

Needs of individuals recovering from a first episode of mental illness: a scoping review

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Abstract

Central to the role of mental health clinicians is the assessment of needs. A number of assessment tools have been used to evaluate the needs of individuals diagnosed with a mental illness. These tools have largely been developed for people with a severe and persistent mental illness, and may not be suitable for individuals who are recovering from a first episode of mental illness. The aims of this review were therefore to: identify the needs experienced by individuals recovering from a first episode of mental illness; determine what tools have been used to evaluate these needs; and to explore whether existing tools adequately reflect the needs described in the literature. Twenty-one articles were included, comprising articles which identified needs ($n = 10$), needs assessment tools ($n = one$) or articles which identified both needs and a needs assessment tool ($n = 10$). Results indicate that individuals who have been admitted to a specialised mental health unit and are recovering from a first episode of mental illness may experience an extensive range of needs, spanning emotional, psychological, social, informational, functional, practical and relationship needs. Four established needs assessment tools were found to have been used to evaluate these needs; however, these do not appear to represent all needs discovered in this review, were mostly developed for populations with a chronic mental illness, and may not be suitable for assessing the needs of individuals recovering from a first episode of mental illness following a presentation to a specialised mental health unit.

Key words: first episode; mental illness; needs; needs assessment; scoping review

INTRODUCTION

A first episode of mental illness may profoundly alter an individual's life (Keks & D'Souza 2003), and result in a broad range of needs. In order for an individual to re-establish themselves, support may be required from family, friends and mental health services to meet these needs. Understanding the type and extent of needs which are being experienced throughout the assessment and recovery period is an important aspect of clinical care. This literature review was undertaken to understand what has already been documented regarding these needs, the types of tools that have been used to assess them, and to evaluate the appropriateness of these tools for clinical use with individuals who are recovering from a first episode of mental illness.

BACKGROUND

The first experience of a mental illness has the potential to significantly affect an individual and those around them (MacDonald et al. 2005). For those individuals who present to mental health services with a moderate to severe mental illness, there is a risk of disruption to educational pursuits, employment and the development and maintenance of social relationships. (Ramsay et al. 2011; Windell, Norman & Malla 2012). The recovery journey which follows a first episode of mental illness may present a number of challenges for the individual and those close to them, and may last months to years (Law & Morrison 2014; Windell, Norman & Malla 2012).

Recovery from a mental illness has been increasingly explored over the past few decades with research consistently outlining the many and varied significant changes that may occur after an individual experiences a mental illness for the first time (Andresen, Oades & Capiti 2003, Lasalvia et al. 2014; MacDonald et al. 2005; Woodside & Krupa 2010). These changes may include altered expectations, priorities or choices relating to education and careers; altered relationship goals with family and friends; and altered perspectives about

health and well-being, to name but a few (Archie et al. 2013; Ramsay et al. 2011; Norman & Malla 2012). Recovery may span weeks, to months to years after a first episode or a relapse of symptoms, with progression potentially impacted by: severity of symptoms; duration of undiagnosed symptoms; age; gender; stigma; as well as environmental and social factors (Andresen, Oades & Caputi 2003; Lam et al. 2011; Windell, Norman & Malla 2012). A number of these factors, which impact an individual's ability and capacity to recover from an episode of mental illness, are modifiable and may collectively be seen as needs which have been met, are being met or are unmet.

The term 'need' has been defined in health care contexts as a 'prerequisite for maintaining or restoring an acceptable level of social independence and quality of life' (Landolt et al. 2012b, p.1462; McCrone et al. 2001). Whilst other definitions of need exist, this definition was chosen to guide the current review, as it most closely aligns with the aims of current recovery-oriented, person-centred frameworks of care which are being embedded into current mental health systems. These frameworks aim to promote the autonomy and independence of individuals who have experienced either a chronic or acute mental illness (Burgess et al. 2011; Middleton, Regueira & Bramley 2009, pp.65-66).

People encounter many types of need, and for the most part, meet these unconsciously and habitually (Roychowdhury 2011). However, at some points in time, life events may occur that significantly impair an individual's ability to meet their own needs. Such events include the onset of physical or mental illness, which can significantly reduce an individual's capacity to cope and function (Andresen, Oades & Caputi 2003; Fitch 2008). The stress attached to these changes may further compound physical or mental illnesses, but also present clinicians with an opportunity to positively intervene (Andresen, Oades & Caputi 2003).

One of the components of a number of models of care established in mental health systems is the assessment of needs. Indeed, the systematic assessment of needs across the health

care sector is increasingly being recognised as an important component of providing person-centred care (de Haan et al. 2001; Fitch 2008; Maguire et al. 2013). By using systematic needs assessment tools in clinical practice, patient care can be more individually tailored, leading to improved quality of life and increased independence (Fitch 2008). Patterns of need within populations can be identified and strategies and resources allocated by service providers (Fitch 2008; Maguire et al. 2013). Further benefits of using needs assessment tools have included; the increased rapport between patients and clinicians, formal identification of needs by patients, carers and clinicians; an increased number of needs being met; and a greater sense of empowerment for the individual participating in the assessment (de Haan et al. 2001; Fitch 2008; Hensel et al. 2016; Maguire et al. 2013).

A number of needs assessment tools have been designed to be used in a variety of health care settings (Brewin et al. 1987; Fitch 2008; Maguire et al. 2013; Phelan et al. 1995). These tools have historically been designed for specific populations, such as individuals diagnosed with cancer, where much of the seminal work relating to the benefits of using clinical, systematic needs assessment tools has been undertaken (Fitch 2008; Maguire et al. 2013). A number of needs assessment tools have been designed in the mental health field, however, these have predominantly targeted individuals with severe and persistent or chronic mental illness (Brewin et al. 1987; Comtois et al. 1998; Marshall et al. 1995; Phelan et al. 1995) and may not be suitable for assessing the needs experienced by those who are recovering from a first episode of mental illness.

AIM

The aims of this scoping review were to identify the needs experienced by individuals recovering from a first episode of mental illness, and to determine whether existing needs assessment tools, which have been used to evaluate these, reflect the needs that have been described in the literature.

METHODOLOGY

Through undertaking a preliminary search of literature relevant to the aims and purpose of this review, it was discovered that the methodologies employed to identify the needs of individuals recovering from a first episode of mental illness were diverse, and included both quantitative and qualitative approaches. A systematic review was therefore considered unsuitable. In reviewing other methodologies for conducting literature reviews, the scoping review approach was determined to best serve the purpose of this review: 'to summarise and disseminate research findings' to mental health clinicians (Arksey & O'Malley 2005, p.6).

Scoping reviews share many features and principles of systematic reviews. Fundamentally, both styles of review should have a methodological framework that allows both reproducibility and transparency and should approach the literature search systematically (Arksey & O'Malley 2005). In this review, the benefits of using the scoping review framework included: the ability to include qualitative data which provide descriptions of the needs of the target population with more depth than quantitative studies; the possibility of extending the search to grey literature if insufficient data was located in peer-reviewed sources and; the capacity for broad research questions to be addressed (Arksey & O'Malley 2005; Levac, Colquhoun & O'Brien 2010). The first five stages of Arksey & O'Malley's (2005) scoping review framework, with guidance from Levac, Colquhoun & O'Brien (2010) were used to undertake a comprehensive literature search.

1. The research questions

Research questions were developed to align with the concepts being investigated (needs and needs assessment tools) and the target population (individuals recovering from a first episode of mental illness) (Levac, Colquhoun & O'Brien 2010).

The two review questions included: 1) What are the known needs of individuals recovering from a first episode of mental illness; and 2) Do the assessment tools that are currently used

to assess needs in this population consider the array of needs that are present in current literature?

2. Identifying relevant literature

In order to appropriately capture all relevant literature relating to both review questions, two searches of the literature were undertaken: the first to identify the documented needs of individuals recovering from a first episode of mental illness (Part A); and the second to identify existing tools that have been developed or used in this population to assess needs (Part B).

A preliminary search of electronic databases revealed a number of articles which appeared to be relevant to the aims of this review. It was decided that the search for relevant literature would be limited to peer-reviewed journal articles initially, and would be expanded to grey literature if the review questions were not adequately addressed. Electronic databases were searched, including: CINAHL; Embase; Informit; JBI COnNECT+; PyscINFO; Medline; PubMed; Scopus and Web of Science. These electronic databases were selected as they contain large collections of peer-reviewed articles relating to the themes relevant to this review. Search phrases and keywords that were used to identify relevant literature were selected based on the PICO framework, and were generated in consultation with an academic librarian (see Table 1).

All identified articles were imported into Endnote® for inspection by the lead author (ED). Duplicates were removed and studies which focused on a topic other than mental illness were excluded. This resulted in 9991 potential articles for Part A, and 3672 potential articles for Part B. These were imported to Covidence® for title and abstract review by the lead author (ED), followed by a full text review, where all articles were reviewed by ED and co-authors (AG) and (LP). Six articles were reviewed by a fourth author (AE), due to uncertainty

across authors regarding suitability for inclusion. Reference lists of all included articles were

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hand searched for additional articles. One further article was included as a result of this process.

Table 1: Search phrases and keywords

	Population		Interest		Context
Part A	MENTAL DISORDER OR MENTALLY ILL PERSONS OR ((behaviour* OR behavior* OR psychiatric OR mental*) AND (disorder* OR diagnos* OR illness))	[AND]	HEALTH SERVICES NEEDS AND DEMAND OR NEEDS ASSESSMENT OR need*	[AND]	first episode OR first admission OR first presentation OR recovery
Part B	MENTAL DISORDER OR MENTALLY ILL PERSONS OR ((behaviour* OR behavior* OR psychiatric OR mental*) AND (disorder* OR diagnos* OR illness))	[AND]	(SURVEYS AND QUESTIONNAIRES OR assessment* OR questionnaire* OR survey* OR tool*) AND (need* OR support*)	[AND]	first episode OR first admission OR first presentation OR recovery

3. Study selection

The study selection phase of scoping reviews is often iterative, with inclusion criteria being developed before, during and post initial searches of the literature (Arksey & O'Malley 2005). In this review, the inclusion criteria remained relatively stable throughout the third stage of the review. The exception to this was the inclusion criteria relating to the population included in the review. The authors explored restricting the review to certain diagnostic categories, however, the consensus was that experiencing a first episode of mental illness constituted a significant point of potential or actual crisis in a person's life, and that this could be a significant factor which unifies the population of individuals who are recovering from a first episode of mental illness. The final inclusion criteria relating to population are listed below as items 5) and 6).

For literature search Part A, the inclusion criteria were: 1) articles published in English; 2) published between 1985 and August 9th, 2017; 3) those which contained primary research; 4) published in a peer-reviewed academic journal; 5) included participants ≥ 16 years of age;

6) those that reported the needs of individuals recovering from a first episode of mental illness. For literature search Part B, the inclusion criteria comprised all of the above, with the addition that articles were required to document the use of a needs assessment tool with this population. The result of the two searches are documented in the PRISMA flow charts in Figure 1.

RESULTS

A total of 20 articles met inclusion criteria for Part A. Of these, five articles also met the inclusion criteria for Part B (Bertani et al. 2012; Hensel et al. 2016; Jorquera et al. 2015; Landolt et al. 2012b; Schlithler et al. 2007), with one additional paper meeting criteria for Part B, but not A (Landolt et al. 2012a). This article was reviewed in the full text review of both searches, however, did not report actual needs.

Of significance, it was found that all of the articles which met the inclusion criteria for this review reported studies which included participants who were recovering from a first episode of mental illness during, or after an admission to a mental health unit. The implications of this limitation on the population being investigated have been included in the discussion and conclusion sections of this review.

Figure 1: PRISMA flow charts

Figure 1a: PRISMA flow chart Part A

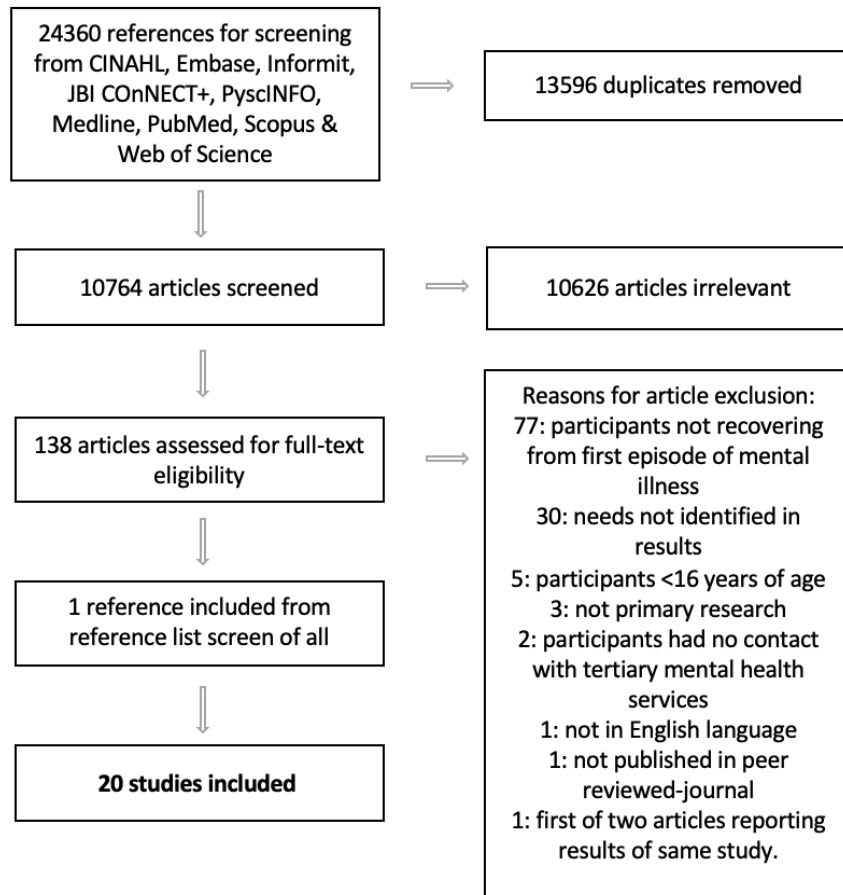
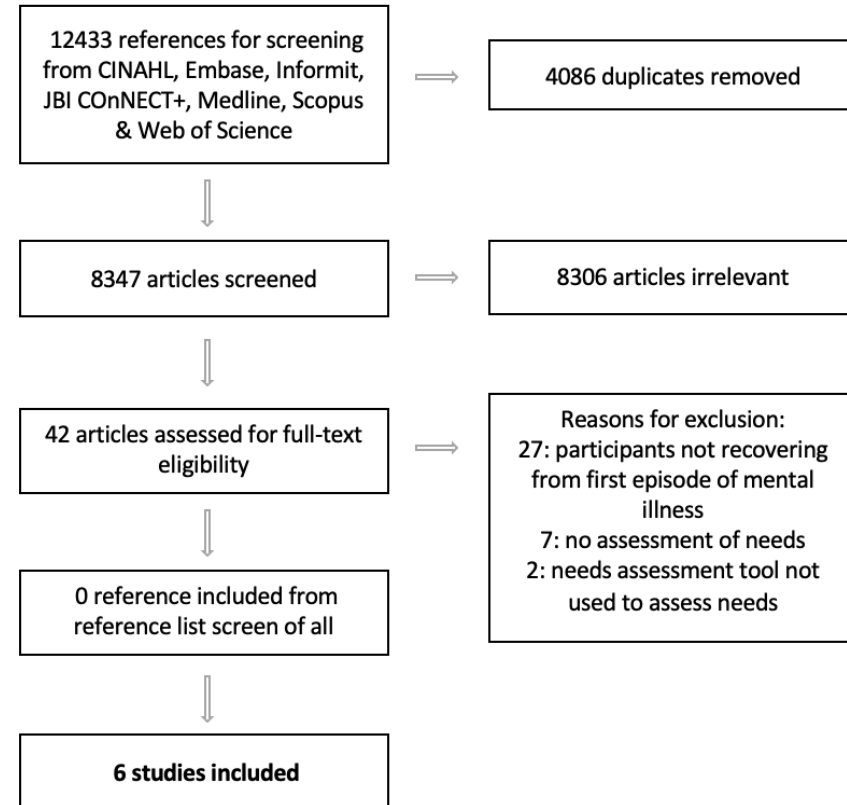


Figure 1b: PRISMA flow chart Part B



4. Charting the data

Data from each of the included articles were extracted and formatted into Table 2. This process involved extracting data from each article regarding authors, year of publication, setting, methodology, data collection and data analysis and the sample. An overview of each article with comments relating to relevant limitations and gaps is provided in this table. The final column was used to document the categories of need which had been identified within the article.

The individual items of need identified in the included articles were grouped into nine categories. These categories evolved throughout this stage of the review, and were informed by: the items of need that were identified in the included articles; publications and theoretical models relating to human needs, which have sought to group related needs (Bertani et al. 2012; Fitch 2008; Lasalvia et al. 2014; Marshall et al. 1995), as well as the combined clinical and academic knowledge of the authors. A summary of each category is provided in the first column of Table 3. Table 3 also presents the items of need that are included in the four established needs assessment tools identified in this review (middle four columns), as well as a list of needs identified through qualitative methods and other scales (final column).

Table 2: Data from included articles

Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
Articles relating to Part A (only) of literature search				
Bielavitz, Wisdom & Pollack 2010	Purposive sampling from numerous sources across the USA; semi-structured interviews; Grounded Theory (Charmaz (2006), Strauss & Corbin (1990).	n = 12; gender NR; age range NR; unknown time since first episode; 'serious mental illness'	Individuals required different types of information at different stages of recovery. Informational needs were linked to psychological well-being, and when met, facilitated improved sense of empowerment, and improved relationships with clinical staff. Although the time since first diagnosis of participants was not documented, this article was included, as there are many details contained within the results that relate to the experience and needs of a first episode of mental illness. Informational needs were found to be complex and related to psychological state and needs.	Informational Psychological
Boucher, Groleau & Whitley 2016	Purposely recruited from a mental health outpatient service in Canada. Interviews and observation occurred at a psychosocial rehabilitation centre; semi-structured interviews and observation; thematic analysis (Braun & Clarke 2006).	n = 35; gender NR; age range NR (over 18 years); diagnosed within previous five years; first episode schizophrenia, major depression, schizoaffective, bipolar disorder	Engaging in romantic or intimate relationships was considered as an important goal and milestone for participants. Barriers to forming intimate relationships, such as money and stigma, were explored. Addressing unmet practical and psychological needs may assist participants to meet other needs and goals, such as forming emotionally and sexually intimate relationships – a goal and need identified as important in recovery from a first episode of mental illness.	Emotional Practical Psychological Social
Doucet, Letourneau & Robertson Blackmore 2012	Participants purposively selected from multiple community and hospital services specialising in postpartum care in Canada and USA. Telephone or in-person interviews were conducted with the individuals who met criteria as well as consenting partners/husbands; semi-structured interviews; inductive thematic analysis (Braun & Clarke, 2006).	n = 17; nine/eight; female mean 34, SD 6.22, male mean 36.25, SD 6.65; range from fewer than six months to six years since episode onset; first episode postpartum psychosis	Participants and their partners experienced needs relating to both first episode psychosis and coping with being new parents. A number of needs and barriers to accessing support were identified. A number of specific needs identified within this article may not be generalisable to broader population of individuals who are recovering	Emotional Family & relationship Functional Informational Practical Psychological Symptom

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Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
Heron et al. 2012	Participants recruited from a postpartum psychosis network in the United Kingdom; semi-structured interview; grounded analytic induction (Silverman 2006).	n = Five; zero/five; age range NR; three to 20 years post diagnosis; first episode postpartum psychosis	from a first episode of mental illness. However, as noted by the authors, awareness of these specific needs may better equip mental health services to meet the needs of this population. Recovery from post-partum psychosis was found to be multi-faceted. A broad array of needs were described by participants, who explored these retrospectively in relation to experiencing a mental illness and motherhood concurrently and for the first time. Despite the length of time for some participants since diagnosis (up to 20 years), the results were found to be relevant to this review.	Cross-category Emotional Functional Informational Psychological
Kilkku, Munnukka & Lehtinen 2003	Participants purposively selected from cohort who were, or had, previously been enrolled in a trial program in Finland. Interviews took place at participants' place of residence or within the hospital; open-ended interviews were used to explore the experience of receiving information; phenomenological analysis (Leininger, 1994).	n = Seven; genders NR; age range NR; time since first diagnosis NR (early stages of first treatment): first episode psychosis	The importance of tailoring information to the individual and their experiences was highlighted. Informational needs were found to be complex and linked to psychological state: with poorly linked information resulting in feelings of worthlessness and appropriately delivered information resulting in a sense of empowerment for participants.	Family & relationship Informational Psychological
Lal, Nguyen & Theriault 2016	Participants selected from a group of young people who were engaged in an early intervention program for first-episode psychosis in Canada; explored experiences of using the Internet as a source of information and link to mental health services through focus group discussions; thematic analysis.	N = 17; 11/six; 21-35; varied time since first treatment: <six months: three, six-12 months: four, >12 months: 10; first episode psychosis	Aspects relating to informational needs were reported, including the connections between informational needs and mental health services, practical, psychological and social needs. There are a number of needs implied in this article relating to mental health services, practical, psychological and social needs. Information appears to play a role in meeting these needs.	Informational
MacDonald et al. 2005	Participants purposively identified by staff members of the EPPIC program in Australia; semi-structured interviews; phenomenological analysis (Colaizzi (1978 and Moustakas (1994).	n = Six; five/one; 19.5-25.25 years; 0.33-1.84 years post first hospitalisation; first episode of psychosis	Participants reported some significant changes in social relationships and dynamics after being diagnosed with psychosis. Needs associated with these	Emotional Family & relationship Functional

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Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
			changes were identified. In-depth exploration of social experiences of a select sample of young people who had experienced a first episode of psychosis. Several themes linking social experiences to a range of needs documented throughout.	Practical Psychological
Ramsay et al. 2011	Participants recruited from tertiary and secondary psychiatric units in the USA; structured interview with open-ended questions; thematic analysis (Pope et al. 2000).	n = 100; 74/26; 24.3 ± 5.1 years; median 5 days post first admission; first episode non-affective psychosis	Life and treatment goals were explored in early stages of recovery. Needs relating to achieving these goals were identified. A significant number of needs identified at a very early stage of treatment and recovery, highlighting that the needs of this population may pre-date diagnosis and initial treatment. A number of needs and goals were not identified by participants until the suggestion was made by the interviewer.	Cross-category Emotional Family & relationship Informational Psychological Symptom
Skärsäter 2006	Participants were parents who were admitted to a specialised inpatient unit for affective disorders in Sweden; structured interview with multiple validated scales (no needs assessment tool used); statistical analysis.	T ₁ : n = 18; five/13; 25-56 years; ethnicity NR T ₂ : n = 16; four/12; 26-57 years; assessed at first admission (T ₁) and 12-months later (T ₂); first episode major depression	Social support for participants was found to be low. The social support of the family was explored and highlighted as significant in symptomatic and functional recovery. Second of two prospective articles. Needs are indirectly reported, with social support being the main focus of the article. Social needs were found to be multi-faceted, and to co-exist with practical, psychological and emotional needs.	Emotional Family & relationship Functional Practical Psychological
Woodside & Krupa 2010	Participants purposively recruited from multiple first episode centres in Canada; semi-structured interviews; grounded theory analysis (Strauss (1986) and Charmaz(2000)).	n = Eight + five secondary participants (three parents, one friend and one sibling); five/three; 28-42 years; 1-3 years post diagnosis; first episode psychosis	Returning to work after a first episode of mental illness was a priority for individuals. The desire to return to work was significantly linked to financial need and re-establishing identity. Individuals who experience a first episode of mental illness later in life may have different priorities and needs to younger people with a first episode, particularly regarding returning to work. There is a mismatch between the article title and self-reported diagnoses, which include	Cross-category Functional Practical

Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
			bipolar affective disorder and depression, not only psychosis.	
Articles related to Part A & B of literature search				
Bertani et al. 2012	25 individual PICOS sites across northern Italy. Multiple scales, including CAN; descriptive statistical analysis.	n = 397; 215/182; male mean age 30.44 (SD 9.15 years), female mean age 34 (SD 10.19 years); assessment undertaken within first 30 days of first contact with a tertiary mental health team; first episode psychosis	Met and unmet needs identified in all items of CAN. Significant differences between genders found in practical category, with females reporting more practical needs, and males receiving more assistance from family members. When gender was specifically targeted as a variable, differences were identified that were not discovered in other articles included in this review.	Cross-category Family & relationship Functional Informational Physical Practical Psychological Symptoms
Boeing et al. 2007	Multiple community and in-patient mental health services, across one third of the area of Scotland; case note review and interviews with modified version of Cardinal Needs Schedule; descriptive statistical analysis.	Case note review: n = 103; 74/29; mean age 18.9, range 13.5-21.6; Interview: n = 44 young people with early-onset psychosis and four carers; 0.5-6.8 years post onset of psychosis; schizophrenia, schizoaffective disorder, bipolar disorder with psychotic symptoms and other psychotic disorders	Participants reported experiencing a number of complex social and clinical needs. Lack of access to age-appropriate community and in-patient services and lack of family support were identified as contributors to the rates of unmet need in this population. The authors recommend routine and systematic needs assessments be undertaken with this population.	Cross-category Emotional Family & relationship Functional Informational Physical Practical Symptom
Breitborde, Kleinlein & Srihari 2012	Participants recruited from an ongoing RCT (STEP) at Yale University, USA; structured interview using multiple assessment tools including BPNS-G; descriptive statistical analysis.	n = 47; gender NR, age range NR (inclusion criteria 16-45 years); median 15 weeks, SD 58.02 weeks; first episode psychosis	Participants were found to have less satisfaction of psychological needs (autonomy, relatedness and competence) than individuals without a diagnosis of psychosis. Need satisfaction and well-being are associated. Authors hypothesise that psychological needs are present in very early stages of onset of psychosis. It is suggested that there is no relationship between gender and psychological need.	Psychological
Comtois et al. 1998	Participants recruited from specialised rehabilitation program for individuals recovering	n = 47; 35/12; mean age 27.4 years; 19.1% attended program for	Problems that were identified by participants, differed from those identified by clinicians.	Cross-category

Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
	from a first episode of a schizophrenia-spectrum disorders in Canada; French versions of NFCAS and the PPASQ completed by staff and patients; answers compared.	previous 2 years, 55.3% attending for previous 2-5 years, 25.5% attending for previous 5-6 years; first episode schizophrenia spectrum disorder	Different priorities for meeting needs were also found. Needs were being directly assessed; differences seen between clinician and patient appraisal of needs. 10/47 had secondary diagnosis of substance abuse.	Emotional Family & relationship Functional Practical Psychological Symptom
deHaan et al. 2001	Participants included consecutively admitted to one of two specialist services in the Netherlands for first episode psychosis, consumer group representatives, family members and mental health clinicians; a list of 42 items comprising preferences for care for individuals who have experienced a first episode of psychosis (previously generated) ranked in order of importance; descriptive statistical analysis.	First-episode participants: n = 45; 34/11; mean age 20.5 SD 2.5 years; Consumer group representatives: n = 54, Family members: 100, Mental health clinicians: n = 263; first admission; first episode schizophrenia, schizoaffective disorder, schizophreniform disorder	Considerable agreement regarding preferences for care found between patients, family members and clinicians, however a number of differences in priorities for care also noted. The authors were not able to find a suitable needs assessment scale that had been developed for and with this population, and so opted for developing a list of preferences for care to identify specific priorities within this population. This was undertaken with patients, family members and clinicians. An assessment tool does not appear to have been developed from this study	Functional Informational Physical Practical Psychological
Hensel et al. 2016	Participants included clients and keyworkers recruited from six different Early Intervention in Psychosis programs across Ontario, Canada. CAN or Ontario Common Assessment of Need Part 1: Consumer Self-Assessment; descriptive and inferential statistical analysis.	Clients: n = 188; 132/56; mean age 23.4 ± 5.3; time since first presentation NR; first episode schizophrenia, psychotic disorder; mood disorder, anxiety, personality disorder, substance-related disorder, attention deficit hyperactivity disorder; Keyworkers: n = 188	Clients and keyworkers differed in their assessment of some categories of need using the CAN. Keyworkers rated more unmet needs in individuals with psychotic illnesses than in other diagnostic groups. Due to the differences in rating of needs between clients and keyworkers, the authors recommend that both parties discuss needs in order to have a common understanding.	Cross-category Family & relationship Functional Informational Physical Practical Psychological Symptom
Jorquera et al. 2015	Participants recruited from three psychiatric services of the public health system in Chile, and interviews conducted in outpatient facilities. Observation and structured interviews using CAN (Spanish version), PANSS and	n = 29; 23/six; mean age 21.9 with SD 6.1 years; time since first diagnosis NR; first episode psychosis	Participants reported multiple needs identified via the CAN. Higher rates of unmet needs were found in participants with a longer duration of undiagnosed psychosis and in those with a higher PANSS score at the time of interview. Information, daytime	Cross-category Family & relationship Functional Informational

Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
	sociodemographic survey; descriptive statistical analysis.		activities, psychotic symptoms, company and self-care were the most highly reported needs. Some items within the CAN were not identified by any participants, including physical health and some of the practical needs.	Practical Psychological Symptom
Landolt et al. 2012b	Participants purposively recruited from fifty European and Israeli mental health centres participating in the EUFEST. Interviews at baseline, 6 months, and 12 months using multiple scales including CAN; latent class growth analysis.	n = 342 (initially 498); 193/149; 26.05 ± 5.64 years (at baseline); up to three years post first episode; psychotic illness, including paranoid schizophrenia, schizophreniform, schizo-affective and other psychotic illness	Different groups of participants experienced different courses of need. The largest number of needs were reported in the first six-month period. Needs persisted in participants who received little to no psychosocial therapy. First of two prospective articles. Psychosocial treatment was positively linked to a lower level of unmet social needs when implemented in early stages of treatment and recovery. Gender differences in experience of needs reported.	Cross-category Family & relationship Functional Informational Physical Practical Psychological Symptom
Lasalvia et al. 2014	Participants purposively selected from public psychiatric services in Italy; multiple scales including CAN and semi-structured interviews; descriptive statistical analysis.	n = 97; 55/42; 34.11 ± 9.07 years; first admission; first episode psychosis	Actual and perceived discrimination was life-limiting for participants in a variety of key social and functional areas, and was linked to higher levels of need, and a lower quality of life. Needs were not the primary focus of this article, however, were explored in relation to experiences of actual or anticipated discrimination. A complete report of the results of the CAN assessments was not provided.	Functional Practical

Author/Year	Setting & Methodology; data collection; analysis	Sample – total (n=); gender (M/F); age range; time since first episode; diagnoses	Overview and comments	Categories of need identified
Schlithler et al. 2007	Mental health services in San Paolo, Brazil. Structured interviews using CAN; descriptive statistical analysis.	n = 52; 25/27; mean age 32.7 (SD 10.6); first contact with mental health services; first episode psychosis	Brazilian version of CAN was found to have good inter-rater reliability and validity for Brazilian's experiencing a first episode of psychosis. The tool that was used to assess needs was initially developed for people with chronic mental illness, not first episode. Whilst validity and reliability tested in this study, other items not included on the CAN that relate specifically to this population may have been overlooked.	Cross-category Family & relationship Functional Informational Physical Practical Psychological Symptom
Article related to Part B (only) of literature search				
Landolt et al. 2012a	Participants purposively recruited from fifty European and Israeli mental health centres participating in the EUFEST. Interviews at baseline, 6 months, and 12 months using multiple scales including CAN and MANSA; regression analysis.	n = 342 (initially 498); 193/149; 26.05 ± 5.64 years (at baseline); up to three years post first episode; psychotic illness, including paranoid schizophrenia, schizophreniform, schizo-affective and other psychotic illness	An association between needs and quality of life over the 12-month trial period was evaluated. Results suggest quality of life may not be improved when items on the CAN change from an 'unmet' to 'met' status, but that quality of life was positively affected if needs changed from an 'unmet' to a 'no need' status.	<i>no specific needs identified</i>

Abbreviations and acronyms: BPNS-G – Basic Psychological Needs Scale-General; CAN = Camberwell Assessment of Needs; EPPIC – Early Psychosis Prevention and Intervention Centre; EUFEST – European First Episode Schizophrenia Trial; MANSA – Manchester Short Assessment of Quality of Life; NFCAS – Needs for Care Assessment Schedule; NR – Not reported; PICOS – Psychosis Incident Cohort Outcome Study; PPASQ – Problems Perception and Adaptation Strategies Questionnaire; SD – standard deviation; RCT – Randomised Controlled Trial; STEP – Specialised Treatment Early in Psychosis; USA – United States of America

Table 3: Needs experienced by individuals recovering from a first episode of mental illness

Category; characteristics	Items of need identified on established needs assessment tools				Items of need identified from other sources
	BPNS-G	CAN	mCNS	NFCAS	
Emotional <i>Needs relating to the understanding and expression of feelings relating to diagnosis, change in life-circumstances and sense of belonging</i>	-	-	-	-	Acceptance Emotional expression Emotional intimacy* Emotional support Managing feelings
Family and relationship <i>Needs relating to the quality and quantity of relationships with family and friends; and the ability to navigate social contexts effectively and independently</i>	-	Company	Family relationships Friendships	-	Contact with others: distrust, apathy or avoidance Counselling for children Difficult relationship with a significant other or relative Meet people with similar experiences (peers) Support with functioning in family context
Functional <i>Needs relating to skills that allow individuals to live independently</i>	-	Home-upkeep Self-care	Domestic skills Educational performance Hygiene/dressing	Communication skills Household chores Household shopping Get meals Occupational skills Personal hygiene Use public transport Use of public amenities Weekly budget*	Engage in normal activities Looking after children* Organising one's day
Informational <i>Needs relating to the capacity and ability to receive and be provided with information relating to diagnosis, prognosis, symptoms, treatment and overall health and well-being</i>	-	Information	Knowledge of mental health and treatment	-	Appropriate for level of comprehension and stage of recovery Delivered by clinicians and peers Meaningful and relevant Regarding diagnosis, prognosis, medications and side-effects Regarding healthy food

Category; characteristics	Items of need identified on established needs assessment tools				Items of need identified from other sources
	BPNS-G	CAN	mCNS	NFCAS	
Physical <i>Needs relating to maintenance of physical health and the treatment and management of illness</i>	-	Physical health	Physical problem	Physical symptoms of disease	Trustworthy sources Verbal and written forms Thorough physical examination
Practical <i>Needs relating to the goods and services required to maintain independence, safety and security</i>	-	Accommodation Benefits Child care* Food Money* Transport Telephone	Transport/amenities	-	-
Psychological <i>Needs relating to the skills and environment required to safely express and explore self- identity, and to reduce psychological symptoms related to mental illness</i>	Autonomy Competence Relatedness	Psychological distress Sexual expression	-	Distress	Advice on coping Affirmation Coping with psychiatric disorder Discussion with peers about experiences Explore self-identity Educate and inform others Formal counselling To be listened to To be understood Trust within relationships
Symptoms <i>Needs relating to any physical, mental and/or psychological symptoms of mental illness, treatment (side-effects) and substance use or withdrawal</i>	-	Psychotic symptoms	Anxiety/mood symptoms Psychosis Side-effects	Dementia or organic psychosis Neurotic symptoms Physical symptoms of disease Positive psychotic symptoms Tardive dyskinesia and other side effects	Side effects from drugs Substance withdrawal* Symptom relief

Category; characteristics	Items of need identified on established needs assessment tools				Items of need identified from other sources
	BPNS-G	CAN	mCNS	NFCAS	
Cross-category <i>Needs that span two or more of the above categories</i>	-	Education Daytime activities Intimate relationships* Risk/safety to self Risk/safety to others Use of alcohol* Use of drugs*	Alcohol misuse Dangerous/destructive behaviour (self/others) Education attendance Illicit drug use Keeping occupied Living situation Money/own affairs* Socially inappropriate behaviour Underactivity (negative symptoms)	Basic education skills Dangerous or destructive behaviour Loneliness/boredom Slowness and underactivity Socially embarrassing behaviour, alcohol and drug use	Adherence with medications Continuity of caregiver Difficulties with services or interventions Employment Leisure activities, loneliness, boredom Person-centred care Privacy Recovery-oriented clinicians Rest Safe place to receive support Sleeping during the day, motivation

Abbreviations: BPNS-G – Basic Psychological Needs Schedule - General; CAN – Camberwell Assessment of Need; mCNS – modified Cardinal Needs Schedule; NFCAS – Need for Care Assessment Schedule

*Similar need also appears in a different category

After reviewing the data available in the included peer-reviewed literature, a decision was made by the authors that there was sufficient information present to adequately and appropriately address the review questions. The option to search through grey literature for relevant articles was therefore suspended, and the review moved on to the fifth and final stage.

5. Collating, summarising and reporting the results

Of the 20 articles addressing the first research question (Part A), 10 articles adopted Likert-type scales or schedules to examine the needs of individuals recovering from a first episode of mental illness (though not all of these were established needs assessment tools), eight used semi-structured interviews (Bielavitz, Wisdom & Pollack 2011; Boucher, Groleau & Whitley 2016; Doucet, Letourneau & Blackmore 2012; Heron et al. 2012; Kilkku, Munnukka & Lehtinen 2003; MacDonald et al. 2005; Ramsay et al. 2011; Woodside & Krupa 2010), one used a combination of a scales and semi-structured interviews (Lasalvia et al. 2014), and one used focus groups to examine participant needs (Lal, Nguyen & Theriault 2016). The majority ($n = 16$; 80%) reported the needs of individuals recovering from a first episode of a psychotic disorder. Of these, two articles related specifically to first episode post-partum psychosis (Doucet, Letourneau & Blackmore 2012; Heron et al. 2012). One article explored the needs of individuals who were recovering from a first episode of major depression (Skärsäter 2006) and three papers reported the needs of participants who were recovering from a first episode of a range of different psychiatric illnesses (Bielavitz, Wisdom & Pollack 2011; Boucher, Groleau & Whitley 2016; Hensel et al. 2016).

One quarter of the articles from Part A ($n = 5$; 25%) explored the needs of individuals in the first month post diagnosis, with the remaining articles documenting needs identified over a variety of time periods, spanning initial diagnosis and treatment, through to almost seven-years post-episode. For the majority of articles ($n = 18$; 90%), data relating to needs were

collected at a specific time, or within a time-frame, after initial diagnosis and treatment, with two articles reviewing needs prospectively (Landolt et al. 2012b; Skärsäter 2006). Whilst most articles reported needs across multiple categories, two focused specifically on psychological and informational needs (Breitborde, Kleinlein & Srihari 2012; Lal, Nguyen & Theriault 2016).

Needs identified in the literature (Part A)

Approximately one hundred individual items of need were identified, and placed into one of nine categories (see Table 3). These categories include: emotional; functional; informational; mental health service; physical; practical; psychological; social; symptoms and; cross-category needs.

Inter-relationships between different items and categories of need were identified in six of the included articles (Boucher, Groleau & Whitley 2016; Breitborde, Kleinlein & Srihari 2012; Heron et al. 2012; Kilku, Munnukka & Lehtinen 2003; Lal, Nguyen & Theriault 2016; Woodside & Krupa 2010). One such example was the link between informational and psychological needs, where needs for information regarding diagnosis, medications, therapy modalities and coping strategies was described in relation to the psychological needs for reassurance, acceptance and ability to cope (Heron et al. 2012; Lal, Nguyen & Theriault 2016). Furthermore, the process of meeting these informational needs through exploring online resources and being involved in discussions with family members, friends and clinicians, was able to facilitate the meeting of a number of family and relationship and psychological needs (Heron et al. 2012; Kilku, Munnukka & Lehtinen 2003; Lal, Nguyen & Theriault 2016). Other examples of the inter-relation between different items of need included: the need for employment and psychological needs (Woodside & Krupa 2010); a lack of money presenting a barrier to initiating intimate relationships (Boucher, Groleau &

Whitley 2016); and the need for relatedness to others being linked to well-being and other psychological needs (Breitborde, Kleinlein & Srihari 2012).

Alterations in the type and severity of unmet needs across the categories were identified in articles where participants either reflected on their past experiences or participated in one of the two prospective studies (Heron et al. 2012; Landolt et al. 2012b; Skärsäter 2006). Landolt et al (2012b) identified four distinct groups of individuals recovering from first episode psychosis whose needs varied at baseline, six and 12-months post initial diagnosis. Participants in three of these groups reported unmet needs at baseline, which declined at varying rates over the following 12-month period. The fourth group, named the 'complicated' group, accounted for approximately 10% of the total sample and were reported to experience an initial decrease in the number of unmet needs at six months, followed by an increase in unmet needs between six and 12-months (Landolt et al. 2012b). Variables that were found to be related to the changing of needs over time included: gender; severity of symptoms; prognosis; compliance with treatment; quality of life prior to diagnosis, duration of untreated psychosis (in that sub-population); and the number of psychological interventions the individual was receiving (Breitborde, Kleinlein & Srihari 2012; Jorquera et al. 2015; Landolt et al. 2012b). Furthermore, higher rates of unmet needs were found in individuals who experienced either a longer duration of untreated psychosis (Breitborde, Kleinlein & Srihari 2012; Jorquera et al. 2015) or in those who experienced anticipated or actual discrimination resulting in feelings of stigma (Kilkku, Munnukka & Lehtinen 2003; Lasalvia et al. 2014).

Individuals belonging to specific age brackets or phases of life were identified as having varied needs. Such sub-populations included: adolescents with first onset psychosis (Boeing et al. 2007; MacDonald et al. 2005); individuals with late onset first episode psychosis (LOFEs) (Woodside & Krupa 2010); parents with a first onset of major depression (Skärsäter 2006); and women experiencing post-partum psychosis (Doucet, Letourneau & Blackmore 2012;

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Heron et al. 2012). Some observations from the available data suggest that individuals who are first diagnosed in adolescence may have more needs relating to the dynamics within family and friend relationships, and establishing self-identity (MacDonald et al. 2005); whereas LOFEs may have more needs relating to returning to established careers and providing ongoing financial support for their families (Skärsäter 2006; Woodside & Krupa 2010). Lack of access to age-appropriate community and in-patient services for adolescent participants was found to contribute to higher rates of unmet needs (Boeing et al. 2007). Parents of new-born or older children, who experienced a first episode of mental illness, described concurrent needs for support as an individual with a mental illness, and as a parent (Doucet, Letourneau & Blackmore 2012; Heron et al. 2012; Skärsäter 2006).

Four articles considered the influence of gender on the experience of needs. Half of these found that gender does influence the presence of needs (Bertani et al. 2012; Landolt et al. 2012b), whilst the other half concluded that gender does not play a significant role (Breitborde, Kleinlein & Srihari 2012; Hensel et al. 2016). Where gender was identified as an influential factor, females were found to have a higher number of met and unmet needs in the practical and functional domains than males. This was despite male participants reporting poorer levels of social disability and pre-morbid functionality (Bertani et al. 2012). In this particular sample, males were identified as receiving higher levels of family support than females in all practical and functional areas: support which was found to reduce the overall experience of unmet needs (Bertani et al. 2012). Observations relating to the experience of needs longitudinally, found that participants with a more complicated course of unmet needs were more likely to be male (Landolt et al. 2012b).

Finally, it was noted in three articles that clients and clinicians do not always share the same views on the type and severity of needs that are being experienced, nor the priorities for addressing these needs (Comtois et al. 1998; de Haan et al. 2001; Hensel et al. 2016).

Clients were more likely to be concerned with social needs than their respective clinician,

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and clinicians were more inclined to be concerned with clinical needs relating to symptoms and treatment (Comtois et al. 1998; Hensel et al. 2016).

Existing tools (Part B)

Several assessment tools have been used to evaluate the needs of individuals recovering from a first episode of mental illness, including three broad, established needs assessment tools: The Camberwell Assessment of Need (CAN) (Phelan et al. 1995); The Need for Care Assessment Schedule (NFCAS) (Brewin et al. 1987); and a modified Cardinal Needs Schedule (mCNS) (Boeing et al. 2007; Marshall et al. 1995); as well as the Basic Psychological Needs Schedule - General (BPNS-G) (Ryan & Deci 2000) which focuses on psychological needs.

The CAN was the most frequently cited tool across the articles, with six studies adopting it to report needs (Bertani et al. 2012; Hensel et al. 2016; Jorquera et al. 2015; Landolt et al. 2012b; Lasalvia et al. 2014; Schlithler et al. 2007), and one further article referring to its use in this population (Landolt et al. 2012a). The CAN was first published in 1998, is a 22-item interviewer-administered tool and is one of the most widely used needs assessment tools in mental health research (Phelan et al. 1995). Versions of the tool were developed for both clinical and research purposes, with input from both clinicians and mental health consumers to assess the needs of individuals with severe and persistent mental illness (Phelan et al. 1995). Items of need are identified as 'no need', 'met need' (a need that would exist if assistance were not being provided by a third-party), or 'unmet need' (Lasalvia et al. 2014; Phelan et al. 1995).

The NFCAS is a 21-item, interviewer-administered tool that was used in one article (Comtois et al. 1998). This tool was first introduced in 1987 to evaluate the clinical and social needs of individuals with a chronic mental illness (Brewin et al. 1987). Items of need are identified as

'no need', 'met need', or 'unmet need'. Additionally, any interventions relating to specific needs are documented, with effectiveness rated on a seven-point scale, though this latter section of the assessment was not included in Comtois et al.'s (1998) article (Brewin et al. 1987; Comtois et al. 1998).

The Cardinal Needs Schedule (CNS) was designed to assess the needs of individuals with a chronic mental illness and was developed from an existing tool: the Medical Research Council's Needs Assessment Schedule (Marshall et al. 1995). These developments were established in order to include the perspectives of carers, to identify which needs are 'cardinal' (requiring intervention) and to provide intervention suggestions (Marshall et al. 1995). The status of 15 items of need are identified as being: an objective problem, a cardinal problem, a suspended need, or a persistent problem despite intervention. Further modifications of this tool (mCNS) were adopted by Boeing et al. (2007) due to the age range of participants in their study. Table 3 includes the items of need that were included in mCNS, rather than the items from the CNS.

Finally, the BPNS-G is a 21-item, interviewer-administered scale, first published in 2000 (Ryan & Deci 2000). This tool derives from Self-Determination Theory. It has been used beyond the health sector and across a diverse range of populations, including factory workers and athletes (Gagné 2003; Ryan & Deci 2000). Autonomy, competency and relatedness, are rated on a seven-point Likert-scale in order to evaluate psychological needs, motivation and well-being (Ryan & Deci 2000).

A number of other tools were used to evaluate the needs of individuals recovering from a first episode of mental illness. These tools have not been described in detail, as they were either developed by the researchers for their particular study as was the case in deHaan et al. (2001), or were not exclusively needs assessment tools, as seen in the articles published

by Comtois et al. (1998) and Skärsäter (2006), who adopted the Problems Perception and Adaptation Strategies Questionnaire and Support-Q assessment tool respectively.

One article identified data obtained from an electronic assessment tool, known as the Ontario Common Assessment of Needs (OCAN) (Hensel et al. 2016). There is very little information about the OCAN in the academic literature, however, some grey literature relating to the tool exists (Zosky n.d.). The OCAN has been developed to assess the needs and recovery goals of individuals recovering from mental illnesses (Zosky n.d.). The CAN has been embedded into this program, and is the primary tool used to assess needs. As the main tool was not adapted or altered for individuals recovering from a first episode of mental illness, the OCAN has not been included in Table 3 as a separate assessment tool.

Most of the categories of need and some specific needs are included in one or more of the assessment tools examined in this review. However, the tools that have been used do not consider the full array of needs identified in this population, as demonstrated by the number of needs contained in the final column of Table 3. The items of need that do not appear in any established needs assessment tool span all nine categories. Notably, emotional needs are not identified in any established needs assessment tool.

DISCUSSION

This review is the first study to systematically and comprehensively identify the documented needs of individuals recovering from a first episode of mental illness for which they have been admitted, or are currently admitted, to a specialised mental health unit. It has identified existing needs assessment tools that have been used with this population and demonstrated that a needs assessment tool designed for this target population does not yet exist. This study has also shown that items of need in the established needs assessment tools that

have been used with this population include relevant items of need, but that there are also a number of items which are absent from these tools.

Needs are dynamic, and are known to alter over time as a result of personal and environmental changes (Fitch 2008; Maguire et al. 2013, p.462). Further evidence of this was found through addressing the first review question. Variables such as gender, age and stage of recovery were identified as having the capacity to alter the experience and manifestation of needs (Bertani et al. 2012; Boeing et al. 2007; Landolt et al. 2012b; Woodside & Krupa 2010). Articles revealed a number of links between needs and provided evidence that some needs may act as a catalyst for other needs. This inter-relation between needs suggests that undertaking assessments and interventions relating to needs in this population could be enhanced if undertaken systematically, and potentially hierarchically. In other areas of health care, it has been suggested that the predictive value of needs could be calculated in order to more efficiently evaluate and address them (Maguire et al. 2013, p.462). Regardless of whether such a systematic approach is used, results of this review re-iterate the importance of acknowledging that individuals who experience a first episode of mental illness are not a homogenous population (Cocchi et al. 2014), and may not experience the same course of needs.

When addressing the second research question, it is evident that the assessment tools that have been used to evaluate the needs of individuals recovering from a first episode of mental illness are inadequately equipped to accomplish this task holistically. Needs that are not included in the three broader established needs assessment tools (CAN, mCNS and NFCAS) account for almost half of the total number of needs. The needs that are absent from these tools span all nine categories and include needs which may arguably be essential to the restoration or maintenance of an acceptable level of social independence and quality of life. Notably, emotional needs, as a category, are not represented in any of the established tools. The three tools vary significantly in their inclusion or exclusion of items of

need. Differences can be seen in the number of items in each category, and the presence or absence of categories of need. For example, the NFCAS places a greater emphasis on functional and symptom-related needs, whereas, there is a greater weighting given to practical needs in the CAN.

Another notable difference between the CAN, the mCNS and the NFCAS is the choice of language used to name the items. To highlight the differences in language use, items in Table 3 which are similar in nature, but which have been placed into different categories due to the labels used to describe the need, have been assigned an asterisk. These labels demonstrate how language use in assessment tools may influence the interpretation of particular items. For example, financial needs are described in three different ways. The emphasis in the NFCAS on 'weekly budget' is placed on the functional capacity of the individual to appropriately manage their income. The item 'money' from the CAN may suggest a broader array of needs relating to the individual's source of income as well as its management. For these two examples, the interviewer may either be restricted to discussing the function of budgeting in the former, or have wide discretion to interpret and assess the item in the latter. In the mCNS, the need to have money and to manage it appropriately appear to be blended into the item 'money/own affairs'. In an assessment which is being scored, the containment of these two items under one label may increase the frequency of an individual's financial needs being falsely interpreted. The use of language in these examples, highlights the influence of a label on what is actually being assessed, and invites clinicians and researchers to further consider how they approach both the formal and informal assessment of needs.

The use of language relating to risk and safety was also notable in the needs assessment tools included in this review. In the CAN, items include either 'risk to self' and 'risk to others' (Hensel et al. 2016), or 'safety to self' and 'safety to others' (Bertani et al. 2012; Jorquera et al. 2015; Landolt et al. 2012b; Schlithler et al. 2007), depending on which version of the

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assessment was used, whereas the mCNS and NFCAS include the item 'dangerous and destructive behaviour'. Discussion in the literature suggest that use of language by clinicians that relates to risk is not always understood by patients, as it does not reflect the experiences or use of language of this population (Clancy, Happell & Moxham 2014).

Additionally, the inclusion of the items 'risk to self and others' and 'dangerous and destructive behaviour' in a needs assessment tool calls into question the purpose of the assessment and its aim to assess what needs the individual may be experiencing. When working within a patient-centred framework, it may be more appropriate to name these items with reference to an individual's sense of personal safety within different environmental contexts, and possessing adequate skills to circumvent impulsive and harmful behaviours (Clancy, Happell & Moxham 2014).

It is arguable that any systematic needs assessment tool that includes all the items of need that have been identified in this review would be impractical to use, and indeed, previous research has identified additional workload and the length of needs assessment tools as significant barriers to their implementation in clinical practice (Middleton, Regueira & Bramley 2009). Despite these challenges, there are benefits to using holistic, systematic needs assessments which have been seen in individuals recovering from a first episode of mental illness and across other populations of individuals who are engaged with a health care system. Firstly, the systematic evaluation of needs has been found to increase the understanding of an individual's needs by clients, clinicians and carers (Comtois et al. 1998; de Haan et al. 2001; Fitch 2008; Ramsay et al. 2011). Additionally, the process of assessing needs often facilitates the identification of needs which may then be addressed and lead to improved quality of life, and a greater capacity to be socially independent (Comtois et al. 1998; de Haan et al. 2001; Ramsay et al. 2011). Given the differences of opinions regarding the experience and severity of needs noted in the reviewed articles, the use of such a needs assessment tool could improve the understanding of these two parties and improve the delivery of patient-centred care.

Whilst a substantial amount of information relating to the needs of individuals recovering from a first episode of mental illness, and the assessment tools that have been used to identify these needs is present in the literature, there are a number of gaps and limitations which future research can target. Firstly, the majority of the articles in this review investigated the needs of individuals with a first episode of psychosis. Some articles did involve participants who were diagnosed with other mental illnesses, including bipolar affective disorder, major depression and anxiety disorders (Bielavitz, Wisdom & Pollack 2011; Boucher, Groleau & Whitley 2016; Hensel et al. 2016; Skärsäter 2006), however, there is insufficient information relating to similarities or differences in the experience of needs between these different cohorts.

Additionally, it is known that the course of illness may be different for individuals with a primary mental illness to that of individuals who have a substance-induced mental illness or comorbid mental illness and substance abuse disorder (Caton et al. 2006). The majority of review articles did not examine differences in the experience of needs between these two populations, however, these could be taken into consideration in the development of such needs assessment tools.

Finally, data presented in this review do not represent the experience of participants from diverse cultural or ethnic backgrounds. The ethnicity of participants was either not recorded, or only partially reported in the majority of the articles included in Part A ($n = 14$, 70%). Where ethnicity was reported, the majority of participants were of Caucasian descent.

This review is limited by the inclusion criteria; specifically, that articles were only included if they were published in English and in peer-reviewed journals. Further items of need and considerations may be found in grey-literature. The language criteria may have limited the review to the experience of Caucasian, Western participants and contexts. The experience

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of needs in a number of regions of the world is not adequately represented here. This review is further limited by the populations which participated in the included studies. There may be differences in experience between individuals who are recovering from a first episode of mental illness after being admitted to a tertiary mental health unit, and those individuals who are recovering from a moderate to severe first episode of mental illness who did not present to a tertiary mental health service or who are recovering from milder symptoms of a mental illness and were not considered suitable for specialised mental health services. The variations in experience of needs between these different sub-populations have not been explored here. Therefore, results of this review may not be generalisable to all individuals who are recovering from a first episode of mental illness.

CONCLUSION

A significant number of needs are experienced by individuals who are recovering from a first episode of mental illness, for which they have received specialised mental health care. Four established needs assessment tools have been used to assess the needs of this population; however, these were not developed for this population, and do not appear to sufficiently represent them. A number of considerations relating to the needs of this population have been presented in the current literature, and may be used to inform improved clinical practice, and the development of a targeted, systematic, clinical needs assessment tool to be used for individuals who have experienced a first episode of mental illness in the future.

RELEVANCE FOR CLINICAL PRACTICE

This scoping review provides insight into the broad array of needs that have been expressed by individuals recovering from a first episode of mental illness. Understanding these needs is critical for any clinical practice that endeavours to be person-centred and recovery-oriented, particularly in view of the evidence that clinicians and clients may differ quite significantly in their appraisal of the type and severity of need that is being experienced. It is anticipated

that the clinical use of a formal, systematic needs assessment tool that is relevant to this population, will improve therapeutic relationships and the meeting of needs, as it has done in other areas of health care.

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