Social connectedness in adults with mental disorders: ecological validation of a conceptual framework for novel complex interventions

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Abstract

Background: Social connectedness interventions may improve the clinical outcomes and personal recovery of adults with mental disorders but many interventions lack a clear theory-base and show limited effectiveness.

Aim: To evaluate the validity of a newly-developed conceptual framework (the CIVIC framework) to function as the theory-base for novel social connectedness-based mental health interventions.

Method: Semi-structured interviews with adults with diagnostically heterogeneous mental disorders (n=13) and mental health professionals (n=9). Participants reported their social connectedness experiences, their views on the CIVIC framework and potential targets for new interventions. Sequential inductive and deductive thematic analyses were used. Data quality were assessed through respondent validation.

Results: Both inductive and deductive analyses provided validation of the CIVIC framework. Additional themes of Stigma and Connectedness beyond social relationships were identified in the inductive analysis. Candidate interventions to target each CIVIC domain were identified.

Conclusions: The CIVIC framework demonstrates ecological validity and can therefore serve as the theory-base for the development of novel social connectedness-based interventions. Current interventions target single domains, such as increasing social network size, and show limited effectiveness. This study indicates that interventions would be most effective when they incorporate evidence-based approaches which target each of the categories described by the CIVIC framework.

Keywords: social connectedness, conceptual framework, complex interventions, mental disorders, loneliness

Introduction

Social connectedness has been defined as the psychological bond an individual experiences with other individuals, groups and communities (Hare-Duke et al., 2019). Social connectedness has been shown to improve mental health in both clinical (Palis et al., 2020) and non-clinical populations (Saeri et al., 2017) yet loneliness is a major concern for adults with mental disorders (Meltzer et al., 2013). Loneliness predicts poorer prognosis, particularly for major depressive disorder (Jeuring et al., 2018; van den Brink et al., 2018). It is also a major risk factor for morbidity and early mortality (Hare-Duke, 2017), for which psychiatric populations are already known to be at increased risk (Thornicroft, 2011). Meanwhile, social connectedness has been identified as being one of the key processes involved in personal recovery in clinical populations (Leamy et al., 2011; Salehi et al., 2019; Stuart et al., 2017) with some arguing that recovery is an inherently social process (Law et al., 2020; Marino, 2015; Price-Robertson et al., 2017). Increasing social connectedness in order to reduce the high prevalence of loneliness amongst adults with mental disorders and support mental health recovery are therefore international policy priorities (UK Department of Culture Media and Sport, 2018; World Health Organization, 2013).

However, whilst there are continuing efforts to tackle loneliness and increase social connectedness amongst psychiatric populations (e.g. Davies et al., 2020; Forrester-Jones et al., 2012; Such et al., 2019) there is a lack of robust trial evidence targeting this outcome (Ma et al., 2019). The lack of a clear theory-base for social connectedness-based interventions has been highlighted in successive systematic reviews as a limiting factor which has impeded progress in this area (Dickens et al., 2011; Gardiner et al., 2018).

Within the Medical Research Council guidance for the development and evaluation of complex interventions it is recommended that all interventions are developed in accordance with a clearly defined theory-base (Craig et al., 2008). The construct of social connectedness is complex and multi-dimensional, with researchers often using multiple different measures to assess this phenomena within the same study (e.g. Haslam et al., 2016; McIntyre et al., 2018). The conceptual complexity of social connectedness makes it challenging to design interventions which target this outcome. New theoretical frameworks to guide the development of clinical interventions to improve social connectedness have therefore been called for (Ma et al., 2019; Mann et al., 2017; Victor et al., 2018).

A recent systematic review identified five possible domains for mental health interventions to increase social connectedness (Hare-Duke et al., 2019). These five domains were labelled Closeness, Identity, Valued relations, Involvement and Cared for and accepted (giving the acronym, CIVIC). However, the CIVIC framework does not identify specific intervention targets for each of these areas. Moreover, this review drew on academic research rather than the perspective of adults with mental disorders or clinicians and therefore the ecological validity of the CIVIC framework is unclear (Priebe, 2007).

Ecological validity refers to the degree to which the results obtained from a research setting translate to real-world settings (Brunswik, 1956). The theory-base of mental health interventions provides the basis for the explanatory frameworks used to describe an intervention to participants and provide a rationale for the activities involved. Previous evaluations have shown that the explanatory frameworks of psychosocial interventions need to be consistent with the understandings and experiences of the target population

(Constantino et al., 2012). For example, a meta-analysis of psychosocial mental health intervention trials found that the plausibility of explanatory frameworks to intervention recipients was a key moderator of effectiveness in reducing symptomatology (Benish et al., 2011). The theory-base and explanatory models of interventions must therefore be cogent to the target population group as well as to clinicians. Therefore, the ecological validity and relevance of the CIVIC framework needs to be assessed in relation to the experiences of social connectedness of adults with mental disorders and the current practices of clinicians.

The aim of this study is to evaluate the validity of the CIVIC framework and identify candidate refinements to this framework to inform specific targets for novel social connectedness interventions.

Methods

Semi-structured interviews were conducted. All procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. All procedures involving human subjects were approved by Division of Psychiatry and Applied Psychology Ethics Sub-committee at the University of Nottingham (reference number: DPAP/249). Written informed consent was obtained from all subjects.

Participants

Participants comprised people with a mental disorder (hereafter 'lived experience participants') and mental health professionals (hereafter 'staff participants'). Inclusion criteria for lived experience participants were: aged 18-65; using social care or third sector services for people with mental disorders; ability to speak/read English; ability to give

informed consent. Inclusion criteria for staff participants were: currently working in the health care, social care or voluntary sectors; one year or more of experience supporting people with mental disorders to develop social connectedness.

Sampling and recruitment

Lived experience participants were recruited from mental health support groups based in the UK Midlands region. Staff participants were recruited from a mental health team based in social care and two voluntary sector charities. Convenience sampling was used with efforts made to recruit a diverse range of participants in terms of age, gender, socioeconomic background, mental disorder, mental health service use, and professional background. Recruitment continued until theoretical saturation was achieved.

Data collection

Participants were interviewed at a time and place of their choosing. A socio-demographic form was completed at the beginning of the interview. The topic guide was split into three sections: (1) participants' understanding and experiences of social connectedness; (2) participants' views on the CIVIC framework; and (3) barriers and facilitators of social connectedness in the context of an intervention. Staff were asked about their service users' experiences of social connectedness as well as their own. All interviews were audio recorded, transcribed verbatim, and anonymised. Respondent validation was conducted via face-to-face interview or a structured form via email. Participants were shown preliminary results and asked about the representativeness of the analysis and whether they would make changes.

Data analysis

Transcripts were coded using NVivo10. Inductive and deductive thematic analysis coding procedures were used. First, two researchers independently coded transcripts line-by-line using inductive techniques to identify themes concerning experiences of social connectedness. An academic researcher (LHD) independently coded 10 transcripts alongside a service user co-researcher (RD) to develop a preliminary coding framework. The kappa coefficient was calculated to determine the consistency of coding between analysts. One researcher (LHD) coded the remaining transcripts once good inter-rater reliability was established (κ>0.6) (McHugh, 2012). Second, a deductive analysis was conducted using a predefined coding framework comprising the CIVIC categories to assess their fit to the data. These categories comprised five superordinate themes (Closeness, Identity and common bond, Valued relationships, Involvement and Cared for and accepted) and four subordinate themes (Group/network involvement, Companionship, Social Acceptance, Social Support). A subgroup analysis was conducted to compare accounts by lived experience and staff participants.

Negative case analysis was used to examine whether the emerging results were fully supported by the data and increase the rigour of the final analysis (Onwuegbuzie & Leech, 2007). Elements of the data which did not support the CIVIC framework and other preliminary results were sought out and discussed. Respondent validation was also used to assess whether the synthesised findings fitted with participants' experiences. The Standards for Reporting Qualitative Research (SRQR) guidelines were followed (O'Brien et al., 2014).

Results

Participants

A total of 22 individuals participated in the interviews, comprising nine staff participants and 13 lived experience participants. Table 1 shows the socio-demographic and clinical characteristics of the participants.

[insert Table 1 here]

Themes

Agreement between the analysts was substantial (κ=0.74). A single coding framework was developed as no major differences were found between the themes emerging from lived experience participants compared to those with staff. Eight participants (six lived experience, two staff) participated in the respondent validation process, with no significant changes suggested for the analysis. The coding framework developed through inductive analysis is shown in Table 2. All the CIVIC categories were represented in the data, with new superordinate and subordinate themes also being identified. Each theme is described as follows.

[insert Table 2 here]

1. Closeness

Two new subordinate themes were identified for Closeness: Feeling comfortable and Trust. Feeling comfortable was reported to increase via regular contact with others over time whilst participants recommended that Trust could be increased by supporting people to self-disclose information to others but that this necessarily took time.

> It's about relationship building and familiarity and feeling relaxed and trustful with someone. (#15, staff)
>
> I've been in this job for ten months…and they are only now starting to open up when they meet for twice, two-hour every week at the groups. (#17, staff)

2. Identity and common bond

Social connectedness was partly based upon sharing something in common with others. This commonality could be based on a wide range of different characteristics, such as mutual interests or a shared background, but it needed to be a characteristic which was personally important to the individual. It was suggested that one potential component of interventions could be to identify individuals' valued personal and social identities to inform later behaviour change and goal-setting exercises.

> I think if you, yeah, if you don't have a particular element that is running through everyone then there is no way to socialise with them. (#9, lived experience)

A new subordinate theme of Shared mental health experiences emerged with participants reporting that they 'fitted in' rather than feeling like an outsider in social contexts where others were known to have similar mental health issues. Exercises to emphasise the shared experiences of service users were suggested for clinical interventions.

> Most of the people here have some kind of similar mental health related issue and that helps them connect…It's a lot harder to feel like an outsider. (#12, lived experience)

3. Valued relationships

Valuing or viewing others positively was a key part of participants' motivation for socialising. Exercises which help service users to reflect on their valued relationships may therefore increase their social behaviours and engagement in interventions. Participants further emphasised that valued relationships were based on reciprocity, such that psychosocial education and practices to increase reciprocity in service users' behaviour could improve the quality of their existing relationships.

> I think it's about feeling that you've got people around you who are of importance to you, also that you are of importance to. (#22, staff)

4. Involvement

Involvement with others was represented by two subordinate themes which were labelled Group activities and Companionship. Participants stressed the importance of regularity of contact for promoting the other themes of social connectedness such as Closeness.

> Without that regular contact it kind of just starts to evaporate a bit. (#14, staff)

> [Connectedness means] if you want to go out you have someone to go out with. (#7, lived experience)

Participants suggested three candidate interventions were suggested in this domain. First, clinical group interventions should be longer-term (more than two months) to increase recipients' social connectedness within the group itself and to provide sufficient time for changes in recipients' perceptions and behaviours within their relationships to occur. Second, digital interventions such as online forums were recommended to maintain regularity of contact between weekly face-to-face group sessions. Third, some service

users may require a supported socialisation component whereby a staff member supports a person to attend a community-based group.

5. Cared for and accepted

The feeling of being cared for and accepted was described by participants in terms of two subordinate themes: Social acceptance and Social support. The perception of being socially accepted was described by participants with reference to both the attitudes and behaviours of others. First, acceptance was understood partly in terms of the attitudes others took towards them as a person. Acceptance in this sense referred to feeling understood, not being judged and being valued as a person. There was also a behavioural component to acceptance which involved being welcomed and included in social activities.

> And if you do feel accepted and people are non-judgmental…to make you feel welcome. (#7, lived experience)

Feeling cared for by others also involved being supported by them. This was especially important when facing a difficult or stressful situation. Participants described several types of support including emotional and practical support.

> …whether it be someone who will take on-board your upset, your bereavement, your situation and discuss it with you. (#9, lived experience)

Participants reported that experiencing the same challenges as others can facilitate the processes of social support. This could occur through: (i) a better understanding of the nature of the challenges faced by the other person; (ii) sharing what has been helpful to

them in the past; and (iii) instilling hope. Shared experiences of mental illness also supported perceptions of social acceptance.

> People come here and they feel probably safe because they know everybody's got a common [reason] why we're here. (#2, lived experience)

> It can help sometimes knowing that there's other people have the same issues as yourself knowing that they can do it, can give you… the oomph to do what they're doing. (#20, lived experience)

It was therefore recommended that structured interventions to increase service users' social connectedness could include peer support components to foster these perceptions. It was further suggested that the primary role of group intervention facilitators, alongside delivering specific exercises, should be to ensure that groups are supportive and explicitly non-judgemental.

5. Stigma

Mental health stigma was found to be a barrier to social connectedness as described by two subordinate themes: Feeling fundamentally different, which interfered with perceptions of commonality with others; and Feeling judged and excluded, thereby reducing perceptions being accepted by others or being involved in group activities. Participants did not suggest any interventions to reduce stigma.

> Without making people feel that they're iso-, not isolated, that they are labelled, basically, yeah, because mental health still has barriers, so many barriers. It's so unacceptable in today's world. Any world. Always has been. Because they're dangerous, they're weird. (#9, lived experience)

6. Connectedness beyond social relationships

Some participants referred to connectedness in a broader sense than is captured by the CIVIC framework and described experiences of connectedness beyond social relationships. First, some participants made reference to Spiritual connectedness against a background of their spiritual or religious beliefs rather than due to social processes specifically. Second, it was suggested that some people prefer non-human relationships and described a feeling of connectedness to animals. Assessing service users' religious beliefs and preferences for different types of relationship may therefore indicate the type of interventions and contexts which could reduce perceived isolation.

> Yes course we're all connected in some way! We're all God's children. (#18, lived experience)

Negative cases

Five participants (two lived experience, three staff) reported that Closeness was not essential in relationships. It was argued that, whilst closeness is important overall, it is not necessary within every relationship. Some people may also desire Closeness but not be comfortable with this experience. Five separate participants (three lived experience, two staff) also reported that Valued relationships are not a necessary dimension of social connectedness. It was argued that perceptions of relationships will vary over time and that positively regarding another person or group is only necessary over the long-term.

Discussion

The results from this study suggest that the CIVIC framework of social connectedness is ecologically valid for adults with mental disorders. Existing social connectedness

interventions have targeted single domains such as increasing social network size, which do not appear to be effective in improving key psychosocial outcomes such as reducing loneliness (Masi et al., 2011; Victor et al., 2018). By contrast, the findings from this study suggest that multiple different domains need to be targeted within complex interventions in order to effectively increase social connectedness.

There were ten negative or disconfirming cases for the CIVIC framework with two themes, *Closeness* and *Valued relationships*, questioned by five participants each. Nevertheless, in all cases, the reasons given by participants related to particular circumstances or a minority of people and it was stressed that *Closeness* and *Valued Relationships* are important to social connectedness overall. The disconfirming cases with regard to *Valued Relationships* may be unsurprising as both positive and negative content often feature within a given social relationship.(Offer & Fischer, 2018) Similarly, the finding that not all adults desire *Closeness* reflects the well-established theory of attachment within psychiatry and developmental psychology. The estimated prevalence of adults showing an 'insecure-dismissing' attachment style, or a tendency to avoid closeness in relationships, is 30% in Europe and 37% for clinical populations (Bakermans-Kranenburg & van Ijzendoorn, 2009). Hence, it may not be surprising that five negative cases (23% of interviewees) were found for the *Closeness* theme.

New themes were identified which contextualise the experience of social connectedness for adults with mental disorders. First, shared mental health experiences emerged as a key facilitator of social connectedness. Shared experiences provided a source of support, perceived acceptance and commonality with others. The salience of shared mental health experiences is corroborated in the related literature on peer support relationships (Gillard et al., 2015). Meanwhile, stigma emerged as a significant barrier to social connectedness

for this population. This fits with previous findings that perceived and experienced stigma can lead to feelings of social isolation (Dinos et al., 2004), social withdrawal (Kleim et al., 2008) and represents a major barrier to social activity (Stain et al., 2012). Finally, it was found that people could form bonds outside of social relationships. Spiritual beliefs, for example, are important for many mental health service users and are associated with reduced feelings of loneliness (Kirkpatrick et al., 1999).

Strengths and limitations

One strength of this study was the inclusion of a service user co-researcher. The lived experience perspective helped strengthen the data analysis given the subjective nature of loneliness and social connectedness and the inter-relationship of these experiences with mental illness (Hare-Duke, 2017).

A limitation of the study is that participants may have felt compelled to confirm the validity of the CIVIC framework when in fact they did not think so or were unsure. However, the inductive analysis of responses to open questions about social connectedness suggested that the CIVIC framework did in fact fit with participants' experiences. Negative case analysis was also used to highlight data which did not fit with the overall results. Therefore, this source of bias is unlikely to have been a major influence in this study.

A second limitation is the lack of ethnic diversity in the sample. This limits the transferability of the results across different cultural groups. For example, different ethnic groups may report unique conceptions of social connectedness stemming from their cultural values and norms regarding social engagement and social relationships (Victor

et al., 2012). Future research should investigate how social connectedness is experienced by adults of different ethnicities.

Conclusion

The results of this study identify the key mechanisms which may increase social connectedness amongst adults with mental disorders and the corresponding targets for new interventions. Clinical assessment should include consideration of the five CIVIC themes and novel interventions may use the CIVIC conceptual framework to identify appropriate targets for intervention.

Candidate intervention components targeting each of the CIVIC domains were also identified in this study. First, service users could be supported to gradually self-disclosure information about themselves to others, which will increase the closeness of their relationships and reduce the isolating experience of self-stigmatisation (Rüsch et al., 2014). Second, group interventions need to be longer-term (more than two months) and could include structured assessments of personal and social identities, spiritual beliefs and preferences, peer support activities, psychoeducation on aspects of relationships such as reciprocity and support to join ongoing community-based groups.

Shared mental health experiences emerged as a particularly important feature of social connectedness for adults with mental disorders. This finding could be utilised within group interventions by supporting participants to share their story through narrative exercises or by encouraging self-disclosure. There may also be wider service implications of these findings in terms of making the shared experiences of service users more visible in clinical settings. One approach might involve supporting service users to develop and share their own stories of mental health. This may help service users to form social bonds

and build collective identities (McWade et al., 2015). There is some preliminary evidence that sharing mental health narratives helps to build connectedness (Rennick-Egglestone et al., 2019) though this approach has not been formally evaluated as an intervention. One way to evaluate this approach may be to conduct a process and outcome evaluation of mental health services which aim to support people in this manner, such as Recovery Colleges.

The next step in developing new clinical interventions is to combine the components of these different interventions shown to be effective in order to more directly target loneliness and social connectedness. Theoretically informed process evaluations can draw on the CIVIC framework to help identify the active ingredients of new interventions.

Declaration of interest

The authors have no conflicts of interest to declare.

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Table 1. Sociodemographic and clinical characteristics of participants (n=22).

Characteristic	Participant group	
	Lived experience (n=13)	***Staff (n=9)***
Age in years (mean, SD)	49.3 (11.9)	47.3 (9.1)
Gender: Male (n, %)	9 (69)	4 (44)
Ethnic group: White (n, %)	13 (100)	8 (89)
Living arrangements (n, %)		
Live alone	9 (69)	
Live with others	4 (31)	
Partner status (n, %)		
Single	6 (46)	
In a relationship	3 (23)	
Divorced or separated	4 (31)	
Self-reported diagnosis (n, %)[$]		
Depression	7 (54)	
Anxiety	5 (38)	
Schizophrenia	3 (23)	
PTSD	3 (23)	
Psychosis	1 (8)	
Bipolar disorder	1 (8)	
Schizoaffective disorder	1 (8)	
Social anxiety	1 (8)	
Prefer not to say	1 (8)	
Mental health service user (n, %)[%]	9 (75)	
Profession (n, %)		
Social worker		5 (56%)
Support worker		2 (22%)
Clinical psychologist		1 (11%)
Occupational therapist		1 (11%)
Years of work experience (mean, SD)		12.6 (9.9)

[$]Seven participants reported multiple diagnoses. [%]One participant preferred not to say

Table 2. Coding framework developed in the inductive analysis.

Superordinate and subordinate themes	Definition	Candidate intervention target
1. Closeness **1.1 Feeling comfortable** **1.2 Trust**	Closeness is characterised in terms of feeling relaxed and familiar with another person as well as trusting them	1. Self-disclosure 2. Long-term structured groups
2. Identity and common bond **2.1 Shared mental health experiences**	Sharing a personally salient characteristic with another person or group	1. Assessment of personal identities 2. Making shared mental health experiences more visible
3. Valued relationships	Valuing an existing interpersonal or group relationship and viewing this relationship positively	1. Social network assessments 2. Psychosocial education
4. Involvement **4.1 Group activities** **4.2 Companionship**	Perceived involvement with other people both in terms of regular group activities and one-to-one companionship	1. Longer-term group interventions 2. Identify ongoing social groups 3. Supported socialisation
5. Cared for and accepted **5.1 Acceptance** **5.2 Social support**	Perceiving oneself to be socially accepted and supported by others	1. Peer support 2. Group disclosure of mental health experiences
6. Stigma **6.1 Feeling different** **6.2 Feeling judged and excluded**	Negative attitudes or behaviours which lead to perceptions of being different, judged and excluded by others	No identified interventions

Table 2. Continued.

7. Connectedness beyond social relationships **7.1 Spiritual connectedness** **7.2 Connectedness to animals**	**Psychological bonds which are not based in social relationships**	**1. Identify religious/ spiritual beliefs** **2. Companion animals**

Bold=new themes not present in the original CIVIC framework.