy for coping with emotional distress or social isolation (Walton et al.,

2016). For instance, this may involve using sex to feel less lonely, to avoid unpleasant feelings, or dealing with emotional pain. Of participants who have had sex within the past four weeks, there were no significant differences in sexual distress between diagnostic groups. It may be that this represents a subset of participants who are in active sexual relationships or who are currently meeting their sexual needs, and thus experience less distress about the current status of their sexual lives. Notably, however, only eight individuals in the early psychosis group reported engaging in sexual activity in the four weeks prior to assessment.

To better understand aspects of sexual self-concept that are most affected in the context of psychosis, I explored specific aspects of sexual self-concept. Participants with psychosis reported higher levels of sexual anxiety and lower levels of sexual optimism and sexual self-esteem compared to the control group. These results may have been shaped by previous negative sexual and intimate experiences (e.g., intimate partner violence or sexual victimization, which occurs at higher rates in individuals with psychosis), loss of close relationships due to illness, higher rates of relationship and clinical anxiety, and/or stigma and self-stigma (Baker & Procter, 2015; Bengtsson-Tops & Ehliasson, 2012; Boyda et al., 2014; Darves-Bornoz et al., 1995; McCann et al., 2019). Ongoing mental health difficulties, such as depression, may also result in less optimistic perspectives about one's future success in interpersonal relationships. There were no differences in sexual self-efficacy, preoccupation, self-blame, motivation, or self-schemata between groups.

3.4.3 Healthcare Experiences and Perspectives

Romance and sexuality remain areas of high need in early psychosis that continue to be insufficiently addressed in healthcare settings. There is a considerable disparity between participants' desires for information on these topics and the actual provision of this information,

with, for example, as little as 6% of the sample receiving information related to sexual dysfunction despite 50% of the sample desiring that information. Information related to friendships, social relationships, romantic relationships, sexual relationships, and sexual functioning were consistently reported as areas where treatment needs were least likely to be met. When this information is provided, however, participants reported it to be of high or very high quality, indicating that some professionals are able to provide appropriate and helpful information regarding intimate relationships, and this is seen as helpful to clients. It is important that early intervention programs be responsive to clients' developing needs and to be prepared to provide psychoeducational resources or targeted interventions for social and sociosexual concerns. Normalizing and validating difficult experiences with intimate relationships, as well as offering opportunities to discuss concerns about sexual health and related interventions (e.g., addressing medication side effects, providing counselling for sexual issues) represent potential valuable contributions to clients' social and overall well-being.

3.4.4 Limitations

Several limitations must be considered when considering the results of this study. Given the requirements for some scales (e.g., that respondents be in a relationship or have engaged in recent sexual activity), some measures had notably lower sample sizes, particularly for the psychosis group. As a result, the sample size may be underpowered to detect small effects.

All measures in the present study, with the exception of the clinical interview, were self-report questionnaires that participants completed over an online survey platform. While some measures were taken to ensure attention to the questionnaires (e.g., participants completing questionnaires on a video call with experimenters), the data may be subject to some of the limitations of self-report data. For example, participants may be more likely to present a

favourable image of themselves through socially desirable responding (Braun et al., 2001). The use of self-report data among individuals with severe mental illness has also been thought to be influenced by affective bias, poor insight, and recent life events (Atkinson et al., 1997). Participants may also face cognitive or language challenges with self-report data (Bibb & McFerran, 2017). On the other hand, self-report measures of sexual functioning have been found to be effective and reliable at quantifying sexual functioning (DeRogatis, 2008), and some research indicates that participants may be more likely to answer questions about sensitive topics or socially undesirable behaviours on computerized or automated questionnaires rather than face-to-face with an examiner (Gnambs & Kaspar, 2015; Reddy et al., 2006).

Demographically, there were also significant differences in ethnicity and educational attainment between groups which may limit some of the generalizability of the results, particularly given the fact that certain groups (e.g., Black or Indigenous persons, which are underrepresented in the control group) may face unique sexual or romantic experiences given their intersecting identities (e.g., Malone & Gervais, 2021; Rice et al., 2023).

3.4.5 Conclusions and Clinical Implications

People with psychosis experience significant challenges in areas related to intimate relationships, including both romantic and sexual relationships. Participants reported these areas as important facets of recovery for which they desire, but do not receive, adequate healthcare support. Romance and sexuality are complex and multifaceted topics, especially within the context of a psychotic illness, that require further attention in both research and clinical contexts. Future research should continue to explore specific areas of need among individuals with psychosis, as well as the relationships between specific aspects of romantic and sexual functioning with other aspects of illness and recovery. Doing so will allow for the development

of resources and interventions that can promote social and subjective recovery among young adults experiencing psychosis.

Chapter 4

The Application of Social Cognitive Skills in Sexual and Romantic Situations: Predicting Sexual and Romantic Functioning in Early Psychosis with a Novel Social Cognitive Task

4.1 Introduction

Social support and close relationships are crucial for recovery, well-being, and quality of life for individuals experiencing psychosis. Many people with psychosis report recovery goals associated with the sociosexual aspects of their lives, including developing intimate relationships, dating, discovering their sexuality, engaging in sexual activity, getting married, or building a family (Lam et al., 2011; McCann, 2010a; Windell et al., 2012). However, individuals with psychosis face several clinical and social barriers to the development of intimate relationships. Following early psychosis, recovery in terms of social functioning is often more difficult to achieve than symptomatic remission (Álvarez-Jiménez et al., 2012). Extensive research has identified that people with early psychosis and schizophrenia experience considerable impairments in social functioning (Penn et al., 2008; Savla et al., 2012; Green et al., 2019; Lee et al., 2015). The experience of psychosis during the critical developmental periods of adolescence and young adulthood can disrupt the development of psychosocial and independent living skills. In addition, individuals are faced with managing a severe clinical condition and the associated symptoms and stigmatization. This represents the first of numerous missed opportunities for building mastery, self-efficacy, and confidence in interpersonal settings, and marks the beginning of an often-prolonged experience of social isolation, social anxiety, difficulty engaging and managing conversations, trouble engaging in intimate relationships, and feelings of inadequacy in social settings (de Jager et al., 2017; Gardner et al., 2019). This can result smaller social networks, fewer romantic and sexual relationships, and more problems in

intimate and sexual aspects of their lives compared to their unaffected peers (Gayer-Anderson & Morgan, 2013; Harley et al., 2012; Marques et al., 2012; McCann et al., 2019; Loranger, 1984). Though difficulties with intimate, romantic, and sexual relationships are established in the psychosis literature, less is known about how these difficulties form and persist, and how they are related to other aspects of a psychotic illness, such as psychiatric symptoms or cognitive and social cognitive impairment.

Cognitive impairment is well-recognized as a defining feature of psychotic illnesses (Heinrichs & Zakzanis, 1998; Bowie & Harvey, 2005; Fioravanti et al., 2012; American Psychiatric Association, 2013), with deficits observed even prior to the first episode of psychosis (Fusar-Poli et al., 2012; Aas et al., 2014; Bora & Murray, 2014). Although neurocognition is a robust predictor of functioning across several domains (e.g., community functioning, work skills), this relationship is less consistent when predicting social functioning (McClure et al., 2007; Bowie et al., 2008; Laes & Sponheim, 2006). Research attempting to explore additional predictors of social functioning has suggested that deficits in this area result from a combination of symptom interference (with negative symptoms in particular being implicated), social cognitive impairment, and reduced opportunities for social interaction and learning, potentially as a result of social withdrawal or societal stigma (Blanchard et al., 2015; Green et al., 2018; Adery et al., 2017). In particular, social cognition has been explored as a more proximal predictor of social functioning.

Social cognition refers to the set of cognitive processes that guide the accurate identification and interpretation of the thoughts, beliefs, and intentions of others in social situations (Couture et al., 2006). Five domains of social cognition have been identified as important to one's ability to navigate complex social interactions, recognize social cues, and

guide social behaviour, namely 1) emotion perception; 2) social perception; 3) social knowledge; 4) theory of mind; and 5) attributional styles and biases (Green et al., 2008). Indeed, social cognition has been found to be a consistent predictor of social functioning in psychosis and explains more of the variance in functional outcomes than neurocognition and psychiatric symptoms (Kalin et al., 2015; Pijnenborg et al., 2009). Theory of mind, which refers to the ability to reason about the intentions and beliefs of others, has been found to be especially relevant to the social functioning of people with psychosis (Bora & Pentelis, 2013; Fett et al., 2011; Roncone et al., 2002), indicating that it might be a specific determinant of functioning in real-world situations, including in the development of close social relationships.

Although social cognitive deficits broadly affect one's ability to function socially (Harvey et al., 2019), less is known about specific barriers to navigating complex intimate and sexual interactions, and how these interactions may be further complicated by factors like psychiatric symptoms, stigma, and a potential lack of experience and opportunity in these areas. Navigating complex social encounters requires an awareness of numerous social rules, conventions, scripts, and expectations (Harvey & Penn, 2010), as well as the ability to read and make inferences based on subtle social cues. In intimate, romantic, and sexual encounters, there are specific behavioural cues and social scripts that must be interpreted and acted upon in order to successfully navigate these types of interactions. This requires identifying specific emotions (e.g., desire, attraction), interpreting another's intentions and level of interest in a particular encounter, and having knowledge of societal and cultural expectations on initiating intimate relationships. For example, nonverbal behaviours that convey sexual or romantic interest, such as flirting behaviours (e.g., sustained eye contact, coy gazing, self-touching), play important communicative roles in initiating a romantic or sexual encounter or relationship (Muehlenhard et al., 1986; Tisdale &

Sheldon, 2018). Interpreting various forms of sociosexual communication, as well as simultaneously processing contextual cues, is required for individuals to discern the intentions and extent of interest of potential partners (Hall, 2016). These interactions also require knowledge of sexual scripts and appropriate behaviour in an ever-evolving dating and relationship environment (e.g., England et al., 2007). However, flirting can also be subtle and ambiguous, and could be misinterpreted by some as neutral or friendly (Haj-Mohamadi et al., 2021). Therefore, one must also be able to distinguish these emotions and behaviours from other, often similar, emotions (e.g., friendliness, neutrality), as the failure to do so may result in missed opportunities to build relationships (e.g., if cues were missed) or inappropriate or misguided responses (e.g., by interpreting sexual or romantic interest when it is not present). Although someone may have the social cognitive abilities to navigate friendships or professional relationships, it is unclear how these abilities are applied in sexual or romantic settings, or whether there are predictors of romantic and sexual “cognition” that are not captured by traditional measures of social cognition.

Assessments of social cognition are concerned with how one’s cognitive abilities (e.g., attention, memory, processing speed) are applied in interpersonal settings, and how they impact how one perceives, processes, and acts on information. However, the tasks used in traditional social cognitive assessments may not fully capture the range of social situations or barriers that people with psychotic disorders encounter (Yager & Ehmann, 2006), especially when it comes to engagement in intimate or sexual relationships. Although some tasks measuring the perception of sexual or romantic cues have been developed, their application has been limited in scope. Experimental tasks exploring one’s ability to perceive sexual or romantic cues have been utilized in studies exploring gender/sex differences in perceptions of sexual intent, sexual consent, and

coercion. In a review, Lingdren and colleagues (2008) described how such tasks vary widely; for example, stimuli may be delivered via live paradigms or conversations, presented via written vignettes, shown in photos or videos, or delivered over audio recordings. The ratings for sexual intent perceptions are also discrepant across studies, with tasks typically requiring participants to rate the degree to which a target expresses certain variables (e.g., sexual, friendly) or exhibits certain behaviours (e.g., eye contact, touching), the target's willingness to engage in particular behaviours (e.g., sexual acts), or the nature of the relationship between two targets (e.g., friends, sexual partners; Lindgren et al., 2008). Stimuli are often designed only for the specific study, and few well-validated stimuli sets and measures exist, with many of these being outdated or unsuitable for the assessment of variables that are sexual or romantic. However, the literature has been relatively consistent in terms of the factors that influence whether someone perceives a situation as romantic or sexual in nature. Behavioural cues that are consistently rated as indicators conveying intimate rather than friendly interest include physical touch, interpersonal distance or proximity, eye contact, and smiling (Kowalski, 1993; Abbey & Melby, 1986; Sigal et al., 1988; Koukounas & Letch, 2001). For the present study, these cues will be applied to the development of novel adaptations of social-cognitive tasks specifically designed to assess the application of these skills in sexual and/or romantic settings.

Through the development of novel tasks that specifically assess aspects of social cognition that relate to romantic and sexual contexts, the present study sought to examine if individuals with psychosis face challenges on tasks that require them to identify romantic and sexual emotions and behaviours. Further, this study sought to examine if performance on these tasks assessing sexual and romantic applications of social cognitive abilities (referred to as “sexual/romantic cognition”) were associated with social cognition, neurocognition, and

psychiatric symptoms. Consistent with the literature, I expected that individuals with psychosis would perform significantly worse than controls on each of the cognitive and social cognitive tasks. I expected that neurocognition and psychiatric symptoms would predict social cognition and sexual/romantic cognition, but that tasks of sexual/romantic cognition would be a stronger predictor of sexual and romantic relationship functioning. Finally, based on existing research identifying sex differences in social cognition and social functioning, with females scoring higher than males (Jaracz et al., 2007; Vaskinn et al., 2011; Zhao et al., 2022), exploratory analyses sought to examine whether sex was a predictor of sexual/romantic cognition.

4.2 Method

4.2.1 *Participants*

This study utilized the same sample as the previous study, and study materials were administered during the same session for both studies. Please refer to Section 3.2.1 for participant information.

4.2.2 *Procedures*

The measures administered for this study were conducted simultaneously with the measures described in Chapter 3. Please refer to Section 3.2.2 for information regarding study procedures.

4.2.3 *Measures*

4.2.3.1 *Demographic Information*

A demographics questionnaire collected information including age, self-identified ethnicity, sex, gender, relationship and marital status, educational and occupational history, current medication, and clinical diagnostic history.

4.2.3.2 *Psychiatric Symptoms*

The Modified Colorado Symptom Index (MCSI; Conrad et al., 2001) was used to measure self-rated emotional distress associated with psychological symptoms. The MCSI consists of 14 items rated on a 5-point scale ranging from 0 (not at all) to 4 (at least every day), where higher scores indicate greater emotional distress. The MCSI demonstrated excellent internal consistency in the present study (Cronbach's $\alpha = .95$). A clinician-rated semi-structured interview, The Brief Psychiatric Rating Scale (BPRS; Overall et al., 1967), was used to assess clinical symptoms over the past two weeks and behavioural observations made during the interview. The BPRS assesses the frequency and severity of 18 psychiatric symptom domains on a 7-point scale ranging from 1 (*absent*) to 7 (*extremely severe*). This interview is typically completed in 15-25 minutes. Factor analyses have produced a consistent five-factor solution assessing the following domains: Affect, Positive Symptoms, Negative Symptoms, Resistance, and Activation (Shafer, 2005). Mean item scores for each domain are reported, with higher scores indicating greater symptom severity.

4.2.3.3 *Romantic Relationship Functioning*

Romantic relationship functioning was assessed using the Romantic Relationship Functioning Scale (RRFS; Bonfils et al., 2016), a 22-item measure with three subscales: resources and interpersonal skills, risks, and stigma. Questions are scored on a 9-point scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*), where a higher mean score indicates better romantic relationship functioning. The RRFS demonstrated good internal consistency in the present study (Cronbach's $\alpha = .88$).

4.2.3.4 *Sexual Functioning*

The National Survey of Sexual Attitudes and Lifestyles – Short Form (Natsal-SF; Mitchell et al., 2012) is a 17-item measure that was used to measure an individual's level of sexual function. To account for participants who are not currently in a relationship and/or who have not had sexual activity within the past year, the 4-item subscale, Overall Sex Life, was used to record sexual functioning. This subscale covers sexual satisfaction, distress, dysfunction, and help-seeking for sexual problems. Sum scores of the Overall Sex Life subscale of the Natsal-SF were computed based on guidelines outlined by Jones and colleagues (2015, Method 2). Higher scores indicate a higher degree of sexual concerns.

4.2.3.5 *Cognition*

The Screen for Cognitive Impairment in Psychiatry (SCIP; Purdon, 2005) was used to assess neurocognitive abilities. The five subtests of the SCIP include: immediate and delayed verbal learning, working memory, verbal fluency, and processing speed. The processing speed subtest (which cannot be administered remotely) was omitted. Executive functioning was assessed using the oral version of the Trail Making Task (OTMT; Ricker & Axelrod, 1994). Raw scores were converted to standard scores based on existing normative data (Purdon, 2005). A global neurocognitive composite score was derived from averaging performance across the remaining four SCIP subtests and the OTMT.

4.2.3.6 *Subjective Cognitive Impairment*

The British Columbia Cognitive Complaints Scale (BC-CCI; Iverson & Lam, 2013) is a 6-item screening tool assessing perceived cognitive difficulties. The BC-CCI consists of six items assessing subjective problems with concentration, memory, expressing thoughts, word-finding, slow thinking, and difficulty with problem-solving in the past seven days. Items are

rated on a scale from 0 (*not at all*) to 3 (*very much*), with total scores ranging from 0-18 and higher scores representing greater severity of cognitive complaints (Iverson & Lam, 2013). Internal consistency for the BC-CCI was excellent in the present study (Cronbach's $\alpha = 0.94$).

4.2.3.7 *Social Cognition*

The Awareness of Social Inference Test, Part III (TASIT: McDonald et al., 2003) is an assessment of theory of mind (ToM) in which participants view 16 videotaped vignettes of social interactions. After each scene, participants answer four forced-choice questions (Yes/No/Don't Know) which require an understanding of the intentions, beliefs, and meanings of the speakers. Raw scores were converted to standard scores based on normative data from community controls that were demographically matched to a sample of first episode patients (Green et al., 2011). The TASIT demonstrated good internal consistency in the present study (Cronbach's $\alpha = .82$).

4.2.3.8 *Sexual/Romantic Cognition*

Sexual/romantic cognition was measured with two novel performance-based experimental tasks designed for the present study. Each task measures a component of social cognition that has been adapted to assess one's ability to detect sexual and/or romantic cues.

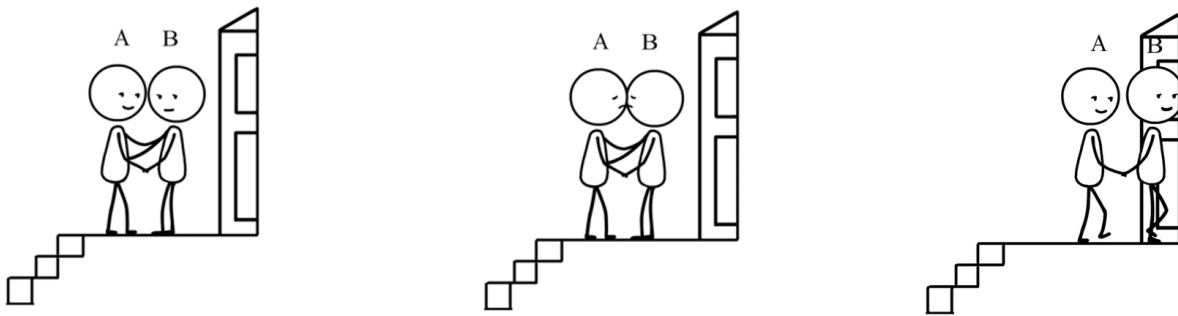
4.2.3.8.1 *Sexual/Romantic Cognition: Theory of Mind*

In this task, participants viewed eight brief (10-12 second) animations depicting either a neutral, sexual, or romantic interaction. Each animation featured two gender- and race-neutral characters, each depicting behaviour that is intended to represent one of the following nonverbal communications: disinterested (subtle or overt), neutral, friendly, romantic (subtle or overt) or sexual (subtle or overt). After viewing each animation, participants were asked to verbally describe what happened in the scene and what they believed would happen next between the two

characters. Responses to these questions were not treated as variables for the present analyses but will be explored in future qualitative work. Participants also answered questions about the relationship status of the characters (strangers, friends, or in a relationship) as well as whether or not the characters were showing interest in one another. Participants rated the intensity of romantic or sexual interest, respectively, being portrayed by each character in the animation on a scale from 1 (*extremely disinterested*) to 7 (*extremely interested*). Outcome variables include participants' total scores on categorical questions assessing relationship status and interest across all scenes (score range 0-24) and mean scores capturing the intensity of romantic or sexual interest reported for each character on the rating scales. Figures demonstrating two of the trials are presented in Figures 4.1 and 4.2.

Figure 4.1

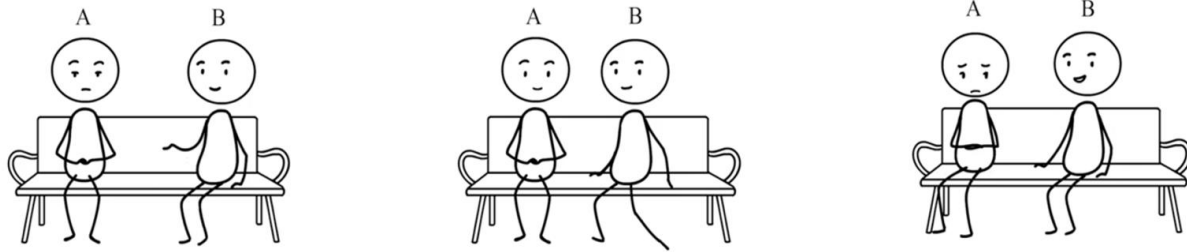
Three Sequential Scenes from Animation 2



Note. Three sequential animated scenes depict the communication dynamics between Characters A and B, representing “subtle sexual” behaviours.

Figure 4.2

Three Sequential Scenes from Animation 3



Note. Three sequential animated scenes depict the communication dynamics between Characters A and B, with Character A representing “subtle disinterested” behaviours.

4.2.3.8.2 Sexual/Romantic Cognition: Emotion Recognition

In this task, participants viewed a series of faces compiled from validated facial expression datasets. Faces were drawn from the Complex Emotion Expression Database (CEED; Benda & Scherf, 2020). This stimulus set consists of eight Black and White (four men, four women) formally trained actors depicting six basic expressions (angry, disgusted, fearful, happy, sad, and surprised) and nine complex expressions (affectionate, attracted, betrayed, broken-hearted, contemptuous, desirous, flirtatious, jealous, and lovesick). In order to include a variety of non-sexual/romantic complex emotions, these stimuli were supplemented by faces from the Amsterdam Dynamic Facial Expressions Set (ADFES; van der Schalk et al., 2011), which consists of 22 Mediterranean and North-European actors depicting ten emotional states (anger, contempt, disgust, embarrassment, fear, joy, pride, sadness, surprise, and neutral), and from the Racially Diverse Affective Expression (RADIATE; Conley et al., 2018) Face Stimulus Set, which includes Black, White, Hispanic, and Asian models depicting eight expressions (angry, calm, disgust, fear, happy, neutral, sad, and surprise).

Participants completed 76 trials in which they viewed an image of a face and were required to select the correct emotion that is being portrayed. On each trial, participants were

presented with four emotions to choose from: one correct choice and three incorrect choices. Trials were divided into three categories. The order of presentation of trials was randomized across all categories. In the first category, faces displayed a sexual/romantic emotion, and incorrect choices were non-sexual words that are positively, negatively, and/or neutrally valenced. In the second category, faces displayed a non-sexual/romantic emotion, and there was a “distractor” choice that was sexual/romantic in nature. In the third category, faces displayed a non-sexual/romantic emotion, and there were no sexual or romantic choices. This third category served as a non-sexual/romantic comparison condition assessing general emotion recognition ability. Correct answers in each category were summed to create total scores and a percent correct was computed. Total scores were computed for each category and for all trials together.

4.2.4 Data Analysis

Descriptive statistics were compared across groups using independent samples *t*-tests and chi-square tests of independence for continuous and categorical variables, respectively. For measures that were completed only by the psychosis group, descriptive information including means, standard deviations, and percentages were computed. Missing data were addressed using mean imputation when the number of missing items was low. Participant data was removed from an analysis if they failed to complete the majority of scale items. Analyses examining group differences between cognitive and social cognitive variables were conducted using independent samples *t*-tests. For the emotion recognition task, a mixed-model ANOVA was conducted to examine group differences by diagnosis and within-subjects differences in trials assessing sexual/romantic emotions and non-sexual/romantic emotions.

Multiple regressions were used to examine predictors of social and sexual/romantic cognition. In exploratory analyses, I aimed to identify additional predictors of sexual/romantic cognition that would account for more of the variance in sexual/romantic cognition.

Finally, two hierarchical regressions were used to predict romantic relationship functioning (as measured by the RRF5) and overall sexual functioning (as measured by the Overall Sex Life subscale of the Natsal-SL), respectively. In the first model of both regressions, cognition, objective and subjective psychiatric symptoms, and social cognition were entered as predictors. In the second model, sexual/romantic cognition was added as an additional predictor to examine the unique variance added by sexual/romantic cognitive in predicting outcomes in these areas.

4.3 Results

4.3.1 Demographics

As this study utilized the same sample as the previous study, demographic variables of the overall sample are presented in Table 3.1 and characteristics of the early psychosis sample are presented in Table 3.2 in the previous chapter.

4.3.2 Cognitive and Social Cognitive Variables

Participants with psychosis reported a significantly greater degree of subjective cognitive impairments. On objective cognitive tasks, participants with psychosis had z-scores below the population mean, whereas control participants fell above the population mean; this difference was of marginal significance. On a standardized measure of social cognition, participants with psychosis scored significantly lower than the control group.

Table 4.3

Group Comparisons on Cognitive and Social Cognitive Variables

	Controls (n = 38)	Early Psychosis (n = 35)	Statistic	<i>p</i>	Hedges' <i>g</i> (95% CI)
British Columbia Cognitive Complaints Inventory*	7.22 (4.37)	16.29 (7.53)	$t(52) = -6.16$	<.001	-1.48 (±.52)
Cognitive Composite <i>z</i> -Score*	.050 (.52)	-.28 (.91)	$t(53) = 1.90$	.063	.45 (±.46)
The Awareness of Social Inference Test*	50.13 (6.23)	45.74 (10.65)	$t(54) = 2.13$	.038	.50 (±.46)
Emotion Recognition Task (% Correct)	76.45 (7.50)	73.00 (9.36)	$t(71) = 1.74$	.086	.41 (±.46)
Animation Task (% Correct)	82.13 (8.33)	78.21 (8.46)	$t(71) = 1.99$	.050	.46 (±.46)

**Equal variances not assumed.*

Diagnostic groups did not differ in their performance on a social cognitive task measuring facial emotion recognition. An independent samples t-test found a marginal difference between groups on overall performance on the emotion recognition task. To assess whether there was a difference between sexual/romantic and non-sexual/non-romantic emotion recognition between groups, a 2 between- (controls vs. psychosis) and 2-within- (sexual/romantic vs. non-sexual/romantic emotions) mixed model ANOVA was conducted. There was a significant main effect of emotion type, $F(1,71) = 74.71, p < .001, \eta_p^2 = .513$, with both groups performing significantly better on trials assessing recognition of non-sexual/romantic emotions compared to sexual/romantic emotions ($p < .001$, respectively). There was no significant main effect of group, $F(1,71) = 2.27, p = .136, \eta_p^2 = .031$, nor was there a significant interaction, $F(1,71) = 3.57, p = .864, \eta_p^2 = .00$. There was no significant difference in performance on sexual/romantic trials between participants with psychosis ($M = 62.02, SD = 17.29$) or controls ($M = 65.90, SD = 15.46$), $p = .316$. There was also no significant difference in performance on non-sexual/romantic

trials between participants with psychosis ($M = 78.08$, $SD = 8.78$) and controls ($M = 81.33$, $SD = 6.18$), $p = .070$.

On a task measuring theory of mind for romantic or sexual interactions, participants with psychosis performed significantly worse than controls, indicating greater inaccuracy when identifying relationship statuses and whether someone is demonstrating interest, disinterest, or neutrality towards another person. However, participants did not significantly differ by group on their ratings of the intensity of sexual and romantic interest being displayed across scenes. Means by scene type are presented in Table 4.4.

Table 4.4

Mean Ratings of Sexual/Romantic Interest on Animation Task by Scene.

Scene type	Controls (n = 38)	Early Psychosis (n = 35)	Statistic $F(1,71)$	p
Romantic (subtle)	4.99 (.41)	5.13 (.89)	.566	.454
Romantic (overt)	5.88 (1.23)	6.10 (1.01)	.681	.412
Sexual (subtle)	6.30 (.70)	6.34 (.69)	.060	.807
Sexual (overt)	6.68 (.49)	6.59 (.59)	.614	.436
Disinterest (subtle)	1.67 (.94)	2.00 (1.29)	1.57	.214
Disinterest (overt)	2.16 (1.09)	2.03 (1.28)	.217	.642
Neutral (friends)	4.06 (.88)	4.13 (1.17)	.083	.774
Neutral (strangers)	3.74 (.82)	3.54 (1.15)	.754	.388

Note. The level of sexual/romantic interest was scored on a 7-point scale ranging from 1 (Very Disinterested) to 7 (Very Interested).

4.3.3 Predictors of Social Cognition and Sexual/Romantic Cognition

Within the early psychosis group, I examined predictors of social cognitive functioning, as measured by The Awareness of Social Inference Test, and social cognitive functioning specific to romantic or sexual situations, as measured by the Animation Task and Emotion Recognition

Task. A multiple linear regression examined whether cognition, subjective cognitive impairment, clinician-rated symptoms, and self-reported psychiatric symptoms predicted social cognitive performance. The model was statistically significant, $F(4,29) = 5.849, p = .001$, accounting for 37.02% of the variance in social cognitive performance. Predictors are presented in Table 4.5. Both cognition and self-reported cognitive complaints are significant predictors of social cognitive performance. Self-reported symptoms, and not clinician-rated symptoms, significantly predicted social cognitive performance. Multicollinearity was assessed using the Variance Inflation Factor (VIF); all predictors had VIF values lower than 5.00, indicating minimal concern for multicollinearity.

Table 4.5

Multiple Linear Regression: Predictors of Social Cognitive Performance

Predictor	Coefficient	Standard error	<i>t</i>	<i>p</i>
Cognition	4.79	2.10	2.28	0.030
BC-CCI	-1.16	0.42	-2.74	0.011
BPRS	-0.18	0.20	-0.92	0.365
MCSI	0.73	0.27	2.71	0.011

An identical multiple linear regression was conducted for sexual/romantic cognition. The regression was not statistically significant for either the Animation Task, $F(4,29) = .864, p = 0.497$, or Emotion Recognition Task, $F(4,29) = 2.30, p = .083$. None of the cognitive or symptom predictors included significantly predicted variance in sexual/romantic cognitive performance in either model.

An exploratory multiple linear regression was performed using R Statistical Software (v4.4.0; R Core Team 2024) to determine the influence of sex and diagnostic group on sexual/romantic cognition as measured by the Animation Task. There was a marginally

significant interaction, $b = 7.71$, $t(66) = 1.948$, $p = .056$. The overall model was significant, $F(3,66) = 3.03$, $p = .035$, and accounted for 8.12% of the variance in sexual/romantic cognition scores. Additional t -tests were conducted to explore group differences. Among males, there was a significant difference in sexual/romantic cognitive task performance, with males in the control group performing significantly better ($M = 84.56$, $SD = 7.18$) than males with psychosis ($M = 75.83$, $SD = 9.99$), $p < .001$. There was no significant difference among females in the control group ($M = 81.92$, $SD = 8.95$) or psychosis group ($M = 80.00$, $SD = 6.84$), $p = .699$. Within the psychosis group, there was no significant difference in performance by sex.

An identical multiple linear regression was conducted to examine general social cognitive performance. There was a significant effect of group, $b = -6.21$, $t(66) = -2.00$, $p = .050$, suggesting that social cognitive performance differed across diagnostic groups. The overall model was not significant, $F(3,66) = 2.34$, $p = .081$. There were no sex differences on general social cognitive performance between males in the control group ($M = 49.94$, $SD = 6.59$) and psychosis group ($M = 43.73$, $SD = 11.83$), $p = .086$, or females in the control group ($M = 51.28$, $SD = 6.02$) and psychosis group ($M = 47.25$, $SD = 9.71$), $p = .130$.

4.3.4 Predictors of Romantic and Sexual Functioning

Hierarchical regressions were used to predict romantic relationship functioning (as measured by the RRFS; Table 4.6) and overall sexual functioning (as measured by the Overall Sex Life subscale of the Natsal-SL; Table 4.7). In the first model of both regressions, cognition, objective and subjective psychiatric symptoms, and social cognition were entered as predictors. In the second model, sexual/romantic cognition as measured by the Animation Task was added as an additional predictor. The Emotion Recognition task was not included as a predictor due to the lack of group differences. Multicollinearity was assessed using the Variance Inflation Factor

(VIF); all predictors had VIF values lower than 5.00, indicating minimal concern for multicollinearity.

Table 4.6

Predictors of Romantic Relationship Functioning in the Early Psychosis Sample.

Independent Variables	R ²	R ² change	B	Beta	<i>t</i>	<i>p</i>
Model 1	.20	.20				.168
BPRS			.025	.23	.77	.433
MCSI			-.065	-.59	-2.10	.045
Cognition			.068	.037	.19	.849
TASIT			-.016	-.11	-.57	.596
Model 2	.31	.12				.067
Sexual/Romantic Cognition			-.059	-.34	-2.02	.054

Table 4.7

Predictors of Sexual Functioning in the Early Psychosis Sample.

Independent Variables	R ²	R ² change	B	Beta	<i>t</i>	<i>p</i>
Model 1	.15	.15				.341
BPRS			.002	.036	.112	.912
MCSI			.016	.28	.914	.369
Cognition			.31	.32	1.58	.126
TASIT			-.002	-.021	-.101	.920
Model 2	.33	.18				.059
Sexual/Romantic Cognition			.038	.44	2.58	.016

4.4 Discussion

This study sought to examine performance and predictors of performance on novel tasks assessing aspects of social cognition that are specific to romantic or sexual interactions.

Participants completed two traditional measures of social cognition (a theory of mind task and an

emotion recognition task), and then two novel tasks measuring those same constructs with romantic or sexual stimuli. Participants with psychosis performed significantly worse on both tasks assessing theory of mind, performed marginally worse on cognitive tasks, and reported significantly more cognitive complaints than the control group. However, there was no difference between groups on the emotion recognition tasks for either basic emotions or sexual/romantic emotions. Finally, sexual/romantic cognition was found to predict romantic and sexual functioning, above and beyond other predictors of social cognition.

4.4.1 Social Cognition and Sexual/Romantic Cognition

Social cognitive abilities are essential for understanding and navigating social interactions, and, consequently, building social relationships. In the present study, participants with psychosis had more difficulty than controls when asked to make judgements and interpret social interactions in general settings and in settings with sexual and/or romantic contexts and cues. This finding represents a novel contribution to the literature base, as no tasks assessing theory of mind in contexts specific to sexual and/or romantic interactions currently exist. In this novel task, participants with psychosis were less accurate when asked to identify others' relationship statuses and/or discern whether sexual and/or romantic interest was being depicted in an interaction. Impairments in this area of functioning may make it more difficult for individuals to recognize and interpret romantic and/or sexual encounters, and subsequently act accordingly to initiate and develop intimate relationships (Cunningham & Barbee, 2008; Dindia & Timmerman, 2003). Social cognitive abilities also have implications within relationships (Fletcher et al., 2006), such as influencing one's ability to navigate interpersonal conflict (Roloff & Miller, 2006) or their ability to understand their partner's romantic and sexual interaction and communication styles (Vannier & O'Sullivan, 2011).

Our findings replicate existing research that identifies a relationship between neurocognition, psychiatric symptoms, and social cognition (Lin et al., 2013; Sergi et al., 2007), as well as the presence of social cognitive deficits (particularly in emotion perception and theory of mind) among individuals with early psychosis (Healey et al., 2016). However, these well-replicated predictors of social cognition did not significantly predict performance on the task assessing sexual/romantic cognition, which is a finding novel to the present study. Though it may be expected for social cognitive deficits in psychosis to extend to sexual/romantic interactions, these findings indicate that difficulty interpreting sexual/romantic interactions may be related to additional deficits outside of neurocognition, social cognition, and psychiatric symptoms. This suggests that while people with psychosis show impairments across social cognitive domains, the specific abilities related to sexual/romantic cognition may be somewhat distinct. This highlights the complexity of social cognition, and the importance of specifically examining social cognition as it relates to intimate, sexual, and romantic relationships in order to better support people's needs in this area of their lives. The specific relationships between neurocognition, social cognition, and sexual/romantic cognition should be further delineated in future work. Future studies should expand on the present work across domains of emotion recognition and theory of mind, as well as expand to examine other domains of social cognition (i.e., social perception, social knowledge, and attributional styles and biases; Green et al., 2008).

In further exploratory analyses, I identified sex as one potential predictor of group differences in the sexual/romantic cognition task. Males with psychosis performed significantly worse on this task than females with psychosis and than males in the control group. There were no significant differences among females across groups. There were also no significant sex differences in performance on the general social cognitive task, indicating unique impairment for

males with psychosis on the task of sexual/romantic cognition. These findings are aligned with existing research on relational outcomes in psychosis, which has consistently found that females with psychosis are more likely to be in relationships (Goldstein, 1988) and report more friendships (Harley et al., 2012) than males with psychosis. Early studies on marriage among individuals with schizophrenia found that only 25% of males were married, compared to 50-70% of females (Loranger, 1984). These differences have been suggested to be related to the fact that females have better premorbid social functioning (Goldstein, 1988), a greater likelihood to desire and seek out opportunities to fulfill intimacy and relationship needs (Chodorow, 1978), or a sense of self that is more closely tied to their relationships with others (Gilligan, 1982; Mulligan & Lavender, 2010). To better understand functional outcomes, I explored how deficits in sexual/romantic cognition are related to outcomes in sexual and romantic functioning.

4.4.2 Sexual/Romantic Cognition and Functional Outcomes

As hypothesized, sexual/romantic cognition was found to be a significant predictor of sexual functioning and a marginally significant predictor of romantic relationship functioning in the present study. Unexpectedly, general social cognition did not predict functioning in these domains, nor did cognition or clinician-rated symptoms. The increase in variance explained by sexual/romantic cognition indicates that this measure may capture unique aspects of romantic and sexual functioning that are not explained by traditional measures of social cognition.

Contrary to expectations, better performance on the task of sexual/romantic cognition predicted *poorer* romantic relationship functioning and *poorer* sexual functioning. These findings are not in alignment with previous research that demonstrates a positive relationship between social cognition and social functioning (Harvey & Penn, 2010). However, these results are consistent with other work that has found inverse relationships between social cognition and

social functioning in early psychosis populations (Woolverton et al., 2017), and that theory of mind is associated with problems in social behaviour (Stouten et al., 2014). These authors suggest that assessment measures may fail to capture the nuanced associations of these constructs. Further, the possibility is raised that better social cognition (e.g., better theory of mind and social perception abilities) may result in a better ability to recognize negative reactions and stigma from others, leading to more social withdrawal, internalized stigma, depression, anxiety, and poorer functioning (Woolverton et al., 2017).

4.4.3 Clinical Implications

These findings have implications for early psychosis interventions. Existing interventions that aim to improve social functioning, such as social skills trainings, typically focus on broad social cognitive abilities, such as expressive behaviours (e.g., speech content, paralinguistic elements), responsive behaviours (e.g., social perception, emotion recognition), interactive behaviours (e.g., turn-taking in conversation) and situational factors (e.g., cultural and contextual demands; Rus-Calafell et al., 2014). While these types of interventions are helpful at improving psychosocial functioning (Inchausti et al., 2018; Kurtz & Mueser, 2008), they typically do not address emotions, behaviours, and social contexts that are specific to romantic and sexual contexts. Only one study exists ($N = 7$) that has assessed an intervention addressing romantic relationships in men with early psychosis (Hache-Labelle et al., 2021). Future work should continue to investigate how early psychosis intervention programs can adapt interventions to improve romantic and sexual functioning in early psychosis, whether through stand-alone therapies or modules in social skills interventions that address romantic and sexual contexts. Further, given the sex differences across performance on sexual/romantic cognitive tasks in the present study, as well as the aforementioned existing research identifying unique difficulties in

area of romantic or sexual functioning for males with psychosis, assessments and interventions that aim to identify and improve sociosexual functioning may benefit from being uniquely tailored across gender/sex.

4.4.4 Limitations

Findings from the present study should be interpreted alongside limitations. First, in this novel area of research, there were no existing tasks that assessed theory of mind and emotion recognition specifically regarding sexual and romantic stimuli; as such, these tasks were designed for the present study. While this represents a novel contribution to the literature base, these tasks have also not undergone a formal validation process, and thus the reliability and validity of these measures are unknown. It is possible that these tasks do not measure the full scope of the constructs that they intend to measure, or that these tasks are influenced by extraneous variables. Second, there is a risk of spurious findings given the small sample size. Future studies should explore the relationship between various domains of social and sexual/romantic cognition in a larger sample. Third, this study was conducted virtually over Zoom as a result of restrictions imposed by the COVID-19 pandemic. As a result, certain tasks (e.g., clinical symptom interviews, cognitive assessments) were conducted in virtual rather than in-person settings. This may have affected the accuracy of some of these measures. For example, behavioural symptom ratings were limited to what was visible over Zoom. Certain symptom domains, such as negative symptoms, may have been particularly affected due to the reliance on behavioural observations. Given the role of negative symptoms specifically in predicting social outcomes in schizophrenia (Robertson et al., 2014), future work should also consider the incorporation of a specific clinical measure of negative symptoms, such as the Brief Negative Symptoms Scale (Kirkpatrick et al., 2011). Participants also completed cognitive testing verbally

from home rather than using pencil-and-paper tasks in a standardized environment, which may have affected performance on these tasks.

4.4.5 Conclusions

Understanding barriers and needs related to intimacy, romance, and sexuality in early psychosis is necessary to support the recovery goals of individuals in early psychosis intervention programs. Future work should continue to explore the specific social cognitive deficits that people with psychosis face when navigating romantic and sexual interactions, how these deficits affect their ability to initiate and maintain intimate relationships, and how interventions can be developed to improve functioning in these areas of life.

Chapter 5

General Discussion

5.1 Summary of Findings

The present studies were undertaken to expand a sparse literature base on the intimate, romantic, and sexual needs of individuals with early phase psychosis, to better understand the role of these relationships for individuals experiencing severe mental illnesses, and to examine how deficits in these relationships may be addressed in intervention programs. Across three studies, this work reaffirmed the importance of intimacy, romance, and sexuality in the lives of many individuals experiencing early psychosis. For these individuals, the cultivation of close relationships is seen as both a facilitator and indicator of mental health recovery.

In Chapter 2, qualitative interviews were conducted with individuals in the early stages of a psychotic illness. Interviews focused on participants' understanding of intimacy, romance, and sexuality in their lives, as well as how they navigated these concepts and relationships within the context of psychosis. Four themes were generated as part of this qualitative work, which highlighted how topics related to intimacy, romance and sexuality were addressed (or not) in healthcare settings, the role of these relationships in recovery, how individuals navigate relationships alongside mental health symptoms, and the way these concepts are defined and experienced by participants. This work emphasized the complex interaction between close relationships and mental health symptoms, as well as how aspects related to identity, social location, life experiences, and future goals shape the way one views the role of these relationships in their lives. Findings from this study underscored the need for early psychosis intervention programs, alongside other healthcare programs, to better address these topics.

In Chapter 3, results were presented on the differences between individuals with early psychosis and control participants across various measures of relationship and sexual functioning. Results from this study demonstrated that individuals with early psychosis experienced greater problems or impairment in areas related to clinical symptoms, cognitive complaints, loneliness, belongingness, romantic relationship functioning, attachment anxiety and avoidance, fears of being single, sexual functioning, sexual concerns, hypersexuality, and aspects of sexual self-concept (e.g., anxiety, pessimism, and low self-esteem). There were no differences between groups on relationship satisfaction, relationship investment, and quality of perceived alternatives (for those in relationships), or sexual distress (for those who have recently engaged in sexual activity). There were also no differences between groups on aspects of sexual self-concept, including sexual self-efficacy, preoccupation, problem self-blame, motivation, and self-schemata. Chapter 3 also explored the opinions of individuals with psychosis on how various problems are addressed in healthcare settings, with results demonstrating that concerns related to social skills, friendships, relationships, and sexual functioning often go unaddressed despite participants expressing need in these areas. Findings from this study highlight broad challenges that people with psychosis face in different areas related to close relationships, as well as the perceived lack of healthcare support in navigating these challenges.

Chapter 4 introduced novel social cognitive tasks designed to assess how social cognitive abilities are applied to romantic and sexual settings. Compared to control participants, individuals with early psychosis reported more cognitive impairments, scored marginally lower on cognitive tests, and had significantly poorer performance on tests of both social cognition and sexual/romantic cognition. While cognition, cognitive complaints, and self-reported symptoms emerged as predictors of social cognition, these variables did not significantly predict

sexual/romantic cognition, indicating that factors outside of traditional predictors of social cognition may be related to performance on sexual/romantic tasks. Sex was a significant predictor of performance on the sexual/romantic task, with males performing more poorly; this relationship did not emerge for social cognitive performance more broadly. Finally, performance on the sexual/romantic social cognitive task was found to predict both sexual functioning and romantic relationship functioning in early psychosis, above and beyond social cognitive performance and cognitive abilities. However, this relationship was in the opposite direction as predicted, with better performance on the task predicting poorer functional outcomes.

5.2 Theoretical and Research Implications

Mixed-methods research aims to provide a richer and more comprehensive understanding of a topic area and is being increasingly recognized as valuable in health research, particularly due to its ability to capture the complexity of health and healthcare interventions (O’Cathain et al., 2007; Wasti et al., 2022). This distinction and division of quantitative and qualitative research has been recognized by some as counterproductive to scientific advancement (Onwuegbuzie & Leech, 2005), and the ability to appropriately utilize and apply both quantitative and qualitative methods is viewed as a central research skill. Qualitative research is well-suited for exploring complex phenomena, offers opportunities for meaningful engagement with populations of interest, which promotes agency in the research process and ensures that the research processes are relevant and guided by the lived experiences of individuals who are participating in the research (Sutterheim & Ratcliffe, 2021). Qualitative research has been identified as important for understanding disability in a social context, as well as its ability to reveal processes underlying subtle and complex interacting phenomena (O’Day & Killeen, 2002). In the mental health field, qualitative methods are vital for shaping and developing theory and critically appraising existing

methodologies, theories, and systems (Gewurtz et al., 2016). Through the course of data collection and analysis, new interpretations and perspectives may evolve, patterns and themes may be identified, and novel discoveries and findings may emerge that further new knowledge (O'Day & Killeen, 2002). Regarding the present work, individuals with psychosis face marginalization and stigmatization, and their experiences are heterogeneous and impacted by various identity and sociopolitical factors. Furthermore, topics related to sex and sexuality are often stigmatized, complex, and individualized, encompassing many facets of life (World Health Organization, 2006). Qualitative methods are valuable for capturing nuanced understandings of sex and sexuality (Tolman et al., 2005). As such, for a comprehensive understanding of these topics, it is important to center the voices and perspectives of people with lived experience. Given that this topic is relatively understudied in clinical research, it is of great theoretical importance that lived experiences guide the development of theories, practices, and interventions. Some of the additional strengths of quantitative methodologies, such as statistical analysis and significance testing, standardized measurement, and predictive abilities, allow for a more complete clinical and theoretical picture of the research topic at hand.

This work builds upon the existing qualitative literature base focusing on our understanding of the process of recovery from severe mental illness, especially surrounding ideas of subjective recovery and recovery-oriented care. In definitions largely derived from qualitative work, recovery is understood to be an active, ongoing process of overcoming stigma and discrimination, participating in valued activities, feeling a sense of hope and personal meaning, and engaging in important human relationships (Borg & Davidson, 2008; Ridgway, 2001). Across research on recovery, findings suggest that mental health services should provide opportunities for individuals to guide and find their place and way of being (Gewurtz et al.,

2016). Person-centered, recovery-oriented care places the emphasis on a person's individual goals, wants, and needs as drivers of the recovery process. The present findings emphasize the role of intimacy, romance, and sexuality as notable aspects of the recovery process for many (though not all) individuals. As such, the way recovery is conceptualized and assessed in mental health research should reflect these diverse perspectives and patient goals.

The findings from the present studies also have theoretical implications for the assessment and intervention of social cognitive abilities, particularly as they are applied in complex interpersonal settings. Based on these findings, general social cognitive abilities alone do not predict functioning in romantic and sexual relationships; rather, one's ability to apply social cognitive skills to romantic or sexual situations, which likely requires knowledge of specific social scripts, expectations, and body language, are involved in the process of understanding romantic and sexual intent (Hall, 2016; Muehlenhard et al., 1986; Tisdale & Sheldon, 2018). As such, even if social cognitive abilities are intact, individuals may still struggle with applying those skills in romantic or sexual settings or may lack knowledge of specific aspects of social cognition (e.g., social knowledge) as it is applied to romantic and sexual relationships. When assessing social cognition, social competence, or social functioning, researchers should consider which specific types of social outcomes or social relationships they are hoping to capture, as one's knowledge and application of various social scripts, norms, or skills may influence performance on these tasks. Researchers and clinicians are cautioned against making assumptions that improvements in broad social functioning (e.g., via interventions targeting predictors of social functioning such as negative symptoms, cognition, or social cognition) will fully generalize to improvements in one's romantic and sexual relationships.

5.3 Clinical Implications

Intimate, romantic, and sexual relationships represent areas of need in early psychosis intervention. Recent research has emphasized the importance of adapting interventions and mental health support to align with individuals' subjective ideas of their own recovery (Van Sant et al., 2012). The present work highlights that many individuals in the early stages of psychotic illnesses see intimate relationships as part of their recovery process and wish to discuss and receive support around these areas of life in. To appropriately address these topics in treatment, it is necessary to understand specific barriers associated with functioning in these relationships. By investigating the psychosocial, cognitive, and social cognitive barriers that people face in this area of life, the present work provides foundational information to guide the development of targeted, appropriate interventions. Two primary means of integrating aspects of intimacy, romance, and sexuality into healthcare include: 1) incorporating these topics into existing assessment and treatment approaches; and 2) developing novel interventions to support functioning in these areas of life.

5.3.1 Incorporating Intimacy, Romance, and Sexuality into Healthcare

The treatment of psychotic disorders has undergone prior shifts in focus, adapting to novel research and conceptualizations of recovery from psychotic disorders (Davidson, 2003). The present work encourages an additional shift towards treatment delivery and conceptualizations of recovery that incorporate the individualized goals and desires of people accessing these services, particularly around interpersonal goals. A more comprehensive approach to mental health care that actively incorporates relationship development is likely to contribute to better short- and long-term outcomes for persons with psychosis, as supportive relationships are related to treatment outcomes (Norman et al., 2005; Uzenoff et al., 2010).

Further, centering client goals in treatment can promote agency in treatment settings. There are several ways that aspects related to intimacy, romance, and sexuality can be acknowledged and/or integrated into existing treatment settings.

One of the simplest ways to address topics related to intimacy, romance, and sexuality in healthcare settings is to create a space in which patients feel comfortable sharing any concerns they might have in this area of their lives. Research on the treatment of sexual problems has consistently identified the importance of giving patients “permission” to discuss sexual concerns, and to listen to and validate these concerns (Annon, 1976; Tuncer & Oskay, 2021). By simply initiating the conversation through permission-giving, a clinician communicates to a patient that their sexual and romantic issues are important, and that they are in a space where they are permitted to talk about their problems and express their needs. Ultimately, and in contrast with many of the experiences reported by participants in the present study, the onus lies with the health care professional to ensure appropriate and thorough health services, which includes sexuality and intimacy as core aspects of an individual’s overall health and wellbeing.

When topics related to romantic relationships and sexuality are addressed in healthcare settings, conversations often prioritize the management of risk behaviours (Black et al., 2020; Urry et al., 2024). For many clinical psychologists who endorse covering topics related to romance and sexuality in early psychosis treatment, these topics often include risk management in terms of sexual risk behaviours, sexual victimization and trauma, contraception or unintended pregnancy, sexually transmitted infections or HIV, intimate partner violence, or romantic relationship problems (Southall & Combes, 2020). Indeed, the management of risk is crucial for the safety and wellbeing of patients in EPI programs. However, when conversations around romance and sexuality predominantly involve safety and risk and do not sufficiently reinforce

healthy relationships or discuss sexual well-being and sexual pleasure, they risk generating an incomplete clinical picture of an individual's experiences. Echoing the definition by the World Health Organization (2006), sexual health is “a state of physical, emotional, mental, and social well-being in relationship to sexuality. It is not merely the absence of disease or dysfunction”. The World Health Organization recognizes sexual pleasure as a “central aspect of being human” and a contributing factor to well-being, overall fulfillment, and satisfaction (WHO, 2006; WHO, 2010). This also requires the acknowledgement that many people are motivated to engage in sexual activity because it is pleasurable (Rye & Meaney, 2007). Yet, conversations around pleasure and satisfaction may be more challenging or uncomfortable for clinicians to engage in than conversations around risk management, which tend to be topics of focus (Ford et al., 2019). This potential discomfort and resulting narrowing of conversations around intimacy, romance, and sexuality can have the unintended consequence of further pathologizing these behaviours, and especially contributes to the pathologizing of sexual behaviours among individuals with severe mental illness. This narrow conceptualization also fails to identify the motivations and goals of patients and may inadvertently silence certain conversations around romantic and sexual well-being. In line with promoting a balanced dialogue around romance and sexuality, it is important to take a proactive approach to the discussion of these topics. Oftentimes, discussions around intimacy, romance, and sexuality are reactive, emerging only after issues have been identified, further perpetuating a pathological discourse around these topics. Fostering and promoting healthy, satisfying intimate relationships, even in the absence of risk or dysfunction, is part of providing holistic health care and supporting patients in building meaning and fulfillment in their lives.

When considering changes and adaptations to existing healthcare approaches, one must acknowledge that there are considerable barriers that healthcare providers face in the application of these changes. For example, individual clinicians may face barriers related to being overworked, having insufficient time to conduct thorough assessments, or lacking managerial or program support in addressing topics that may be viewed as peripheral to a specific program's mandate (Urry et al., 2019). Often, issues related to intimacy and sexuality are “overshadowed” by other treatment targets, stigmatization, complex treatment regimens, or fragmentation in the healthcare system (Barker & Vigod, 2020). These areas may also be assumed to improve following symptom remission, despite a lack of evidence supporting this view. These systemic barriers are present alongside individual barriers related to stigma, discomfort, or biases about the role and importance of intimate, romantic, and sexual relationships in the lives of people with psychosis (Quinn et al., 2011a; Quinn et al., 2011b; Southall & Combes, 2020; Urry et al., 2019).

However, failing to address these topics is inconsistent with best practices and standards in healthcare. Based in human rights, sexual rights are based on the freedom, dignity, and equality of all humans, and include a commitment to protection from harm (Kismödi et al., 2017). Patients carry these sexual rights into treatment. These rights include the right to information, which includes accurate and accessible information about sexuality and sexual health, and comprehensive sexual education, which incorporates a positive, rights-based approach to sexuality and pleasure (IPPF, 2008; Kismödi et al., 2017; WHO, 2010). Patients also have the right to the highest attainable standard of healthcare, which is recognized as one that includes sexual health and the possibility of pleasurable, satisfying, and safe sexual experiences (IPPF, 2008; WHO, 2006; WHO, 2010). It is not up to clinicians to determine who gets sexual healthcare and when it is delivered, but rather the onus lies on clinicians to ensure that patients

are aware of pathways to access education, treatment, and support related to sexual healthcare. Mental health clinicians are not the sole providers responsible for this information, but given the interplay between mental health and intimate relationships, it is important that clinicians are aware of resources or interventions to support these types of relationships. Acknowledging or addressing these topics in all healthcare settings is both aligned with ethical practices and prevents these areas of life from “falling through the cracks” due to a diffusion of responsibility across healthcare settings.

Mental healthcare settings may benefit from offering and encouraging staff to seek additional training opportunities to build competencies in navigating issues related to intimacy, sexuality, and romantic relationships, as well as in applying gender and sexuality minority-affirming approaches. For clinical psychologists, it is recommended that training surrounding the provision of sexual healthcare services be included in graduate curricula for students, as well as through continuing education programs for practicing clinicians (Reissing & Giulio, 2010). Broadly, across studies examining clinicians’ abilities and comfort addressing topics around intimacy and sexuality, the need for services to incorporate additional training to support their providers in responding to these concerns is emphasized (Berger-Merom et al., 2022).

Finally, if these topics are not sufficiently integrated or addressed in healthcare settings, it may perpetuate a belief that they are not important in the lives of people with psychosis, which may render them less likely to be targets of research or treatment. When considering pathways to knowledge translation (Wathan & MacMillan, 2018), the silencing or sidelining of conversations related to intimate relationships may lead to them being understudied, which subsequently results in fewer treatments and clinical trials being developed. As a result, we are left with less information on if and how we can improve these areas of life, what the specific mechanisms of

action are in recovery, and how we can address these topics most successfully in primary care settings.

5.3.2 The Development of Novel Interventions Targeting Intimate, Romantic, and Sexual Functioning

Results from the present study indicate that supporting patients in meeting their goals related to intimate, romantic, and sexual relationships may be facilitated by the inclusion of interventions that specifically target these areas of life. Interventions that target barriers to social engagement have shown promising efficacy, including interventions seeking to improve social skills (Kurtz & Mueser, 2008; Turner et al., 2018), clinical symptoms (Hazell et al., 2016; Sitko et al., 2020), cognitive and social cognitive impairment (Fiszdon & Reddy, 2012; Horan & Green, 2019; McGurk et al., 2007; Revell et al., 2015), and stigma (Best et al., 2020). Although these interventions may help people engage socially and increase opportunities for building intimate relationships, if one lacks the specific social cognitive abilities and social knowledge to develop romantic and sexual relationships, they may struggle to capitalize on these opportunities. The present findings suggest that existing interventions targeted facets of social functioning (e.g., cognitive remediation, social skills training) alone may not be sufficient in improving functioning in romantic and sexual relationships. In addition to existing interventions, individuals with early psychosis may also benefit from interventions, psychoeducation, and support specifically related to romantic relationships, dating, sexuality, and sexual activity. This includes adaptations of social cognitive abilities, such as recognizing and interpreting nuanced social, behavioural, and facial cues (e.g., flirtation, sexual/romantic interest and disinterest). Given that impairments across various domains contribute to social, romantic, and sexual functioning, a modular-based program may be well-suited to support persons with psychosis in

these areas of life, such that they could enroll in specific modules of interest on an as-needed basis in ways that are aligned with their individual treatment goals. For instance, modules could include education and skill-building related to stigma reduction, social skills, understanding social, romantic, and sexual cues, building and maintaining healthy relationships, sexual communication, and so forth. This is aligned with prior research demonstrating that multi-component interventions are associated with the largest psychosocial gains in early psychosis (Frawley et al., 2021). In line with the present findings, opportunities to talk about issues in these areas of life can help mitigate feelings of isolation, build self-efficacy, and validate and normalize difficulties. Furthermore, given the sex differences across performance on sexual/romantic cognition in the present study, as well as research identifying unique difficulties in areas of romantic or sexual functioning for males with psychosis (Firmin et al., 2021; Hanlon et al., 2017; Salokangas et al., 2001), assessments and interventions that aim to improve sociosexual functioning may benefit from being uniquely tailored across genders.

Strategies that help individuals and their partners or families understand the impact of psychosis on relationship development may also be beneficial for facilitating functioning within relationships, as would interventions targeting communication and conflict resolution. Educating partners about the challenges and realities of experiencing psychosis may better equip them to navigate specific challenges, manage associated stress and distress, set healthy boundaries, and support their loved ones. Further, education could allow partners to understand the diverse outcomes in psychotic disorders, including that persons with psychosis can manage intimacy and have satisfying relationships. This may reduce fears and combat stigmatizing beliefs, ultimately promoting a more balanced view of illness outcomes in psychosis. Family interventions in psychosis have been found to be effective at improving outcomes, such as improving symptom

severity, reducing risk of relapse, improved conflict resolution, and lesser caregiver burnout (Bird et al., 2010; Claxton et al., 2017). However, these interventions typically involve parents rather than romantic partners, which may represent a future area of research exploration.

5.4 Limitations

The findings of the present research should be considered alongside limitations. Across studies, participants consisted of individuals who were outpatients living in the community who had been first involved in an early psychosis intervention service within the past five years. As a result, while all participants could be considered as within the “early” stages of psychosis, they varied in illness duration, length of current treatment, and perceived degree of recovery. On average, participants in the current sample had mild to moderate symptoms of psychosis, and many were not in acute stages of psychotic illness. As a result, findings may not be generalizable to individuals experiencing acute psychosis or who are hospitalized. The present samples may also be shaped by self-selection biases. It may be that participants who were more willing to discuss intimacy, romance, and sexuality, or who endorsed values and goals related to these areas of life, were more likely to participate in the study. Conversely, people who do not have goals or interests in these areas of life, or who do not seek relationships and who are not concerned with a lack of these relationships, may have opted to not participate in this type of research. Further, individuals who may experience more discomfort or self-stigma related to aspects of romance and sexuality may have also opted not to participate in this research, and therefore their perspectives may not have been adequately captured by the present findings.

Regarding the control group, eligibility required that participants did not have any past or current psychiatric or autism spectrum disorders. Though this allows for comparisons between individuals unaffected by psychosis, the use of a control group that reports being unaffected by

any psychiatric conditions may also not fully represent the romantic and sexual experiences of the general population. Other research in psychosis has similarly argued for the inclusion of both psychiatric and non-psychiatric comparisons groups (e.g., Millman et al., 2019). Given that anxious and depressive symptoms, which are among the most commonly experienced psychiatric symptoms, emerged as significant barriers to engagement in romantic and sexual relationships, future research may benefit from the inclusion of individuals with anxiety or depression as comparison groups. As the choice of control group can affect inferences made about the clinical group, this would allow for a clearer understanding of the specific barriers that individuals with psychosis may face, above and beyond those experienced by individuals with other psychiatric illnesses. This may also provide researchers with a better understanding of common factors across psychiatric illnesses that may serve as barriers to social relationships.

The relatively small sample size represents a further limitation, resulting in a lack of statistical power to detect small effects or, conversely, increasing the risk of a type I error when conducting multiple analyses using the same sample. This sample overlapped considerably across the qualitative and quantitative studies, and Chapters 3 and 4 utilized the same sample. Future research should seek to replicate these results with a larger sample size. Further, the sample consists of individuals with varying diagnostic profiles, as is characteristic of those in early psychosis intervention programs (Cawkwell et al., 2020). Therefore, while the sample is representative of EPI program patients, the findings should not be assumed to be generalized to individuals with specific diagnostic profiles (e.g., schizophrenia, bipolar disorder, substance-induced psychosis), as there may be unique differences in social cognition and social functioning depending on one's diagnostic status, and, by extension, the course of their illness. Further research with a larger sample size would allow for the exploration of differences within

diagnostic groups to better understand how issues in intimacy, romance, and sexuality manifest and persist across different illnesses.

Compared to other domains of functioning in early psychosis, the domains of intimacy, romance, and sexuality are relatively understudied and lack a comprehensive literature base. As such, while this work makes an important contribution to a sparse literature base, several of the findings are exploratory in nature and are guided by findings from a relatively understudied area. Additional work is needed to strengthen the theoretical frameworks on which this work is based. Furthermore, conceptualizations of romantic relationships and sexuality in the present study are defined and discussed from theoretical and sociopolitical perspectives that are predominantly Canadian, North American, and Western approaches. As such, while certain themes are more generalizable, such as those related to human rights, it is important to recognize that perspectives of intimate, romantic, and sexual relationships can vary considerably across and within individuals and cultures. This is highlighted by the unique experiences shared by people with diverse ethnocultural and sexual and gender identities within the present work. Future studies should adopt an intersectional approach to explore how individuals of varying cultures, gender/sex identities, sexual orientations, religions, and ethnicities experience and engage with intimacy, romance, sexuality, mental health, and the many intersections of these areas of life.

Though this study offers a foundational understanding of the relationships between cognition, symptoms, and social cognition in early psychosis, as well as their relationship with romantic and sexual functioning, it also highlights the need for future research. Replication and extension of the present findings is necessary to better understand these relationships and their impact on the lives of people with early psychosis.

5.5 Conclusions

This program of work aimed to provide researchers and clinicians with a more accurate and comprehensive understanding of the intimate, romantic, and sexual needs of people with early psychosis. Findings highlight enduring barriers and difficulties in this area of life and advance our understanding of how difficulties concerning intimacy and sexuality may be related to other aspects of psychotic illnesses, which may inform how these topics are addressed and treated in EPI programs. It is clear that not dealing with these issues does not reduce their burden on the lives of people with psychotic disorders. Supporting individuals in navigating difficulties relating to intimacy, romance, and sexuality can help in the development and maintenance of support systems and relationships, ultimately contributing to recovery from psychosis.

References

- Aas, M., Dazzan, P., Mondelli, V., Melle, I., Murray, R. M., & Parianti, C. M. (2014). A systematic review of cognitive function in first-episode psychosis, including a discussion on childhood trauma, stress, and inflammation. *Frontiers in Psychiatry, 4*, 182.
<https://doi.org/10.3389/fpsy.2013.00182>
- Abbey, A., & Melby, C. (1986). The effects of nonverbal cues on gender differences in perceptions of sexual intent. *Sex Roles, 15*(5–6), 283–298.
<https://doi.org/10.1007/BF00288318>
- Abbott, D. M., Mollen, D., Anaya, E. J., Burnes, T. R., Jones, M. M., & Rukus, V. A. (2021). Providing sexuality training for psychologists: The role of predoctoral internship sites. *American Journal of Sexuality Education, 16*(2), 161–180.
<https://doi.org/10.1080/15546128.2021.1892555>
- Adery, L. H., Park, S., & Kim, J. (2017). 62.2 Consequences of isolation and loneliness on social perception. *Schizophrenia Bulletin, 43*(Suppl 1), S37–S38.
<https://doi.org/10.1093/schbul/sbx021.099>
- Alasmawi, K., Mann, F., Lewis, G., White, S., Mezey, G., & Lloyd-Evans, B. (2020). To what extent does severity of loneliness vary among different mental health diagnostic groups: A cross-sectional study. *International Journal of Mental Health Nursing, 29*(5), 921-934.
<https://doi.org/10.1111/inm.12727>
- Álvarez-Jiménez, M., Gleeson, J. F., Henry, L. P., Harrigan, S. M., Harris, M. G., Killackey, E., Bendall, S., Amminger, G. P., Yung, A. R., Herrman, H., Jackson, H. J., & McGorry, P. D. (2012). Road to full recovery: Longitudinal relationship between symptomatic remission

- and psychosocial recovery in first-episode psychosis over 7.5 years. *Psychological Medicine*, 42(3), 595–606. <https://doi.org/10.1017/S0033291711001504>
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.).
- Annon, J. S. (1976). The PLISSIT model: A proposed conceptual scheme for the behavioral treatment of sexual problems. *Journal of Sex Education and Therapy*, 2(1), 1-15. <https://doi.org/10.1080/01614576.1976.11074483>
- Assalian, Ronald Fraser, Raymond Te, P. (2000). Sexuality and quality of life of patients with schizophrenia. *International Journal of Psychiatry in Clinical Practice*, 4(1), 29–33. <https://doi.org/10.1080/13651500052048479>
- Atkinson, M., Zibin, S., & Chuang, H. (1997). Characterizing quality of life among patients with chronic mental illness: A critical examination of the self-report methodology. *American Journal of Psychiatry*, 154(1), 99–105. <https://doi.org/10.1176/ajp.154.1.99>
- Badcock, J. C., Adery, L. H., & Park, S. (2020). Loneliness in psychosis: A practical review and critique for clinicians. *Clinical Psychology: Science and Practice*, 27(4), Article e12345. <https://doi.org/10.1111/cpsp.12345>
- Badcock, J. C., Di Prinzio, P., Waterreus, A., Neil, A. L., & Morgan, V. A. (2020). Loneliness and its association with health service utilization in people with a psychotic disorder. *Schizophrenia Research*, 223, 105–111. <https://doi.org/10.1016/j.schres.2020.05.059>

- Badcock, J. C., Di Prinzio, P., Waterreus, A., Neil, A. L., & Morgan, V. A. (2020). Loneliness and its association with health service utilization in people with a psychotic disorder. *Schizophrenia Research*, 223, 105–111. <https://doi.org/10.1016/j.schres.2020.05.059>
- Baker, A. E. Z., & Procter, N. G. (2015). ‘You just lose the people you know’: Relationship loss and mental illness. *Archives of Psychiatric Nursing*, 29(2), 96–101. <https://doi.org/10.1016/j.apnu.2014.11.007>
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Benda, M. S., & Scherf, K. S. (2020). The Complex Emotion Expression Database: A validated stimulus set of trained actors. *PLoS ONE*, 15(2). <https://doi.org/10.1371/journal.pone.0228248>
- Bengtsson-Tops, A., & Ehliasson, K. (2012). Victimization in individuals suffering from psychosis: A Swedish cross-sectional study. *Journal of Psychiatric and Mental Health Nursing*, 19(1), 23–30. <https://doi.org/10.1111/j.1365-2850.2011.01749.x>
- Berger-Merom, R., Zisman-Ilani, Y., Jones, N., & Roe, D. (2022). Addressing sexuality and intimate relations in community mental health services for people with serious mental illness: A qualitative study of mental health practitioners’ experiences. *Psychiatric Rehabilitation Journal*, 45(2), 170–175. <https://doi.org/10.1037/prj0000506>

- Berry, K., & Barrowclough, C. (2009). The needs of older adults with schizophrenia Implications for psychological interventions. *Clinical Psychology Review, 29*(1), 68–76.
<https://doi.org/10.1016/j.cpr.2008.09.010>
- Bertrand, M.-C., Sutton, H., Achim, A. M., Malla, A. K., & Lepage, M. (2007). Social cognitive impairments in first episode psychosis. *Schizophrenia Research, 95*(1), 124–133.
<https://doi.org/10.1016/j.schres.2007.05.033>
- Best, M. W., Grossman, M., Milanovic, M., Renaud, S., & Bowie, C. R. (2018). Be Outspoken and Overcome Stigmatizing Thoughts (BOOST): A group treatment for internalized stigma in first-episode psychosis. *Psychosis, 10*(3), 187-197.
<https://doi.org/10.1080/17522439.2018.1472630>
- Bibb, J., & McFerran, K. S. (2017). The challenges of using self-report measures with people with severe mental illness: Four participants’ experiences of the research process. *Community Mental Health Journal, 53*(6), 747–754. <https://doi.org/10.1007/s10597-017-0127-6>
- Bird, V., Premkumar, P., Kendall, T., Whittington, C., Mitchell, J., & Kuipers, E. (2010). Early intervention services, cognitive–behavioural therapy and family intervention in early psychosis: systematic review. *The British Journal of Psychiatry, 197*(5), 350-356.
<https://doi.org/10.1192/bjp.bp.109.074526>
- Bjornestad, J., Hegelstad, W. ten V., Joa, I., Davidson, L., Larsen, T. K., Melle, I., Veseth, M., Johannessen, J. O., & Bronnick, K. (2017a). “With a little help from my friends” social predictors of clinical recovery in first-episode psychosis. *Psychiatry Research, 255*, 209–214. <https://doi.org/10.1016/j.psychres.2017.05.041>

- Black, S., Salway, T., Dove, N., Shoveller, J., & Gilbert, M. (2020). From silos to buckets: A qualitative study of how sexual health clinics address their clients' mental health needs. *Canadian Journal of Public Health, 111*, 220-228. <https://doi.org/10.17269/s41997-019-00273-6>
- Blanchard, J. J., Park, S. G., Catalano, L. T., & Bennett, M. E. (2015). Social affiliation and negative symptoms in schizophrenia: Examining the role of behavioral skills and subjective responding. *Schizophrenia Research, 168*(1-2), 491–497. <https://doi.org/10.1016/j.schres.2015.07.019>
- Boislard, M.-A., Van de Bongardt, D., & Blais, M. (2016). Sexuality (and lack thereof) in adolescence and early adulthood: A review of the literature. *Behavioral Sciences, 6*(1), Article 1. <https://doi.org/10.3390/bs6010008>
- Bonfils, K. A., Firmin, R. L., Salyers, M. P., & Wright, E. R. (2015). Sexuality and intimacy among people living with serious mental illnesses: Factors contributing to sexual activity. *Psychiatric Rehabilitation Journal, 38*(3), 249. <https://doi.org/10.1037/prj0000117>
- Bonfils, K. A., Rand, K. L., Luther, L., Firmin, R. L., & Salyers, M. P. (2016). The Romantic Relationship Functioning Scale: Development and preliminary validation in two samples. *Journal of Behavioural and Social Sciences, 3*(3), 117-130.
- Bora, E. & Murray, R. M. (2014). Meta-analysis of cognitive deficits in ultra-high risk to psychosis and first-episode psychosis: Do the cognitive deficits progress over, or after, the onset of psychosis? *Schizophrenia Bulletin, 40*(4), 744–755. <https://doi.org/10.1093/schbul/sbt085>
- Bora, E., & Pantelis, C. (2013). Theory of mind impairments in first-episode psychosis,

- individuals at ultra-high risk for psychosis and in first-degree relatives of schizophrenia: Systematic review and meta-analysis. *Schizophrenia Research*, 144(1-3), 31-36.
<https://doi.org/10.1016/j.schres.2012.12.013>
- Bora, E., Yucel, M., & Pantelis, C. (2009). Theory of mind impairment in schizophrenia: Meta-analysis. *Schizophrenia Research*, 109(1), 1–9.
<https://doi.org/10.1016/j.schres.2008.12.020>
- Borg, M., & Davidson, L. (2008). The nature of recovery as lived in everyday experience. *Journal of Mental Health*, 17(2), 129-140. <https://doi.org/10.1080/09638230701498382>
- Bóthe, B., Kovács, M., Tóth-Király, I., Reid, R. C., Griffiths, M. D., Orosz, G., & Demetrovics, Z. (2019). The Psychometric Properties of the Hypersexual Behavior Inventory Using a Large-Scale Nonclinical Sample. *The Journal of Sex Research*, 56(2), 180–190.
<https://doi.org/10.1080/00224499.2018.1494262>
- Boucher, M. E., Groleau, D., & Whitley, R. (2016). Recovery and severe mental illness: The role of romantic relationships, intimacy, and sexuality. *Psychiatric Rehabilitation Journal*, 39(2), 180–182. <https://doi.org/10.1037/prj0000193>
- Bowie, C. R. & Harvey, P. D. (2005). Cognition in schizophrenia: Impairments, determinants, and functional importance. *Psychiatric Clinics*, 28(3), 613-633.
<https://doi.org/10.1016/j.psc.2005.05.004>
- Bowie, C. R., Leung, W. W., Reichenberg, A., McClure, M. M., Patterson, T. L., Heaton, R. K.,

- & Harvey, P. D. (2008). Predicting schizophrenia patients' real-world behavior with specific neuropsychological and functional capacity measures. *Biological Psychiatry*, 63(5), 505-511. <https://doi.org/10.1016/j.biopsych.2007.05.022>
- Boyda, D., McFeeters, D., & Shevlin, M. (2014). Intimate partner violence, sexual abuse, and the mediating role of loneliness on psychosis. *Psychosis*, 7(1), 1–13. <https://doi.org/10.1080/17522439.2014.917433>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Braun, V., & Clarke, V. (2021). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health*, 13(2), 201–216. <https://doi.org/10.1080/2159676X.2019.1704846>
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3–26. <https://doi.org/10.1037/qup0000196>
- Braun, H. I., Jackson, D. N., & Wiley, D. E. (2001). Socially desirable responding: The evolution of a construct. In *The role of constructs in psychological and educational measurement* (pp. 61-84). Routledge.

- Catts, S. V., O'Toole, B. I., Carr, V. J., Lewin, T., Neil, A., Harris, M. G., Frost, A. D. J., Crissman, B. R., Eadie, K., & Evans, R. W. (2010). Appraising evidence for intervention effectiveness in early psychosis: Conceptual framework and review of evaluation approaches. *Australian & New Zealand Journal of Psychiatry*, *44*(3), 195–219. <https://doi.org/10.3109/00048670903487167>
- Cawkwell, P. B., Bolton, K. W., Karmacharya, R., Öngür, D., & Shinn, A. K. (2020). Two-year diagnostic stability in a real-world sample of individuals with early psychosis. *Early Intervention in Psychiatry*, *14*(6), 751–754. <https://doi.org/10.1111/eip.12930>
- Cechnicki, A., Angermeyer, M. C., & Bielańska, A. (2011). Anticipated and experienced stigma among people with schizophrenia: Its nature and correlates. *Social Psychiatry and Psychiatric Epidemiology*, *46*(7), 643–650. <https://doi.org/10.1007/s00127-010-0230-2>
- Chan, S. K. W., Kao, S. Y. S., Leung, S. L., Hui, C. L. M., Lee, E. H. M., Chang, W. C., & Chen, E. Y. H. (2019). Relationship between neurocognitive function and clinical symptoms with self-stigma in patients with schizophrenia-spectrum disorders. *Journal of Mental Health*, *28*(6), 583–588. <https://doi.org/10.1080/09638237.2017.1340599>
- Chodorow, N. (1978). *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley: University of California Press.
- Clarke, V., & Braun, V. (2021). *Thematic analysis: A practical guide*. Thematic Analysis (pp. 1–100). SAGE Publications Ltd.

- Claxton, M., Onwumere, J., & Fornells-Ambrojo, M. (2017). Do family interventions improve outcomes in early psychosis? A systematic review and meta-analysis. *Frontiers in Psychology, 8*, 244898. <https://doi.org/10.3389/fpsyg.2017.00371>
- Conley, M. I., Dellarco, D. V., Rubien-Thomas, E., Cohen, A. O., Cervera, A., Tottenham, N., & Casey, B. J. (2018). The racially diverse affective expression (RADIATE) face stimulus set. *Psychiatry Research, 270*, 1059–1067. <https://doi.org/10.1016/j.psychres.2018.04.066>
- Conrad, K. J., Yagelka, J. R., Matters, M. D., Rich, A. R., Williams, V., & Buchanan, M. (2001). Reliability and validity of a Modified Colorado Symptom Index in a national homeless sample. *Mental Health Services Research, 3*(3), 141–153. <https://doi.org/10.1023/a:1011571531303>
- Couture, S. M., Penn, D. L., & Roberts, D. L. (2006). The functional significance of social cognition in schizophrenia: A review. *Schizophrenia Bulletin, 32 Suppl 1*(Suppl 1), S44–S63. <https://doi.org/10.1093/schbul/sbl029>
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications, Inc.
- Cunningham, M. R., & Barbee, A. P. (2008). Prelude to a kiss: Nonverbal flirting, opening gambits, and other communication dynamics in the initiation of romantic relationships. In S. Sprecher, A. Wenzel, & J. Harvey (Eds.), *Handbook of relationship initiation* (pp. 97–120). Psychology Press.

- Dansby Olufowote, R. A., Fife, S. T., Schleiden, C., & Whiting, J. B. (2020). How can I become more secure?: A grounded theory of earning secure attachment. *Journal of Marital and Family Therapy*, 46(3), 489–506. <https://doi.org/10.1111/jmft.12409>
- Darves-Bornoz, J. M., Lempérière, T., Degiovanni, A., & Gaillard, P. (1995). Sexual victimization in women with schizophrenia and bipolar disorder. *Social Psychiatry and Psychiatric Epidemiology*, 30(2), 78–84. <https://doi.org/10.1007/BF00794947>
- Davidson, L. (2003). Living outside mental illness: Qualitative studies of recovery in schizophrenia (Vol. 7). NYU Press.
- Deegan, P. E. (1988). Recovery: The lived experience of rehabilitation. *Psychosocial Rehabilitation Journal*, 11(4), 11–19. <https://doi.org/10.1037/h0099565>
- de Jager, J., Cirakoglu, B., Nugter, A., & van Os, J. (2017). Intimacy and its barriers: A qualitative exploration of intimacy and related struggles among people diagnosed with psychosis. *Psychosis*, 9(4), 301–309. <https://doi.org/10.1080/17522439.2017.1330895>
- de Jager, J., & McCann, E. (2017). Psychosis as a barrier to the expression of sexuality and intimacy: An environmental risk? *Schizophrenia Bulletin*, 43(2), 236–239. <https://doi.org/10.1093/schbul/sbw172>
- de Jager, J., van Greevenbroek, R., Nugter, A., & van Os, J. (2018). Sexual expression and its determinants in people diagnosed with psychotic disorders. *Community Mental Health Journal*, 54(7), 1082–1088. <https://doi.org/10.1007/s10597-018-0285-1>

- DeRogatis, L. R. (2008). Assessment of sexual function/dysfunction via patient reported outcomes. *International Journal of Impotence Research*, 20(1), 35–44.
<https://doi.org/10.1038/sj.ijir.3901591>
- Dindia, K., & Timmerman, L. (2003). Accomplishing romantic relationships. In J. O. Greene & B. R. Burleson (Eds.), *Handbook of communication and social interaction skills* (pp. 685–721). Lawrence Erlbaum Associates Publishers.
- Doron, H., Sharabi-Nov, A., Trablus, M., Amory, V., Benbenishty, Y., Skuza, Y., & Issa, F. (2014). Couple relationships in persons with schizophrenia: Intimacy, passion, and commitment. *American Journal of Health Sciences (AJHS)*, 5(2), 155–164.
<https://doi.org/10.19030/ajhs.v5i2.8960>
- Elkington, K. S., Hackler, D., Walsh, T. A., Latack, J. A., McKinnon, K., Borges, C., Wright, E. R., & Wainberg, M. L. (2013). Perceived mental illness stigma, intimate relationships and sexual risk behavior in youth with mental illness. *Journal of Adolescent Research*, 28(3), 378–404. <https://doi.org/10.1177/0743558412467686>
- Elliott, R., Fischer, C. T., & Rennie, D. L. (1999). Evolving guidelines for publication of qualitative research studies in psychology and related fields. *British journal of clinical psychology*, 38(3), 215-229. <https://doi.org/10.1348/014466599162782>
- Emsley, R., Chiliza, B., Asmal, L., & Harvey, B. H. (2013). The nature of relapse in schizophrenia. *BMC Psychiatry*, 13(1), 1-8. <https://doi.org/10.1186/1471-244X-13-50>

- England, P., Shafer, E. F., & Fogarty, A. C. K. (2012). Hooking up and forming romantic relationships on today's college campuses. In M. Kimmel, & A. Aronson (Eds.), *The Gendered Society Reader* (5th ed., pp. 559-572). Oxford University Press.
- Evert, H., Harvey, C., Trauer, T., & Herrman, H. (2003). The relationship between social networks and occupational and self-care functioning in people with psychosis. *Social Psychiatry and Psychiatric Epidemiology*, *38*(4), 180–188.
<https://doi.org/10.1007/s00127-003-0617-4>
- Fan, X., Henderson, D. C., Chiang, E., Briggs, L. B. N., Freudenreich, O., Evins, A. E., Cather, C., & Goff, D. C. (2007). Sexual functioning, psychopathology and quality of life in patients with schizophrenia. *Schizophrenia Research*, *94*(1–3), 119–127.
<https://doi.org/10.1016/j.schres.2007.04.033>
- Feeney, J. A., & Karantzas, G. C. (2017). Couple conflict: Insights from an attachment perspective. *Current opinion in psychology*, *13*, 60-64.
<https://doi.org/10.1016/j.copsyc.2016.04.017>
- Fett, A.-K. J., Viechtbauer, W., Dominguez, M.-G., Penn, D. L., van Os, J., & Krabbendam, L. (2011). The relationship between neurocognition and social cognition with functional outcomes in schizophrenia: A meta-analysis. *Neuroscience & Biobehavioral Reviews*, *35*(3), 573–588. <https://doi.org/10.1016/j.neubiorev.2010.07.001>
- Fett, A.-K. J., Viechtbauer, W., Dominguez, M.-G., Penn, D. L., van Os, J., & Krabbendam, L. (2011). The relationship between neurocognition and social cognition with functional outcomes in schizophrenia: A meta-analysis. *Neuroscience & Biobehavioral Reviews*, *35*(3), 573–588. <https://doi.org/10.1016/j.neubiorev.2010.07.001>

- Fioravanti, M., Bianchi, V., & Cinti, M. E. (2012). Cognitive deficits in schizophrenia: An updated metanalysis of the scientific evidence. *BMC psychiatry*, *12*, 1-20.
<https://doi.org/10.1186/1471-244X-12-64>
- Firmin, R. L., Zalzalá, A. B., Hamm, J. A., Luther, L., & Lysaker, P. H. (2021). How psychosis interrupts the lives of women and men differently: A qualitative comparison. *Psychology and Psychotherapy: Theory, Research and Practice*, *94*(3), 704-720.
<https://doi.org/10.1111/papt.12317>
- Fiszdon, J. M., & Reddy, L. F. (2012). Review of social cognitive treatments for psychosis. *Clinical Psychology Review*, *32*(8), 724-740. <https://doi.org/10.1016/j.cpr.2012.09.003>
- Ford, J. V., Corona Vargas, E., Finotelli Jr, I., Fortenberry, J. D., Kismödi, E., Philpott, A., ... & Coleman, E. (2019). Why pleasure matters: Its global relevance for sexual health, sexual rights and wellbeing. *International Journal of Sexual Health*, *31*(3), 217-230.
<https://doi.org/10.1080/19317611.2019.1654587>
- Fletcher, G. J. O., Overall, N. C., & Friesen, M. D. (2006). Social Cognition in Intimate Relationships. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 353–368). Cambridge University Press.
<https://doi.org/10.1017/CBO9780511606632.020>
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*(2), 350-365. <https://doi.org/10.1037/0022-3514.78.2.350>

- Frawley, E., Cowman, M., Lepage, M., & Donohoe, G. (2023). Social and occupational recovery in early psychosis: A systematic review and meta-analysis of psychosocial interventions. *Psychological Medicine*, 53(5), 1787-1798. [doi:10.1017/S003329172100341X](https://doi.org/10.1017/S003329172100341X)
- Fusar-Poli, P., Deste, G., Smieskova, R., Barlati, S., Yung, A. R., Howes, O., ... & Borgwardt, S. (2012). Cognitive functioning in prodromal psychosis: A meta-analysis. *Archives of General Psychiatry*, 69(6), 562-571. <https://doi.org/10.1001/archgenpsychiatry.2011.1592>
- Gardner, A., Filia, K., Killackey, E., & Cotton, S. (2019). The social inclusion of young people with serious mental illness: A narrative review of the literature and suggested future directions. *Australian & New Zealand Journal of Psychiatry*, 53(1), 15–26. <https://doi.org/10.1177/0004867418804065>
- Gayer-Anderson, C., & Morgan, C. (2013). Social networks, support and early psychosis: A systematic review. *Epidemiology and Psychiatric Sciences*, 22(2), 131–146. <https://doi.org/10.1017/S2045796012000406>
- Gewurtz, R., Moll, S., Poole, J.M., Gruhl, K.R. (2016). Qualitative research in mental health and mental illness. In: K. Olson, R. Young, I. Schultz (Eds.), *Handbook of qualitative health research for evidence-based practice* (Vol. 7, pp. 203-223) Springer. https://doi.org/10.1007/978-1-4939-2920-7_13
- Giacco, D., McCabe, R., Kallert, T., Hansson, L., Fiorillo, A., & Priebe, S. (2012). Friends and symptom dimensions in patients with psychosis: A pooled analysis. *PLoS ONE*, 7(11). <https://doi.org/10.1371/journal.pone.0050119>
- Gilligan, C. (1982). In a different voice: Psychological theory and women's development.

Cambridge, MA: Harvard University Press.

Gnambs, T., & Kaspar, K. (2015). Disclosure of sensitive behaviors across self-administered survey modes: A meta-analysis. *Behavior Research Methods*, *47*(4), 1237–1259.

<https://doi.org/10.3758/s13428-014-0533-4>

Goes, F. S., Sadler, B., Toolan, J., Zamoiski, R. D., Mondimore, F. M., MacKinnon, D. F., Schweizer, B., Group, T. B. D. P., Raymond DePaulo Jr, J., & Potash, J. B. (2007). Psychotic features in bipolar and unipolar depression. *Bipolar Disorders*, *9*(8), 901–906.

<https://doi.org/10.1111/j.1399-5618.2007.00460.x>

Goldstein, J. M. (1988). Gender differences in the course of schizophrenia. *Am J Psychiatry*,

145(6), 684–689. <https://doi.org/10.1176/ajp.145.6.684>

Green, M. F., Horan, W. P., & Lee, J. (2019). Nonsocial and social cognition in schizophrenia: Current evidence and future directions. *World Psychiatry*, *18*(2), 146–161.

<https://doi.org/10.1002/wps.20624>

Green, M. F., Horan, W. P., Lee, J., McCleery, A., Reddy, L. F., & Wynn, J. K. (2018). Social disconnection in schizophrenia and the general community. *Schizophrenia Bulletin*, *44*(2),

242–249. <https://doi.org/10.1093/schbul/sbx082>

Green, M. F., Penn, D. L., Bentall, R., Carpenter, W. T., Gaebel, W., Gur, R. C., Kring, A. M., Park, S., Silverstein, S. M., & Heinssen, R. (2008). Social cognition in schizophrenia: An NIMH workshop on definitions, assessment, and research opportunities. *Schizophrenia Bulletin*,

34(6), 1211–1220. <https://doi.org/10.1093/schbul/sbm145>

- Hache-Labelle, C., Abdel-Baki, A., Lepage, M., Laurin, A.-S., Guillou, A., Francoeur, A., Bergeron, S., & Lecomte, T. (2021). Romantic relationship group intervention for men with early psychosis: A feasibility, acceptability and potential impact pilot study. *Early Intervention in Psychiatry*, 15(4), 753–761. <https://doi.org/10.1111/eip.13012>
- Haj-Mohamadi, P., Gillath, O., & Rosenberg, E. L. (2021). Identifying a facial expression of flirtation and its effect on men. *The Journal of Sex Research*, 58(2), 137–145. <https://doi.org/10.1080/00224499.2020.1805583>
- Hall, J. A. (2016). Interpreting Social-Sexual Communication: Relational Framing Theory and Social-Sexual Communication, Attraction, and Intent: Social-Sexual Communication. *Human Communication Research*, 42(1), 138–164. <https://doi.org/10.1111/hcre.12071>
- Hanlon, M. C., Campbell, L. E., Single, N., Coleman, C., Morgan, V. A., Cotton, S. M., ... & Castle, D. J. (2017). Men and women with psychosis and the impact of illness-duration on sex-differences: The second Australian national survey of psychosis. *Psychiatry Research*, 256, 130-143. <https://doi.org/10.1016/j.psychres.2017.06.024>
- Harley, E. W.-Y., Boardman, J., & Craig, T. (2010). Sexual problems in schizophrenia: Prevalence and characteristics. A cross sectional survey. *Social Psychiatry and Psychiatric Epidemiology*, 45(7), 759–766. <https://doi.org/10.1007/s00127-009-0119-0>
- Harley, E. W.-Y., Boardman, J., & Craig, T. (2012). Friendship in people with schizophrenia: A survey. *Social Psychiatry and Psychiatric Epidemiology*, 47(8), 1291–1299. <https://doi.org/10.1007/s00127-011-0437-x>
- Harvey, P. D., Deckler, E., Jarskog, F., Penn, D. L., & Pinkham, A. E. (2019). Predictors of social functioning in patients with higher and lower levels of reduced emotional experience:

- Social cognition, social competence, and symptom severity. *Schizophrenia Research*, 206, 271–276. <https://doi.org/10.1016/j.schres.2018.11.005>
- Harvey, P. D., & Penn, D. (2010). Social cognition: the key factor predicting social outcome in people with schizophrenia? *Psychiatry*, 7(2), 41–44.
- Harvey, P. D., & Strassnig, M. (2012). Predicting the severity of everyday functional disability in people with schizophrenia: Cognitive deficits, functional capacity, symptoms, and health status. *World Psychiatry*, 11(2), 73-79.
<https://doi.org/10.1016/j.wpsyc.2012.05.004>
- Hazell, C. M., Hayward, M., Cavanagh, K., & Strauss, C. (2016). A systematic review and meta-analysis of low intensity CBT for psychosis. *Clinical Psychology Review*, 45, 183-192.
<https://doi.org/10.1016/j.cpr.2016.03.004>
- Healey, K. M., Bartholomeusz, C. F., & Penn, D. L. (2016). Deficits in social cognition in first episode psychosis: A review of the literature. *Clinical Psychology Review*, 50, 108–137.
<https://doi.org/10.1016/j.cpr.2016.10.001>
- Hegarty, J. D., Baldessarini, R. J., Tohen, M., Wateraux, C., & Oepen, G. (1994). One hundred years of schizophrenia: A meta-analysis of the outcome literature. *The American Journal of Psychiatry*, 151(10), 1409-1416. <https://doi.org/10.1176/ajp.151.10.1409>
- Heinrichs, R. W., & Zakzanis, K. K. (1998). Neurocognitive deficit in schizophrenia: A quantitative review of the evidence. *Neuropsychology*, 12(3), 426-445.
<https://doi.org/10.1037//0894-4105.12.3.426>

- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family*, 50, 93–98.
- Higgins, A., Barker, P., & Begley, C. M. (2008). 'Veiling sexualities': a grounded theory of mental health nurses responses to issues of sexuality. *Journal of advanced nursing*, 62(3), 307–317. <https://doi.org/10.1111/j.1365-2648.2007.04586.x>
- Hollis, C. (2000). Adult outcomes of child-and adolescent-onset schizophrenia: Diagnostic stability and predictive validity. *The American Journal of Psychiatry*, 157(10), 1652-1659. <https://doi.org/10.1176/appi.ajp.157.10.1652>
- Horan, W. P., & Green, M. F. (2019). Treatment of social cognition in schizophrenia: Current status and future directions. *Schizophrenia Research*, 203, 3-11. <https://doi.org/10.1016/j.schres.2017.07.013>
- Huckle, C., Lemmel, F., & Johnson, S. (2021). Experiences of friendships of young people with first-episode psychosis: A qualitative study. *PLoS ONE*, 16(7). <https://doi.org/10.1371/journal.pone.0255469>
- Huggins, A., Barker, P., & Begley, C. M. (2008). 'Veiling sexualities': A grounded theory of mental health nurses' responses to issues of sexuality. *Journal of Advanced Nursing*, 62(3), 307–317. <https://doi.org/10.1111/j.1365-2648.2007.04586.x>
- Huguelet, P., Mohr, S., Miserez, C., Castellano, P., Lutz, C., Boucherie, M., Yaron, M., Perroud, N., & Bianchi Demicheli, F. (2015). An exploration of sexual desire and sexual Activities of Women with Psychosis. *Community Mental Health Journal*, 51(2), 229–238. <https://doi.org/10.1007/s10597-014-9768-x>

- Inchausti, F., García-Poveda, N. V., Ballesteros-Prados, A., Ortuño-Sierra, J., Sánchez-Reales, S., Prado-Abril, J., Aldaz-Armendáriz, J. A., Mole, J., Dimaggio, G., Ottavi, P., & Fonseca-Pedrero, E. (2018). The effects of metacognition-oriented social skills training on psychosocial outcome in schizophrenia-spectrum disorders: A randomized controlled trial. *Schizophrenia Bulletin*, *44*(6), 1235–1244. <https://doi.org/10.1093/schbul/sbx168>
- International Planned Parenthood Federation. (2008). *Sexual rights: An IPPF declaration*. <https://www.ippf.org/resource/sexual-rights-ippf-declaration>
- Iverson, G. L., & Lam, R. W. (2013). Rapid screening for perceived cognitive impairment in major depressive disorder. *Annals of Clinical Psychiatry*, *25*(2), 135-140.
- Jaracz, K., Górna, K., & Rybakowski, F. (2007). Social functioning in first-episode schizophrenia. A prospective follow-up study. *Archives of Psychiatry and Psychotherapy*.
- Joel, S., Eastwick, P. W., Allison, C. J., Arriaga, X. B., Baker, Z. G., Bar-Kalifa, E., Bergeron, S., Birnbaum, G. E., Brock, R. L., Brumbaugh, C. C., Carmichael, C. L., Chen, S., Clarke, J., Cobb, R. J., Coolson, M. K., Davis, J., de Jong, D. C., Debrot, A., DeHaas, E. C., ... Wolf, S. (2020). Machine learning uncovers the most robust self-report predictors of relationship quality across 43 longitudinal couples studies. *Proceedings of the National Academy of Sciences*, *117*(32). <https://doi.org/10.1073/pnas.1917036117>
- Joiner, T. E., Robison, M., Robertson, L., Keel, P., Daurio, A. M., Mehra, L. M., & Millender, E. (2022). Ethnoracial status, intersectionality with gender, and psychotherapy utilization, retention, and outcomes. *Journal of Consulting and Clinical Psychology*, *90*(10), 837–849. <https://doi.org/10.1037/ccp0000726>

- Jones, K. G., Mitchell, K. R., Ploubidis, G. B., Wellings, K., Datta, J., Johnson, A. M., & Mercer, C. H. (2015). The Natsal-SF Measure of Sexual Function: Comparison of three scoring methods. *Journal of Sex Research*, 52(6), 640–646.
<https://doi.org/10.1080/00224499.2014.985813>
- Kalin, M., Kaplan, S., Gould, F., Pinkham, A. E., Penn, D. L., & Harvey, P. D. (2015). Social cognition, social competence, negative symptoms and social outcomes: Inter-relationships in people with schizophrenia. *Journal of Psychiatric Research*, 68, 254-260.
<https://doi.org/10.1016/j.jpsychires.2015.07.008>
- Kelly, D. L., & Conley, R. R. (2004). Sexuality and schizophrenia: A review. *Schizophrenia Bulletin*, 30(4), 767–779. <https://doi.org/10.1093/oxfordjournals.schbul.a007130>
- Kerpelman, J. L., Pittman, J. F., Saint-Eloi Cadely, H., Tuggle, F. J., Harrell-Levy, M. K., & Adler-Baeder, F. M. (2012). Identity and intimacy during adolescence: Connections among identity styles, romantic attachment and identity commitment. *Journal of Adolescence*, 35(6), 1427–1439. <https://doi.org/10.1016/j.adolescence.2012.03.008>
- Kettle, J. W. L., O'Brien-Simpson, L., & Allen, N. B. (2008). Impaired theory of mind in first-episode schizophrenia: Comparison with community, university and depressed controls. *Schizophrenia Research*, 99(1), 96–102. <https://doi.org/10.1016/j.schres.2007.11.011>
- Kirkpatrick, B., Strauss, G. P., Nguyen, L., Fischer, B. A., Daniel, D. G., Cienfuegos, A., & Marder, S. R. (2011). The Brief Negative Symptom Scale: Psychometric properties. *Schizophrenia Bulletin*, 37(2), 300–305. <https://doi.org/10.1093/schbul/sbq059>

- Kismödi, E., Corona, E., Maticka-Tyndale, E., Rubio-Aurioles, E., & Coleman, E. (2017). Sexual rights as human rights: A Guide for the WAS declaration of sexual rights. *International Journal of Sexual Health, 29*(sup1), 1–92. <https://doi.org/10.1080/19317611.2017.1353865>
- Kivlighan, D. M., Hooley, I. W., Bruno, M. G., Ethington, L. L., Keeton, P. M., & Schreier, B. A. (2019). Examining therapist effects in relation to clients' race-ethnicity and gender: An intersectionality approach. *Journal of Counseling Psychology, 66*(1), 122–129. <https://doi.org/10.1037/cou0000316>
- Kopeykina, I., Kim, H.-J., Khatun, T., Boland, J., Haeri, S., Cohen, L. J., & Galynker, I. I. (2016). Hypersexuality and couple relationships in bipolar disorder: A review. *Journal of Affective Disorders, 195*, 1–14. <https://doi.org/10.1016/j.jad.2016.01.035>
- Koukounas, E., & Letch, N. M. (2001). Psychological correlates of perception of sexual intent in women. *The Journal of Social Psychology, 141*(4), 443–456. <https://doi.org/10.1080/00224540109600564>
- Kowalski, R. M. (1993). Inferring sexual interest from behavioral cues: Effects of gender and sexually relevant attitudes. *Sex Roles, 29*(1–2), 13–36. <https://doi.org/10.1007/BF00289994>
- Kurtz, M. M., & Mueser, K. T. (2008). A meta-analysis of controlled research on social skills training for schizophrenia. *Journal of Consulting and Clinical Psychology, 76*(3), 491–504. <https://doi.org/10.1037/0022-006X.76.3.491>
- Laes, J. R., & Sponheim, S. R. (2006). Does cognition predict community function only in

- schizophrenia?: A study of schizophrenia patients, bipolar affective disorder patients, and community control subjects. *Schizophrenia Research*, 84(1), 121-131.
<https://doi.org/10.1016/j.schres.2005.11.023>
- Lam, M. M. L., Pearson, V., Ng, R. M. K., Chiu, C. P. Y., Law, C. W., & Chen, E. Y. H. (2011). What does recovery from psychosis mean? Perceptions of young first-episode patients. *International Journal of Social Psychiatry*, 57(6), 580–587.
<https://doi.org/10.1177/0020764010374418>
- Lasalvia, A., Zoppei, S., Bonetto, C., Tosato, S., Zanatta, G., Cristofalo, D., De Santi, K., Bertani, M., Bissoli, S., Lazzarotto, L., Ceccato, E., Riolo, R., Marangon, V., Cremonese, C., Boggian, I., Tansella, M., & Ruggeri, M. (2014). The role of experienced and anticipated discrimination in the lives of people with first-episode psychosis. *Psychiatric Services*, 65(8), 1034–1040. <https://doi.org/10.1176/appi.ps.201300291>
- Laxhman, N., Greenberg, L., & Priebe, S. (2017). Satisfaction with sex life among patients with schizophrenia. *Schizophrenia Research*, 190, 63–67.
<https://doi.org/10.1016/j.schres.2017.03.005>
- Lee, T. Y., Hong, S. B., Shin, N. Y., & Kwon, J. S. (2015). Social cognitive functioning in prodromal psychosis: A meta-analysis. *Schizophrenia Research*, 164(1-3), 28-34.
- Leucht, S., Kane, J. M., Kissling, W., Hamann, J., Etschel, E., & Engel, R. (2005). Clinical implications of Brief Psychiatric Rating Scale scores. *The British Journal of Psychiatry: The Journal of Mental Science*, 187, 366–371. <https://doi.org/10.1192/bjp.187.4.366>
- Lewis, J., & Scott, E. (1997). The sexual education needs of those disabled by mental illness.

- Psychiatric Rehabilitation Journal*, 21(2), 164–167. <https://doi.org/10.1037/h0095323>
- Li, T., & Chan, D. K.-S. (2012). How anxious and avoidant attachment affect romantic relationship quality differently: A meta-analytic review. *European Journal of Social Psychology*, 42(4), 406–419. <https://doi.org/10.1002/ejsp.1842>
- Lim, M. H., Gleeson, J. F., Alvarez-Jimenez, M. & Penn, D. L. (2018). Loneliness in psychosis: a systematic review. *Social Psychiatry and Psychiatric Epidemiology*, 53(3), 221– 238. <https://doi.org/10.1007/s00127-018-1482-5>
- Lin, C.-H., Huang, C.-L., Chang, Y.-C., Chen, P.-W., Lin, C.-Y., Tsai, G. E., & Lane, H.-Y. (2013). Clinical symptoms, mainly negative symptoms, mediate the influence of neurocognition and social cognition on functional outcome of schizophrenia. *Schizophrenia Research*, 146(1), 231–237. <https://doi.org/10.1016/j.schres.2013.02.009>
- Lingdren, K. P., Parkhill, M. R., George, W. H., & Hendershot, C. S. (2008). Gender differences in perceptions of sexual intent: A qualitative review and integration. *Psychology of Women Quarterly*, 32(4), 423-439. <https://doi.org/10.1111/j.1471-6402.2008.00456.x>
- Liu, J. J., Norman, R. M. G., Manchanda, R., & De Luca, V. (2013). Admixture analysis of age at onset in schizophrenia: Evidence of three subgroups in a first-episode sample. *General Hospital Psychiatry*, 35(6), 664–667. <https://doi.org/10.1016/j.genhosppsy.2013.07.002>
- Loranger A. W. (1984). Sex difference in age at onset of schizophrenia. *Archives of general psychiatry*, 41(2), 157–161. <https://doi.org/10.1001/archpsyc.1984.01790130053007>

- Lysaker, P. H. (2012). The processes of recovery from schizophrenia: The emergent role of integrative psychotherapy, recent developments, and new directions. *Journal of Psychotherapy Integration, 22*(4), 287–297. <https://doi.org/10.1037/a0029581>
- Ma, M., Shi, Z., Chen, Y., & Ma, X. (2023). Recovery journey of people with a lived experience of schizophrenia: A qualitative study of experiences. *BMC Psychiatry, 23*(1), 468. <https://doi.org/10.1186/s12888-023-04862-1>
- Malla, A. K., Norman, R. M., & Joober, R. (2005). First-episode psychosis, early intervention, and outcome: What have we learned? *The Canadian Journal of Psychiatry, 50*(14), 881–891. <https://doi.org/10.1177/070674370505001402>
- Malone, R., & Gervais, L. (2021). Working with Indigenous Peoples in Canada: The Legacies of Colonization on Sexuality. In *An Intersectional Approach to Sex Therapy*. Routledge.
- Malone, G. P., Pillow, D. R., & Osman, A. (2012). The general belongingness scale (GBS): Assessing achieved belongingness. *Personality and individual differences, 52*(3), 311–316. <https://doi.org/10.1016/j.paid.2011.10.027>
- Malterud, K., Siersma, V. D., & Guassora, A. D. (2015). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research, 26*(13), 1753–1760. <https://doi.org/10.1177/1049732315617444>
- Marques, T. R., Smith, S., Bonaccorso, S., Gaughran, F., Kolliakou, A., Dazzan, P., Mondelli, V., Taylor, H., DiForti, M., McGuire, P. K., Murray, R. M., & Howes, O. D. (2012). Sexual dysfunction in people with prodromal or first-episode psychosis. *British Journal of Psychiatry, 201*(2), 131–136. <https://doi.org/10.1192/bjp.bp.111.101220>

- Marshall, M., & Rathbone, J. (2011). Early intervention for psychosis. *Cochrane Database of Systematic Reviews*, (6). <https://doi.org/10.1002/14651858.CD004718.pub3>
- McCann, E. (2010a). Investigating mental health service user views regarding sexual and relationship issues. *Journal of Psychiatric and Mental Health Nursing*, 17(3), 251–259. <https://doi.org/10.1111/j.1365-2850.2009.01509.x>
- McCann, E. (2010b). The sexual and relationship needs of people who experience psychosis: Quantitative findings of a UK study. *Journal of Psychiatric and Mental Health Nursing*, 17(4), 295–303. <https://doi.org/10.1111/j.1365-2850.2009.01522.x>
- McCann, E., Donohue, G., de Jager, J., Nugter, A., Stewart, J., & Eustace-Cook, J. (2019). Sexuality and intimacy among people with serious mental illness: A qualitative systematic review. *JBIS Evidence Synthesis*, 17(1), 74–125. <https://doi.org/10.11124/JBISRIR-2017-003824>
- McCann, E., Marsh, L., & Brown, M. (2019). People with intellectual disabilities, relationship and sex education programmes: A systematic review. *Health Education Journal*, 78(8), 885-900. <https://doi.org/10.1177/0017896919856047>
- McClure, M. M., Bowie, C. R., Patterson, T. L., Heaton, R. K., Weaver, C., Anderson, H., & Harvey, P. D. (2007). Correlations of functional capacity and neuropsychological performance in older patients with schizophrenia: Evidence for specificity of relationships?. *Schizophrenia Research*, 89(1-3), 330-338. <https://doi.org/10.1016/j.schres.2006.07.024>

- McDonald, S., Flanagan, S., Rollins, J., & Kinch, J. (2003). TASIT: A new clinical tool for assessing social perception after traumatic brain injury. *The Journal of Head Trauma Rehabilitation, 18*(3), 219–238. <https://doi.org/10.1097/00001199-200305000-00001>
- McGorry, P. D., Killackey, E., & Yung, A. (2008). Early intervention in psychosis: concepts, evidence and future directions. *World psychiatry, 7*(3), 148. <https://doi.org/10.1002/j.2051-5545.2008.tb00182.x>
- McGuire, N., Melville, C., Karadzhev, D., & Gumley, A. (2020). “She is more about my illness than me”: A qualitative study exploring social support in individuals with experiences of psychosis. *Psychosis, 12*(2), 128–138. <https://doi.org/10.1080/17522439.2019.1699943>
- McGurk, S. R., Mueser, K. T., Feldman, Karin, Wolfe, Rosemarie, & Pascaris, Alysia. (2007). Cognitive training for supported employment: 2-3 year outcomes of a randomized controlled trial. *American Journal of Psychiatry, 164*(3), 437–441. <https://doi.org/10.1176/ajp.2007.164.3.437>
- McGurk, S. R., Twamley, E. W., Sitzer, D. I., McHugo, G. J., & Mueser, K. T. (2007). A meta-analysis of cognitive remediation in schizophrenia. *American Journal of Psychiatry, 164*(12), 1791-1802. <https://doi.org/10.1176/appi.ajp.2007.07060906>
- McInnis, M. (2018). *Life after prostate cancer: An investigation of patients' health-related quality of life, sexual outcomes, mental health, social support, and healthcare experiences*. [Master's thesis, Queen's University]. QSpace.
- McMillan, E., Sanchez, A. A., Bhaduri, A., Pehlivan, N., Monson, K., Badcock, P., Thompson, K., Killackey, E., Chanen, A., & O'Donoghue, B. (2017). Sexual functioning and

- experiences in young people affected by mental health disorders. *Psychiatry Research*, 253, 249–255. <https://doi.org/10.1016/j.psychres.2017.04.009>
- McMillian, J. H. & Schumacher, S. (2010). *Research in education: Evidence-based inquiry* (7th ed.). Pearson.
- Mikulincer, M., & Shaver, P. R. (2016). *Attachment in Adulthood: Second Edition: Structure, Dynamics, and Change*. (2016). Guilford Press.
- Millman, Z. B., Gold, J. M., Mittal, V. A., & Schiffman, J. (2019). The critical need for help-seeking controls in clinical high-risk research. *Clinical Psychological Science*, 7(6), 1171-1189. <https://doi.org/10.1177/2167702619855660>
- Mitchell, K. R., Ploubidis, G. B., Datta, J., & Wellings, K. (2012). The Natsal-SF: a validated measure of sexual function for use in community surveys. *European Journal of Epidemiology*, 27(6), 409–418. <https://doi.org/10.1007/s10654-012-9697-3>
- Mitra, S., Mahintamani, T., Kavoor, A. R., & Nizamie, S. H. (2016). Negative symptoms in schizophrenia. *Industrial Psychiatry Journal*, 25(2), 135-144. https://doi.org/10.4103/ipj.ipj_30_15
- Mizock, L., La Mar, K., DeMartini, L., & Stringer, J. (2019). Relational resilience: Intimate and romantic relationship experiences of women with serious mental illness - Corrigendum. *Journal of Relationships Research*, 10, e8. <https://doi.org/10.1017/jrr.2019.4>
- Mollen, D., & Abbott, D. M. (2022). Sexuality as a competency: Advancing training to serve the public. *Training and Education in Professional Psychology*, 16(3), 280–286. <https://doi.org/10.1037/tep0000378>

Muehlenhard, C. L., Koralewski, M. A., Andrews, S. L., & Burdick, C. A. (1986). Verbal and nonverbal cues that convey interest in dating: Two studies. *Behavior Therapy, 17*(4), 404–419. [https://doi.org/10.1016/S0005-7894\(86\)80071-5](https://doi.org/10.1016/S0005-7894(86)80071-5)

Mulligan, A., & Lavender, T. (2010). An investigation into the relationship between attachment, gender and recovery from psychosis in a stable community-based sample. *Clinical Psychology & Psychotherapy, 17*(4), 269–284. <https://doi.org/10.1002/cpp.655>

Neil, S. T., Kilbride, M., Pitt, L., Nothard, S., Welford, M., Sellwood, W., & Morrison, A. P. (2009). The questionnaire about the process of recovery (QPR): A measurement tool developed in collaboration with service users. *Psychosis, 1*(2), 145-155. <https://doi.org/10.1080/17522430902913450>

Nickerson, A. B., & Nagle, R. J. (2005). Parent and peer attachment in late childhood and early adolescence. *The Journal of Early Adolescence, 25*(2), 223–249. <https://doi.org/10.1177/0272431604274174>

Nnaji, R. N., & Friedman, T. (2008). Sexual dysfunction and schizophrenia: Psychiatrists' attitudes and training needs. *Psychiatric Bulletin, 32*(6), 208–210. <https://doi.org/10.1192/pb.bp.107.016162>

Norman, R. M. G., Malla, A. K., Manchanda, R., Harricharan, R., Takhar, J., & Northcott, S. (2005). Social support and three-year symptom and admission outcomes for first episode psychosis. *Schizophrenia Research, 80*(2), 227–234. <https://doi.org/10.1016/j.schres.2005.05.006>

O'Cathain, A., Murphy, E., & Nicholl, J. (2007). Why, and how, mixed methods research is

- undertaken in health services research in England: a mixed methods study. *BMC Health Services Research*, 7, 1–11. <https://doi.org/10.1186/1472-6963-7-85>
- O’Day, B., & Killeen, M. (2002). Research on the lives of persons with disabilities: The emerging importance of qualitative research methodologies. *Journal of Disability Policy Studies*, 13(1), 9–15. <https://doi.org/10.1177/1044207302013001020>
- Ogden, L. P. (2014). Interpersonal relationship narratives of older adults with schizophrenia-spectrum diagnoses. *American Journal of Orthopsychiatry*, 84(6), 674–684. <https://doi.org/10.1037/ort0000035>
- Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology*, 8(5), 375-387. <https://doi.org/10.1080/13645570500402447>
- Östman, M., & Björkman, A. C. (2013). Schizophrenia and relationships: the effect of mental illness on sexuality. *Clinical Schizophrenia & Related Psychoses*, 7(1), 20-24.
- Overall, J. E., Hollister, L. E., & Pichot, P. (1967). Major psychiatric disorders: A four dimensional model. *Archives of General Psychiatry*, 16(2), 146–151. <https://doi.org/10.1001/archpsyc.1967.01730200014003>
- Owen, M., O’Donovan, M., Thapar, A., & Craddock, N. (2011). Neurodevelopmental hypothesis of schizophrenia. *British Journal of Psychiatry*, 198(3), 173-175. <https://doi.org/10.1192/bjp.bp.110.084384>

- Padgett, D. K., Henwood, B., Abrams, C., & Drake, R. E. (2008). Social relationships among persons who have experienced serious mental illness, substance abuse, and homelessness: Implications for recovery. *The American Journal of Orthopsychiatry*, 78(3), 333–339. <https://doi.org/10.1037/a0014155>
- Penn, D. L., Sanna, L. J., & Roberts, D. L. (2008). Social cognition in schizophrenia: An overview. *Schizophrenia Bulletin*, 34(3), 408–411. <https://doi.org/10.1093/schbul/sbn014>
- Pijnenborg, G. H. M., Withaar, F. K., Evans, J. J., Bosch, R. J. V. D., Timmerman, M. E., & Brouwer, W. H. (2009). The predictive value of measures of social cognition for community functioning in schizophrenia: Implications for neuropsychological assessment. *Journal of the International Neuropsychological Society*, 15(2), 239–247. <https://doi.org/10.1017/S1355617709090341>
- Ponce-Correa, F., Caqueo-Úrizar, A., Berrios, R., & Escobar-Soler, C. (2023). Defining recovery in schizophrenia: A review of outcome studies. *Psychiatry Research*, 322, 115134. <https://doi.org/10.1016/j.psychres.2023.115134>
- Purdon, S. E. (2005). *The Screen for Cognitive Impairment in Psychiatry: Administration and psychometric properties*. Edmonton, Alberta: PNL Inc.
- Quinn, C., Happell, B., & Browne, G. (2011a). Talking or avoiding? Mental health nurses' views about discussing sexual health with consumers. *International Journal of Mental Health Nursing*, 20(1), 21–28. <https://doi.org/10.1111/j.1447-0349.2010.00705.x>
- Quinn, C., Happell, B., & Browne, G. (2011b). Sexuality and consumers of mental health services: The impact of gender and boundary issues. *Issues in Mental Health Nursing*, 32(3), 170–176. <https://doi.org/10.3109/01612840.2010.531518>

- Raja, M., & Azzoni, A. (2003). Sexual behavior and sexual problems among patients with severe chronic psychoses. *European Psychiatry, 18*(2), 70–76. [https://doi.org/10.1016/S0924-9338\(03\)00009-9](https://doi.org/10.1016/S0924-9338(03)00009-9)
- Read, J., & Dillon, J. (Eds.). (2013). *Models of madness: Psychological, social, and biological approaches to psychosis* (2nd ed.). Routledge.
- Reddy, M. K., Fleming, M. T., Howells, N. L., Rabenhorst, M. M., Casselman, R., & Rosenbaum, A. (2006). Effects of Method on Participants and Disclosure Rates in Research on Sensitive Topics. *Violence and Victims, 21*(4), 499–506. <https://doi.org/10.1891/vivi.21.4.499>
- Redmond, C., Larkin, M., & Harrop, C. (2010). The personal meaning of romantic relationships for young people with psychosis. *Clinical Child Psychology and Psychiatry, 15*(2), 151–170. <https://doi.org/10.1177/1359104509341447>
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.), *Handbook of personal relationships: Theory, research and interventions* (pp. 367–389). John Wiley & Sons.
- Reissing, E. D., & Giulio, G. D. (2010). Practicing clinical psychologists' provision of sexual health care services. *Professional Psychology: Research and Practice, 41*(1), 57–63. <https://doi.org/10.1037/a0017023>
- Revell, E. R., Neill, J. C., Harte, M., Khan, Z., & Drake, R. J. (2015). A systematic review and meta-analysis of cognitive remediation in early schizophrenia. *Schizophrenia Research, 168*(1-2), 213-222. <https://doi.org/10.1016/j.schres.2015.08.017>

- Rice, T. M., Jenkins, A. I. C., Smith, S. M., Alexander, C., & McGregor, C. M. (2023). Racial discrimination and romantic relationship dynamics among Black Americans: A systematic review. *Journal of Family Theory & Review*, 15(4), 793–821.
<https://doi.org/10.1111/jftr.12535>
- Ricker, J. H., & Axelrod, B. N. (1994). Analysis of an oral paradigm for the Trail Making Test. *Assessment*, 1(1), 47–52. <https://doi.org/10.1177/1073191194001001007>
- Ridgway, P. (2001). Restorying psychiatric disability: Learning from first person recovery narratives. *Psychiatric Rehabilitation Journal*, 24(4), 335–343.
<https://doi.org/10.1037/h0095071>
- Ritsher, J. B., Otilingam, P. G., & Grajales, M. (2003). Internalized stigma of mental illness: Psychometric properties of a new measure. *Psychiatry Research*, 121(1), 31–49.
<https://doi.org/10.1016/j.psychres.2003.08.008>
- Robertson, B. R., Prestia, D., Twamley, E. W., Patterson, T. L., Bowie, C. R., & Harvey, P. D. (2014). Social competence versus negative symptoms as predictors of real world social functioning in schizophrenia. *Schizophrenia Research*, 160(1), 136–141.
<https://doi.org/10.1016/j.schres.2014.10.037>
- Robinson, D., Woerner, M. G., Alvir, J. M. J., Bilder, R., Goldman, R., Geisler, S., Koreen, A., Sheitman, B., Chakos, M., Mayerhoff, D., & Lieberman, J. A. (1999). Predictors of relapse following response from a first episode of schizophrenia or schizoaffective disorder. *Archives of General Psychiatry*. 56(3), 241–247.
<https://doi.org/10.1001/archpsyc.56.3.241>

- Roloff, M. E., & Miller, C. W. (2006). Social cognition approaches to understanding interpersonal conflict and communication. In *The SAGE Handbook of Conflict Communication: Integrating Theory, Research, and Practice* (pp. 97–128). SAGE Publications Inc. <https://doi.org/10.4135/9781412976176.n4>
- Roncione, R., Falloon, I. R. H., Mazza, M., De Risio, A., Pollice, R., Necozone, S., Morosini, P., & Casacchia, M. (2002). Is theory of mind in schizophrenia more strongly associated with clinical and social functioning than with neurocognitive deficits? *Psychopathology*, 35(5), 280–288. <https://doi.org/10.1159/000067062>
- Roy, L., Rousseau, J., Fortier, P., & Mottard, J. P. (2013). Transitions to adulthood in first episode psychosis: A comparative study. *Early Intervention in Psychiatry*, 7(2), 162–169. <https://doi.org/10.1111/j.1751-7893.2012.00375.x>
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, 5(4), 357-387. [10.1111/j.1475-6811.1998.tb00177.x](https://doi.org/10.1111/j.1475-6811.1998.tb00177.x)
- Rus-Calafell, M., Gutiérrez-Maldonado, J., Ribas-Sabaté, J., & Lemos-Giráldez, S. (2014). Social skills training for people with schizophrenia: What do we train? *Behavioral Psychology*, 22(3), 461–477.
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20–40. https://doi.org/10.1207/s15327752jpa6601_2

- Rye, B. J., & Meaney, G. J. (2007). The pursuit of sexual pleasure. *Sexuality & Culture, 11*, 28-51. <https://doi.org/10.1007/BF02853934>
- Sabry, W., El Sayed El Taweel, M., & Zyada, F. (2017). Sexual dysfunctions in drug-naive male patients with first-episode schizophrenia: A case–control study. *Middle East Current Psychiatry, 24*(4), 168–173. <https://doi.org/10.1097/01.XME.0000520063.00808.3d>
- Saha, S., Chant, D., & McGrath, J. (2007). A systematic review of mortality in schizophrenia: Is the differential mortality gap worsening over time? *Archives of General Psychiatry, 64*(10), 1123-1131. <https://doi.org/10.1001/archpsyc.64.10.1123>
- Salokangas, R. K. R., Honkonen, T., Stengård, E., & Koivisto, A. M. (2001). To be or not to be married—that is the question of quality of life in men with schizophrenia. *Social Psychiatry and Psychiatric Epidemiology, 36*, 381-390. <https://doi.org/10.1007/s001270170028>
- Santos-Iglesias, P., Bergeron, S., Brotto, L. A., Rosen, N. O., & Walker, L. M. (2020). Preliminary validation of the Sexual Distress Scale-Short Form: Applications to women, men, and prostate cancer survivors. *Journal of Sex & Marital Therapy, 46*(6), 542–563. <https://doi.org/10.1080/0092623X.2020.1761494>
- Sarısoy, G., Kaçar, Ö. F., Pazvantoğlu, O., Korkmaz, I. Z., Öztürk, A., Akkaya, D., Yılmaz, S., Böke, Ö., & Sahin, A. R. (2013). Internalized stigma and intimate relations in bipolar and schizophrenic patients: A comparative study. *Comprehensive Psychiatry, 54*(6), 665–672. <https://doi.org/10.1016/j.comppsy.2013.02.002>

- Savla, G. N., Vella, L., Armstrong, C. C., Penn, D. L., & Twamley, E. W. (2012). Deficits in domains of social cognition in schizophrenia: A meta-analysis of the empirical evidence. *Schizophrenia Bulletin*, 39(5), 979–992. <https://doi.org/10.1093/schbul/sbs080>
- Schulz, S. C., Findling, R. L., Wise, A., Friedman, L., & Kenny, J. (1998). Child and adolescent schizophrenia. *Psychiatric Clinics of North America*, 21(1), 43–56. [https://doi.org/10.1016/S0193-953X\(05\)70360-9](https://doi.org/10.1016/S0193-953X(05)70360-9)
- Scott, M. E., Steward-Streng, N. R., Manlove, J., Schelar, E., & Cui, C. (2011). Characteristics of young adult sexual relationships: Diverse, sometimes violent, often loving. *Child Trends Research Brief*, 1-8. <https://doi.org/10.1037/e506862011-001>
- Segalovich, J., Doron, A., Behrbalk, P., Kurs, R., & Romem, P. (2013). Internalization of stigma and self-esteem as it affects the capacity for intimacy among patients with schizophrenia. *Archives of Psychiatric Nursing*, 27(5), 231–234. <https://doi.org/10.1016/j.apnu.2013.05.002>
- Sergi, M. J., Rassovsky, Y., Widmark, C., Reist, C., Erhart, S., Braff, D. L., Marder, S. R., & Green, M. F. (2007). Social cognition in schizophrenia: Relationships with neurocognition and negative symptoms. *Schizophrenia Research*, 90(1), 316–324. <https://doi.org/10.1016/j.schres.2006.09.028>
- Shafer A. (2005). Meta-analysis of the brief psychiatric rating scale factor structure. *Psychological assessment*, 17(3), 324–335. <https://doi.org/10.1037/1040-3590.17.3.324>
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview

- (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *The Journal of Clinical Psychiatry*, 59(Suppl 20), 22–33.
- Shindel, A. W., Ando, K. A., Nelson, C. J., Breyer, B. N., Lue, T. F., & Smith, J. F. (2010). Medical student sexuality: How sexual experience and sexuality training impact U.S. and Canadian medical students' comfort in dealing with patients' sexuality in clinical practice. *Academic Medicine*, 85(8), 1321.
<https://doi.org/10.1097/ACM.0b013e3181e6c4a0>
- Sibitz, I., Amering, M., Unger, A., Seyringer, M. E., Bachmann, A., Schrank, B., Benesch, T., Schulze, B., & Woppmann, A. (2011). The impact of the social network, stigma and empowerment on the quality of life in patients with schizophrenia. *European Psychiatry*, 26(1), 28–33. <https://doi.org/10.1016/j.eurpsy.2010.08.010>
- Sigal, J., Gibbs, M., Adams, B., & Derfler, R. (1988). The effect of romantic and nonromantic films on perception of female friendly and seductive behavior. *Sex Roles*, 19(9–10), 545–554. <https://doi.org/10.1007/BF00289734>
- Sitko, K., Bewick, B. M., Owens, D., & Masterson, C. (2020). Meta-analysis and meta-regression of cognitive behavioral therapy for psychosis (CBTp) across time: The effectiveness of CBTp has improved for delusions. *Schizophrenia Bulletin Open*, 1(1), sgaa023. [doi:10.1093/schizbullopen/sgaa023](https://doi.org/10.1093/schizbullopen/sgaa023)
- Smart, E. L., Berry, K., Palmier-Claus, J., & Brown, L. J. E. (2021). Aging well with psychosis. *Journal of aging studies*, 57, 100925. <https://doi.org/10.1016/j.jaging.2021.100925>

- Snell, W. E., Jr. (1995). *The Extended Multidimensional Sexuality Questionnaire: Measuring psychological tendencies associated with human sexuality*. Paper presented at the annual meeting of the Southwestern Psychological Association, Houston, TX.
- Southall, D. J. L., & Combes, H. A. (2020). Clinical psychologists' views about talking to people with psychosis about sexuality and intimacy: A Q-methodological study. *Sexual and Relationship Therapy, 37*(4), 512-536. <https://doi.org/10.1080/14681994.2020.1749255>
- Spielmann, S. S., MacDonald, G., Maxwell, J. A., Joel, S., Peragine, D., Muise, A., & Impett, E. A. (2013). Settling for less out of fear of being single. *Journal of Personality and Social Psychology, 105*(6), 1049–1073. <https://doi.org/10.1037/a0034628>
- Sprong, M., Schothorst, P., Vos, E., Hox, J., & Engeland, H. V. (2007). Theory of mind in schizophrenia: Meta-analysis. *The British Journal of Psychiatry, 191*(1), 5–13. <https://doi.org/10.1192/bjp.bp.107.035899>
- Stouten, L. H., Veling, W., Laan, W., Van der Helm, M., & Van der Gaag, M. (2014). Psychotic symptoms, cognition and affect as predictors of psychosocial problems and functional change in first-episode psychosis. *Schizophrenia research, 158*(1-3), 113-119. <https://doi.org/10.1016/j.schres.2014.06.023>
- Stutterheim, S. E., & Ratcliffe, S. E. (2021). Understanding and addressing stigma through qualitative research: Four reasons why we need qualitative studies. *Stigma and Health, 6*(1), 8–19. <https://doi.org/10.1037/sah0000283>
- Sue, D. W., & Sue, D. (1999). *Counseling the culturally different: Theory and practice* (3rd ed.). John Wiley & Sons Inc.

- Świtaj, P., Anczewska, M., Chrostek, A., Sabariego, C., Cieza, A., Bickenbach, J., & Chatterji, S. (2012). Disability and schizophrenia: A systematic review of experienced psychosocial difficulties. *BMC Psychiatry, 12*, 193. <https://doi.org/10.1186/1471-244X-12-193>
- Świtaj, P., Grygiel, P., Anczewska, M., & Wciórka, J. (2015). Experiences of discrimination and the feelings of loneliness in people with psychotic disorders: The mediating effects of self-esteem and support seeking. *Comprehensive Psychiatry, 59*, 73–79. <https://doi.org/10.1016/j.comppsy.2015.02.016>
- Tillman, K. H., Brewster, K. L., & Holway, G. V. (2019). Sexual and romantic relationships in young adulthood. *Annual Review of Sociology, 45*, 133–153. <https://doi.org/10.1146/annurev-soc-073018-022625>
- Tisdale, L., & Sheldon, P. (2018). Female flirting cues and male perception. *American Communication Journal, 19*(2), 1-11.
- Tolman, D. L., Hirschman, C., & Impett, E. A. (2005). There is more to the story: The place of qualitative research on female adolescent sexuality in policy making. *Sexuality Research & Social Policy, 2*, 4-17. <https://doi.org/10.1525/srsp.2005.2.4.4>
- Torrey, E. F., & Yolken, R. H. (2010). Psychiatric genocide: Nazi attempts to eradicate schizophrenia. *Schizophrenia bulletin, 36*(1), 26-32. <https://doi.org/10.1093/schbul/sbp097>
- Tuncer, M., & Oskay, Ü. Y. (2022). Sexual counseling with the PLISSIT model: A systematic review. *Journal of Sex & Marital Therapy, 48*(3), 309-318. <https://doi.org/10.1080/0092623X.2021.1998270>

- Turner, D. T., McGlanaghy, E., Cuijpers, P., Van Der Gaag, M., Karyotaki, E., & MacBeth, A. (2018). A meta-analysis of social skills training and related interventions for psychosis. *Schizophrenia Bulletin*, 44(3), 475-491. <https://doi.org/10.1093/schbul/sbx146>
- Twamley, E. W., Jeste, D. V., & Bellack, A. S. (2003). A review of cognitive training in schizophrenia. *Schizophrenia Bulletin*, 29(2), 359–382. <https://doi.org/10.1093/oxfordjournals.schbul.a007011>
- Urry, K., Breakey, G. R., Scholz, B., & Chur-Hansen, A. (2024). Approaches for improving sexuality and sexual health care in mental health settings: A qualitative study exploring clinicians' own perspectives. *International Journal of Mental Health Nursing*, 33(1), 125-133. <https://doi.org/10.1111/inm.13234>
- Urry, K., Chur-Hansen, A., & Khaw, C. (2019). ‘It’s just a peripheral issue’: A qualitative analysis of mental health clinicians’ accounts of (not) addressing sexuality in their work. *International Journal of Mental Health Nursing*, 28(6), 1278–1287. <https://doi.org/10.1111/inm.12633>
- Uzenoff, S. R., Brewer, K. C., Perkins, D. O., Johnson, D. P., Mueser, K. T., & Penn, D. L. (2010). Psychological well-being among individuals with first-episode psychosis. *Early Intervention in Psychiatry*, 4(2), 174–181. <https://doi.org/10.1111/j.1751-7893.2010.00178.x>
- van Anders, S. M. (2015). Beyond sexual orientation: Integrating gender/sex and diverse sexualities via sexual configurations theory. *Archives of Sexual Behavior*, 44(5), 1177–1213. <https://doi.org/10.1007/s10508-015-0490-8>

- van der Schalk, J., Hawk, S. T., Fischer, A. H., & Doosje, B. (2011). Moving faces, looking places: Validation of the Amsterdam Dynamic Facial Expression Set (ADFES). *Emotion, 11*(4), 907-920. <http://dx.doi.org/10.1037/a0023853>
- Vannier, S. A., & O'Sullivan, L. F. (2011). Communicating interest in sex: Verbal and nonverbal initiation of sexual activity in young adults' romantic dating relationships. *Archives of Sexual Behavior, 40*(5), 961–969. <https://doi.org/10.1007/s10508-010-9663-7>
- Van Sant, S. P., Ahmed, A. O., & Buckley, P. F. (2012). Schizophrenia, sexuality, and recovery. *Journal of Ethics in Mental Health, 7*, 1-5.
- van Weeghel, J., van Zelst, C., Boertien, D., & Hasson-Ohayon, I. (2019). Conceptualizations, assessments, and implications of personal recovery in mental illness: A scoping review of systematic reviews and meta-analyses. *Psychiatric Rehabilitation Journal, 42*(2), 169–181. <https://doi.org/10.1037/prj0000356>
- Vaskinn, A., Sundet, K., Simonsen, C., Hellvin, T., Melle, I., & Andreassen, O. A. (2011). Sex differences in neuropsychological performance and social functioning in schizophrenia and bipolar disorder. *Neuropsychology, 25*(4), 499–510. <https://doi.org/10.1037/a0022677>
- Vázquez Morejón, A. J., León Rubio, J. M., & Vázquez-Morejón, R. (2018). Social support and clinical and functional outcome in people with schizophrenia. *International Journal of Social Psychiatry, 64*(5), 488–496. <https://doi.org/10.1177/0020764018778868>
- Verhulst, J., & Schneidman, B. (1981). Schizophrenia and sexual functioning. *Psychiatric Services, 32*(4), 259–262. <https://doi.org/10.1176/ps.32.4.259>

- Virat, M., & Dubreil, C. (2020). Building secure attachment bonds with at-risk, insecure late adolescents and emerging adults: Young people's perceptions of their care workers' caregiving behaviors. *Children and Youth Services Review, 109*, 104749. <https://doi.org/10.1016/j.chilyouth.2020.104749>
- Volman, L., & Landeen, J. (2007). Uncovering the sexual self in people with schizophrenia. *Journal of Psychiatric and Mental Health Nursing, 14*(4), 411–417. <https://doi.org/10.1111/j.1365-2850.2007.01099.x>
- Walton, M. T., Lykins, A. D., & Bhullar, N. (2016). Sexual arousal and sexual activity frequency: Implications for understanding hypersexuality. *Archives of Sexual Behavior, 45*(4), 777–782. <https://doi.org/10.1007/s10508-016-0727-1>
- Wang, J., Lloyd-Evans, B., Marston, L., Mann, F., Ma, R., & Johnson, S. (2020). Loneliness as a predictor of outcomes in mental disorders among people who have experienced a mental health crisis: A 4-month prospective study. *BMC Psychiatry, 20*(1), 249. <https://doi.org/10.1186/s12888-020-02665-2>
- Wasti, S. P., Simkhada, P., van Teijlingen, E. R., Sathian, B., & Banerjee, I. (2022). The growing importance of mixed-methods research in health. *Nepal Journal of Epidemiology, 12*(1), 1175–1178. <https://doi.org/10.3126/nje.v12i1.43633>
- Wathen, C. N., & MacMillan, H. L. (2018). The role of integrated knowledge translation in intervention research. *Prevention Science, 19*, 319-327. <https://doi.org/10.1007/s11121-015-0564-9>

- Watkins, N. K., & Beckmeyer, J. J. (2020). Assessing young adults' beliefs regarding the importance of romantic relationships. *Journal of Family Issues*, *41*(2), 158–182. <https://doi.org/10.1177/0192513X19871080>
- Wexler, B. E., & Bell, M. D. (2005). Cognitive remediation and vocational rehabilitation for schizophrenia. *Schizophrenia Bulletin*, *31*(4), 931–941. <https://doi.org/10.1093/schbul/sbi038>
- White, R., Haddock, G., & Varese, F. (2020). Supporting the intimate relationship needs of service users with psychosis: What are the barriers and facilitators? *Journal of Mental Health*, *29*(3), 314–320. <https://doi.org/10.1080/09638237.2019.1608928>
- White, R., Haddock, G., Campodonico, C., Haarmans, M., & Varese, F. (2021a). The influence of romantic relationships on mental wellbeing for people who experience psychosis: A systematic review. *Clinical Psychology Review*, *86*, 102022. <https://doi.org/10.1016/j.cpr.2021.102022>
- White, R., Haddock, G., Varese, F., & Haarmans, M. (2021b). “Sex isn’t everything”: Views of people with experience of psychosis on intimate relationships and implications for mental health services. *BMC Psychiatry*, *21*(1), 307. <https://doi.org/10.1186/s12888-021-03262-7>
- Windell, D., Norman, R., & Malla, A. K. (2012). The personal meaning of recovery among individuals treated for a first episode of psychosis. *Psychiatric Services*, *63*(6), 548–553. <https://doi.org/10.1176/appi.ps.201100424>
- Woolverton, C. B., Bell, E. K., Moe, A. M., Harrison-Monroe, P., & Breitborde, N. J. (2018). Social cognition and the course of social functioning in first-episode psychosis. *Early Intervention in Psychiatry*, *12*(6), 1151–1156. <https://doi.org/10.1111/eip.12432>

World Health Organization. (2006). *Defining sexual health: Report of a technical consultation on sexual health, 28–31 January 2002, Geneva.*

<https://www.cesas.lu/perch/resources/whodefiningsexualhealth.pdf>

World Health Organization. (2010). *Developing sexual health programmes: A framework for action.* <https://apps.who.int/iris/handle/10665/70501>

Yager, J. A., & Ehmann, T. S. (2006). Untangling social function and social cognition: A review of concepts and measurement. *Psychiatry: Interpersonal and Biological Processes*, 69(1), 47–68. <https://doi.org/10.1521/psyc.2006.69.1.47>

Yung, A. R., & McGorry, P. D. (1996). The prodromal phase of first-episode psychosis: Past and current conceptualizations. *Schizophrenia Bulletin*, 22(2), 353-370. <https://doi.org/10.1093/schbul/22.2.353>

Zhao, J., Diao, J., Li, X., Yang, Y., Yao, Y., Shi, S., Yuan, X., Liu, H., & Zhang, K. (2022). Gender differences in psychiatric symptoms and the social functioning of 610 patients with schizophrenia in urban China: A 10-year follow-up study. *Neuropsychiatric Disease and Treatment*, 18, 1545–1551. <https://doi.org/10.2147/NDT.S373923>

Appendix A:
Qualitative Interview Protocol

Introduction: Thank you for agreeing to take part in this study. In this interview, I am going to ask you about your opinions and experiences regarding romantic relationships, intimacy, and sexuality in the context of any mental health difficulties you have experienced. This can include positive experiences, negative experiences, barriers, or successes that you have faced in these areas of your life, as well as how important or not important they are for you. I have some questions that I will ask, but I want to encourage you to share your thoughts and experiences as they come to mind as well. There are no right or wrong answers.

Questions:

1. What does intimacy mean to you?

Prompts: How do you understand intimacy? How do you define it? How do you interpret it? How do you make sense of it?

2. What does romance mean to you?

Prompts: How do you understand romance or your romantic relationships? How do you interpret it? How do you make sense of it?

3. What does sexuality mean to you?

Prompts: How do you understand your sexuality? How do you interpret it? How do you make sense of it?

4. How do you see the role of romance in your life?

Prompts: How important is romance to your life? What are some emotions that come up when you think about romance in your life?

5. How do you see the role of sexuality in your life?

Prompts: How important is sexuality in your life? What are some emotions that come up when you think about sexuality in your life?

6. What are some of the things that might get in the way of your romantic relationships?

Prompts: What barriers have you faced in these areas? What has made engaging in these types of relationships challenging? Do you feel that you have opportunities to engage in these relationships?

7. What are some of the things that might get in the way of your sexual relationships?

Prompts: What barriers have you faced in these areas? What has made engaging in these types of relationships challenging? Do you feel that you have opportunities to engage in these relationships?

8. What is the role of romance in your illness?

Prompts: How does your illness affect romantic aspects of your life? How does romance affect your illness? How do you feel when thinking about these things? Do you think there are specific symptoms that affect the romantic aspects of your life?

9. What is the role of sexuality in your illness?

Prompts: How does your illness affect sexual aspects of your life? How does sexuality affect your illness? How do you feel when thinking about these things? Do you think there are specific symptoms that affect the sexual aspects of your life?

10. What is the role of romance in your recovery?

Prompts: How does romance affect your recovery? How is this a part of your treatment?

11. What is the role of sexuality in your recovery?

Prompts: How does sexuality affect your recovery? How is this a part of your treatment?

12. How has romance has been addressed in your care, by clinicians, or by doctors?

Prompts: How do you feel about the way romance has been addressed in your care? Have you ever felt the need for support from mental health services regarding romantic matters? What opportunities have you had to discuss these topics with healthcare workers or anyone involved in your treatment? What are some of the reasons these topics have/have not been discussed?

13. How has sexuality has been addressed in your care, by clinicians, or by doctors?

Prompts: How do you feel about the way sexuality has been addressed in your care? Have you ever felt the need for support from mental health services regarding sexual matters? What opportunities have you had to discuss these topics with healthcare workers or anyone involved in your treatment? What are some of the reasons these topics have/have not been discussed?

14. Is there anything else you would like to add?

Appendix B:
Research Ethics Board Approval (Qualitative Study)



May 10, 2022

Ms. Stephanie Woolridge
Queen's University

Title: "GPSYC-1134-22 A Qualitative Study of Sexuality and Romantic Relationships;" TRAQ # 6036014

Dear Ms. Woolridge:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "**GPSYC-1134-22 A Qualitative Study of Sexuality and Romantic Relationships**" for ethical compliance with the Tri-Council Guidelines (TCPS 2) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405), your project has been cleared for one year.

You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at <http://www.queensu.ca/traq/signon.html/>; click on "Events;" under "Create New Event" click on "General Research Ethics Board Annual Renewal/Closure Form for Cleared Studies"). Please note that when your research project is completed, you need to submit an Annual Renewal/Closure Form in Romeo/traq indicating that the project is 'completed' so that the file can be closed. This should be submitted at the time of completion; there is no need to wait until the annual renewal due date.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one-year period (access this form at <http://www.queensu.ca/traq/signon.html/>; click on "Events;" under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example, you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at <http://www.queensu.ca/traq/signon.html/>; click on "Events;" under "Create New Event" click on "General Research Ethics Board Request for the Amendment of Approved Studies." Once submitted, these changes will automatically be sent to the Ethics Coordinator, GREB, at University Research Services for further review and clearance by GREB or the Chair, GREB.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dean A. Tripp".

Professor Dean A. Tripp, PhD
Chair, General Research Ethics Board (GREB)
Departments of Psychology, Anesthesiology & Urology
Queen's University

Appendix C:
Research Ethics Board Approval (Quantitative Studies)



Queen's University Health Sciences & Affiliated Teaching Hospitals Research Ethics Board (HSREB)

HSREB Initial Ethics Clearance

February 24, 2022

Ms. Stephanie Woolridge
 Department of Psychology
 Queen's University

TRAQ #: 6034781

Department Code: PSYC-254-21

Study Title: "PSYC-254-21 Interpersonal Relationships and Well-Being in Early Psychosis"

Supervisor: Dr. Christopher R Bowie

Review Type: Delegated

Date Ethics Clearance Issued: February 24, 2022

Ethics Clearance Expiry Date: February 24, 2023

Dear Ms. Woolridge:

The Queen's University Health Sciences & Affiliated Teaching Hospitals Research Ethics Board (HSREB) has reviewed the application and granted ethics clearance for this study as of the date noted above.

Document Name	Comments	Version Date
Letter of Information/Consent Form (combined document)	LOIC - Controls	2022/02/22
Letter of Information/Consent Form (combined document)	LOIC - FEP	2022/02/22
Recruitment Letter/Email/Notice/Poster	Recruitment Ad - Controls	2022/02/17
Recruitment Letter/Email/Notice/Poster	Recruitment Poster - Controls	2022/02/17
Recruitment Letter/Email/Notice/Poster	Recruitment Cards - FEP	2022/02/17
Recruitment Letter/Email/Notice/Poster	Recruitment Poster - FEP	2022/02/17
Recruitment Letter/Email/Notice/Poster	Recruitment - Email Responses (FEP and Controls)	2021/10/04
Questionnaire	Questionnaires/Measures	2021/10/04

Documents Acknowledged:

- Ethics Training Certificates

Amendments: No deviation from, or changes to the protocol, informed consent form and conduct of study should be initiated without prior written clearance or an appropriate amendment event from the HSREB, except when necessary to eliminate immediate hazard(s) to study participants or when the change(s) involves only administrative or logistical aspects of the study.

Renewals: An annual renewal event form or a study closure event form must be submitted annually as per the TCPS 2 Article 6.14. As a courtesy, the Office of Research Ethics Compliance may send reminders 30 days in advance of the ethics clearance expiry date. All lapses in ethics clearance will be documented on the annual renewal clearance letter. A Suspension letters may be issued for lapses in ethics clearances, with subsequent termination and closure of the ethics file for lapses greater than 10 business days. Terminations should be reported to regulatory authorities (e.g., Health Canada, FDA) as applicable.

Completion/Termination: The HSREB must be notified of the completion or termination of this study through the submission of a study closure event form in TRAQ.

Reporting of Serious Adverse Event (SAE)/Privacy Breach: Any SAEs that meet the HSREB reporting criteria (i.e. definition of an unanticipated problem) and all privacy breaches must be reported as outlined in 410 HSREB Reporting Adverse Events.

Reporting of Complaints: Any complaints made by participants or persons acting on behalf of participants must be reported to the HSREB within 7 days of becoming aware of the complaint using the protocol deviation event form. If your study is registered you are responsible for ensuring that the registration information is accurate and complete.

Regards,



Albert F. Clark, PhD

Chair, Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board

The HSREB operates in compliance with, and is constituted in accordance with, the requirements of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2); the international Conference on Harmonisation Good Clinical Practice Consolidated Guideline (ICH GCP); Part C, Division 5 of the Food and Drug Regulations; Part 4 of the Natural Health Product Regulations; Part 3 of the Medical Devices Regulations, and the provisions of the Ontario Personal Health Information Protection Act (PHIPA 2004) and its applicable regulations. The HSREB is qualified through the CTO REB Qualification Program and is registered with the U.S. Department of Health and Human Services (DHHS) Office for Human Research Protection (OHRP). Federalwide Assurance Number: FWA#: 00004184, IRB#: 00001173. HSREB members involved in the research project do not participate in the review, discussion or decision.