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Sociometric methods and difference: a force for good - or yet more harm
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This paper offers a critique of sociometrics as a ubiquitous method of measuring social relationships among children in social groups such as school classes. This is important in relation to disability politics and research as the apparently scientific measures are frequently used in the process of labelling children or predisposing the children involved, or others involved with them, to view disabled and other children in particular ways. We open a debate about judgements concerning whether the use of sociometric techniques needs to be better informed by questions about the underpinning normalising frameworks on which they depend, about the connotations of blame associated with particular sociometric statuses, and about the way that research constructs difficulties and reflects an adult agenda, marginalising the voices of (disabled) children. We argue for the value of the transactional turn in understanding the implications of this approach and for highlighting alternative perspectives.

Keywords: sociometrics; friendship; quantitative measures; popularity; disabled children; transaction

Points of interest

- SSL approach researchers use to measure the popularity of individuals. Often researchers ask participants to name the people they like or dislike spending time with and calculations are used to determine a category of popularity for each individual.
- We argue that this approach is based on an assumption that all individuals need and want a certain number of friends rather than understanding the varying nature of social experiences. We include the voices of disabled children and researchers in countering particular assumptions.
- This practice of categorising individuals as popular, and so on, may construct and reinforce social difficulties, especially for disabled children. It fails to consider the role of the environment in creating these difficulties, and instead may blame the individual.
- Lastly, this approach may have a detrimental impact on behaviour and interactions and may affect the social context.
Introduction

Sociometrics as tools for measuring social relationships across children and adults and a range of social contexts are well established. In educational research, and particularly in studies concerned with children’s social experiences of schooling or the group belonging of pupils who are different, disabled, or have learning disabilities, there is considerable reliance on the use of these measures. This methodological dominance was particularly apparent to us when conducting a literature search on the theme of belonging and friendship. The method is also widely used outside education; for example, in studying the interrelationships between workforce staff (Jones 2001).

In this paper we critique the sociometric approach from a social justice perspective, drawing attention to the potential for harm through the normative pressures and labelling processes entailed. In offering the critique we draw on the perspectives of disabled people from the literature and of children and young people from our own research. The paper is not an attempt to evaluate all, or even a specific sample, of the work in this vast field, although our examples are mainly drawn from the education field in which we work. Instead this is a discursive paper, motivated by a concern to respond to the issues arising for us as we are constantly confronted with this body of work in our own research on social belonging. We qualify our arguments with the acknowledgement that there is considerable variation in sociometric techniques and what use is made of them. Thus, it is to some definitions that we now turn.

Avramidis and Wilde describe sociometrics as:

quantitative tools which are designed to measure social relationships, typically used in education studies to understand group clusters and characteristics and for evaluating the extent and types of students’ popularity within classrooms. (2009, 328)

The most commonly used technique to help researchers to identify, describe and evaluate the social status of individuals is the peer nomination approach that originated from Moreno (1934). Children name classmates who fit a particular sociometrics criterion (e.g. ‘three classmates with whom you like to play’). Nominations may be based on positive criteria (as in the example above) or negative criteria (e.g. ‘three classmates with whom you do not like to play’). Variations include McCandless and Marshall’s (1957) picture sociometric nomination technique, used with younger children using photographs of peers.

Sociometric techniques are variously used as the method in a study, or as one of a group of methods. Sandstrom and Cillessen (2003), for example, utilised a diary approach to examine children’s experiences of school each day followed by sociometrics group interviews. For some researchers, there is a need not just to combine but to move on. Avramidis (2010, 415) suggests that social cognitive mapping may provide an alternative to sociometrics, providing more information about the nature of social networks and the relations amongst peers. Here participants are asked to name the pupils they spend time with in school, and their responses are used to form a social map of the class. This approach therefore enables individuals to provide information about social clusters beyond their own immediate set of friends, resulting in the identification of all peer groups in a particular network. This technique leads to the classification of pupils in four types of network centrality: nuclear, secondary, peripheral, and isolate.
A critique

Friendships and social bonds are always going to be differently researched and differently understood by philosophers, psychologists and sociologists; to expect consensus would be naive. Our critique comes from our position as educationalists/methodologists taking the stance that these methods have consequences for people—children, disabled people, teachers and researchers—and these require some attention. *Disability & Society* has not been an outlet for research using sociometrics, perhaps because of these consequences, but it is an obvious place to open up dialogue about whether we should be making more of a fuss about sociometrics and its treatment of disabled children. Two decades ago, writing in the journal, Söder drew attention to the advantages of the techniques in terms of seeking attitudes towards ‘concrete persons’ as opposed to ‘abstract persons singled out only by their disability’ (1990, 232). He further noted the ways in which such research has highlighted the negative social status of children with learning disabilities in particular. Importantly, however, he questioned the usefulness of such research that does not look at why some children are preferred over others and the role of stereotypes and social contexts in the preferences that are elicited. While sympathising whole-heartedly with these points we are not getting into an argument that qualitative alternatives are better as they already exist and do a different job for the researcher. Instead, our arguments are about the injustices that sociometric techniques may inadvertently promulgate for disabled children.

The normativity stranglehold

Researchers who use sociometric techniques often do so out of concern for children who may lack friends and social networks; the argument is that if such children (or patterns of particular kinds of children) are identified, then the research can be used to inform direct interventions to help them (Barrera and Schulte 2009; Frosh and Callias 1980). What this neglects, however, is the underpinning assumption that a certain number of friends is normal and that children with atypical friendship or social patterns require these to be normalised, often by normalising the children themselves. Inherent to normalising is pathologising, and, as McMaugh (2011) shows, pathologising children and their interactions with peers is all too easy. Moreover, such normativity strangleholds can work against the affirmation of positive identities and comfortable lives celebrated in Swain and French’s (2000) affirmation model of disability.

Sociometric techniques are often used to evaluate the interactions between children with and without special educational needs/impairment (for example, Koster et al, 2007), maintaining a view that children should interact together and disabled children should mix with non-disabled peers. However, research by Morris (1999) suggests that although children and young people want to be included in their peer group of non-disabled peers, they also gain a lot from having friends with similar impairments. One young woman with cystic fibrosis explained why having friends with similar experiences was so important:

> When I’m admitted to hospital we sit around in a cubicle, not very big, talking about things … it’s nice to have a peer group … to have a good chat with. (Morris 1999, 39)

Deaf and hearing children and young people interviewed for a study by Jarvis, Iantaffi, and Sinka (2003, 211) talked similarly of the value of peers with ‘similar
experiences’ of deafness alongside other friends. One, with profound hearing loss lamented:

Hearing classmates are not nice and I don’t feel right. It would be better if I had my deaf friend with me. The teacher said she had to separate us. I was angry inside. (Jarvis et al. 2003, 215)

The benefits of commonality felt by young disabled people indicate that while friendships with non-disabled peers are important, they are neither essential nor superior. This is often negated in sociometric assumptions.

Normative assumptions maintain a position that the happiness of young people is completely dependent on the social relations between them and their peers – the number and superficial type of their friendships – without considering the fluid and contextual nature of social interaction. The fluidity of these social relations was particularly evident in our research into belonging for children and young people having difficulties in school. Participants talked about the varying nature of their friendships; for example, after speaking very positively about his friendship with another boy in his year group and the games they played together, Spongebob, a nine-year-old boy, went on to say:

He is annoying at times. Sometimes he can be on my side and sometimes he can be on the bad side ... He’s usually on the bad side twice a day ... well probably more than twice a day now but sometimes he can be on my side. ... Sometimes he makes fun of me, calls me nasty names and copies Jeremy [another peer] by ganging up on me. (Social concept mapping interview; Child, PhD in progress)

Similarly, the fluid, nuanced nature of children’s qualities and of their social interaction was evident in interview with Sonic, who reflected on his relationship with Spongebob, with whom he regularly played: ‘Spongebob is not really my friend ... I like Spongebob ... He’s just ... annoying. He’s funny at times ... He’s nice to me, it’s just that he’s annoying’.

Normativity may be less important than sociometric researchers assume. When Nina, in a special provision for excluded girls, reflected on her peer relationships, she commented that: ‘there’s girls here that understand like, each other’s situations, cos we’ve all like, some of us have been in care, some of us haven’t, some of us haven’t got our mums with us, some of ’em have’ (Nind, Boorman, and Clarke 2012, 649). Two of the girls chatted about how they had ‘made up friends again’, fully recognising that falling out and making up is what happens (Nind, Boorman, and Clarke 2012, 649). While sociometric studies have indicated a relative stability in friendships/social contact nominations over time, they have not problematised the notion that there is an ideal number of friends or that to be on the edge of social groupings can be a valid place to be. This adds to pressures to normalise rather than accept the plurality of children’s social experiences. Even researching to find whether children who are disabled are more likely to have ‘low levels of sociometric status (i.e., neglected, rejected) than their peers without disabilities’ (Farmer and Famer 1996) is to impose a normative stranglehold on a complex social situation. All kinds of assumptions are at work about the value and status of certain kinds of people, certain places in the social set-up and the problematic nature of being different, which are tied up with an uncritical normalisation agenda. This maintains the insider/out-
sider binary without addressing alternative outsider routes to experiencing social belonging (Williams and Nind 1999).

We argue it is important to embrace the subjective and complex nature of interaction and the research process, rather than attempting to discover a singular normative ‘truth’ as sociometrics do. French and Swain (2004) found that a key theme when talking to disabled young people regarding inclusion was the embarrassment they felt at being ‘different’ and the considerable affect this had on their social relations. Here, however, the contextual and situated nature of normative assumptions on social interaction is captured and reflected upon. Arnot and Reay (2007) call for researchers to look beyond the surface of what children say to consider the implicit categories and rules that determine their responses. Reflexivity is therefore important in helping the researcher consider the partiality of findings and the role of research in maintaining these normative understandings.

Architects of their own downfall

Sociometric studies form a core part of a literature in which isolated children are seen as architects of their own downfall. Coie, Dodge, and Kupersmidt (1990, 17), for example, contend that their research shows that ‘cooperativeness and pro-social behaviour emerge as major correlates of positive status’. The reverse is inevitably implied and children who are isolated are identified alongside factors that make them unpopular among others. Often this reflects simplistic, medicalised understandings of the children whose ‘isolation’ is blamed on their own social skills deficits, overlooking the role of the environment, rather than, as Schoon (2009) and Cotterell (1996) have argued, seeking to understand the complex, contextual and situated nature of social interaction.

The children and young people in our research certainly lacked social skills at times but they had insights into the role of the social and physical environment in this that sociometrics would ordinarily fail to grasp. For example, one of our participants, 10-year-old Danny, spoke in detail about how much closer he had become with another of his school peers, yet he then went onto say:

We used to go to the skate park, play computer games at each other’s house or go swimming together but then our Mums had an argument. Now we only see each other in school. (Social concept mapping interview; Child, PhD in progress)

Similarly, in a study into the social exclusion of disabled people with high levels of support needs, Morris reports a young man who had communication difficulties, but no facilitator or equipment to enable him to use telecommunications explaining:

I had a really good friend at school but I haven’t seen her since I left. It’s difficult. I can’t talk to her on the phone. (2001, 168)

With mobility difficulties and disabled by poor public transport, it was doubly problematic for him to meet up with his friend. Equally, much of the variation in the experiences and preferences of the deaf young people talking to Jarvis et al. (2003, 217) could be put down to environmental differences, such that ‘those deaf pupils interviewed who expressed positive views on friendship were located in school environments that celebrated diversity and where deafness had a high profile amongst both staff and students bodies’.
Farmer and Farmer (1996), however, are unusually explicit about the limitations of sociometrics in overlooking the role of the environment in determining social relations. They go on to propose a ‘social network perspective’ that reflects an understanding of the complex arrangement of both individual and group factors with regards to classroom social relationships. However, like Foster and Ritchey (1979), we argue that the tendency of sociometrics more generally to ignore the context of interactions limits the usefulness of the data generated. More importantly, in terms of our argument about potential harms, this can reduce the research to a process of categorisation.

It is evident from research we have been engaged in that children and young people, who become unpopular partly as a consequence of their own social behaviours, have an awareness that they are not entirely to blame. Sam, a young woman excluded from mainstream school, explained for an earlier study:

And when you’re sat there with your hand up for 20 minutes, and get fucked off with it, so then you go and, you just start doing something different because you can’t do the work, and then they think you’re just doing it to be a pain in the arse. Well, NO! You’re the one that didn’t come to me when I asked for help, so in actual fact, you brought it on yourself really. (Nind, Boorman, and Clarke 2012, 648)

For her, as with the young people in McMaugh’s (2011, 854) research, school(ing) is ‘a site of social exclusion’. Moreover, young people talk of differences among their peers – ‘you’ve got the weird ones, and the funny ones, and the best ones [points to self]’ – and how to manage these: ‘some of them you can’t stand … But you try and make an effort, because everyone’s different, and everyone has their different issues’ (Bella, young woman labelled with behavioural, emotional and social difficulties excluded from mainstream school; Nind, Boorman, and Clarke 2012, 648). What may be less apparent to the young people, and to sociometric researchers, is that the voice and choice of a young person has no essential, authentic purity to it; it is a voice and choice produced by and within dominant discourses (Thomson & Gunter 2006) that are gendered, classed, racialised (Wright, Weekes, & McGlaughlin 2000), sexualised (Clarke 2004) and disablist (Davis & Watson 2001; Davis & Hill 2006). Isolated and disabled children are active agents in this and are not immune to adopting the discourses that ultimately harm them.

Making difficulties

Barton’s (1988) core argument that ‘research is not a value neutral activity’ barely needs further rehearsal. Clough and Barton (1995, 3) illustrated very powerfully how research constructs special education needs; through its presumptions ‘research itself creates – rather than merely studies – the phenomenon of special education/disability’. Nowhere is this more evident yet under-critiqued than in the field of sociometrics, where, for example, researchers ask questions about ‘who in your grade do you like most/least’, ‘who are mean’ and ‘who play alone a lot’, and yield scores for liking, disliking aggression, social withdrawal and leadership (Sandstrom & Cillessen 2003). This is a field where researchers create and construct ‘isolates’ (Moreno 1934), ‘most disliked’ (Mand 2007), children ‘at risk’ (see Asher, Markall, and Hymel 1981) and ‘rejected’ (Scheepstra, Nakken, and Pijl 1999; De Monchy, Pijl, and Zandberg 2004). Rieser (2001) notes how the ‘1 in 8
Group’ identified a ‘burden/outcast’ as one of the damaging stereotypes about disabled people that pervade the media. The findings of sociometric studies can reflect and reinforce this stereotype and the marginalisation and exclusion embedded in social systems, recreating them through whole new processes of labelling and categorisation.

Avramidis and Wilde (2009) are unusual in arguing that findings from sociometrics reflect the normative standards of classrooms. Their not altogether unique move to adapt the technique with ‘rating scale’ methods, in which pupils rate their degree of preference for spending time with all their classmates, reflects an awareness of the way in which methods can merely reflect the marginal status of some pupils and thereby bias nominations. Rating scale studies place equal attention on each class member, therefore providing a ‘whole class’, multi-dimensional picture of group associations and the reasons behind them. However, even with a rating scale approach we question to what extent the peer responses are influenced by embedded societal understandings and ‘make difficulties’ by fixing what may be in flux.

Children and young people often get a sense of this fixing of dimensions of their lives, as one young woman explained:

None of the teachers ever liked me anyway, because, they all read my file and stuff, then basically they thought, she’s a pain in the arse from the get-go. So that’s what they thought of me, and that’s how they treated me. (Sam; Nind, Boorman, and Clarke 2012, 649)

This can then be amplified in the research when sociometric patterns disguise the variation in lived experiences in which some children support and some isolate, and things shift (see McMaugh 2011).

Whose agenda?

In probing the potential harm connected with sociometrics, we need to recognise the intended good also associated with these techniques. Many researchers (for example, Gest et al. 2003) justify the use of sociometrics on the grounds that they capture the perspectives of children and young people. Warden and MacKinnon (2003) highlight that what children experience differs from that which adults witness. Rather than relying on teachers as providers of information, peer nomination techniques go more directly to children who, it is argued, are stakeholders in the research. Coie, Dodge, and Kupersmidt, for example, argue the importance of peers in sociometric testing, stating that:

Peers, of course, are the judges of status, so their perspective is crucial. They have access to social interactions that often are outside the scrutiny of adults. They also have an implicit understanding of the norms for behaviour within the child peer group and are apt to be sensitive to the implications of violating these norms. (1990, 18)

Similarly, Hayvren and Hymel (1984) maintain that this technique provides an evaluation of children’s social relations from the perspective of the peers themselves, rather than relying on external or adult sources of information. This may be so, but the desire to identify children who may be ‘isolates’ and so on is very much an adult agenda. Moreover, as part of this agenda, children are recruited into the busi-
ness of categorising or labelling their peers and potentially into creating negative impacts on interaction. This is an argument we return to later in the paper.

The dominance of the adult agenda within sociometric research leads us to question the extent to which this really foregrounds the views of children, continuing to position young people into marginalised roles. Children are given a voice of sorts, but not the kind of control that and ethnographic approach enables (see, for example, Emond 2005). In sociometric research, children’s opinions are designed to fit what we already think we know about being a child easily positioned within overly simplistic categories of social positioning.

The desire to demonstrate the reliability of sociometric data has led to researchers using a test–retest approach to show continuity in peer nominations. For example, Asher, Singleton, Tinsley, and Hymel (1979) utilised a sociometric approach with 19 four-year-old children in a pre-school setting, in which the test was administered at two different times four weeks apart. Once again, this very particular agenda has a consequence for children of drawing them into adult processes, this time of repeat labelling. If nominating a child who is different in some way as someone they do not wish to play with did no stick in children’s minds the first time round, then after multiple nominations the chances of colluding in ‘making difficulties’ are surely increased.

The harm of labelling

Our concern with the potential of sociometrics to cause harm through labelling is not new. Indeed, some researchers who use the techniques attempt to address this in their specific methods. The use of negative nominations, which requires children to report their negative perceptions of children, is the most contentious application. Hayvren and Hymel found no observable negative impacts on preschool children’s behaviour following their involvement in sociometric nominations, but concede that:

Sociometric measures may potentially have other, less readily observable negative effects on children, including the possibility of lower self-esteem among children who are generally disliked by their peers. Until further research has been conducted, the judicious use of sociometrics measures is probably still warranted. (1984, 848)

Due to concerns regarding the influence of negative nomination practice on the behaviour of children, researchers often remove negative nominations from their research design. This is a positive option in our view, but may only serve to make the process of othering some children more subtle. For example, Avramidis and Wilde (2009) argue that sociometrics often result in findings that highlight the popularity or marginalisation of a limited number of children. This is most likely to reflect the normative standards of the class whilst obscuring the position of children accredited with special educational needs. The alternative peer-rating method discussed above is seen as preferential in reducing the impact of focusing on the most and least popular peers by focusing on everyone, but ultimately the outcome is to identify those on the edge of children’s social networks.

For some researchers, reducing the prospect of doing harm is particularly high on the agenda. Avramidis (2010) utilised one-to-one interviews with all participating pupils, rather than administering a self-report instrument. He took careful attention to ensure that the process of peer assessment formed only a small part of a much broader interview addressing a wide range of issues. This, he argues, helped to min-
imise the chance of pupils sharing their answers with peers, reducing the potentially problematic impact on social interaction.

An alternative to avoiding, or minimising the use of negative nominations, has been to research their effects. Various researchers have investigated the effects of negative nominations on the behaviour of children and suggest that the technique does not have a detrimental impact on peer interaction. These studies tend to take a relatively unsophisticated approach to this causal relationship. For example, Iverson and Iverson (1996) asked a group of sixth-grade children who had previously participated in sociometric research about their experiences of the process. Most participants claimed they had enjoyed taking part, but enjoyed the negative nominations less than the positive nominations. Bell-Dolan, Foster, and Sikora (1989) also investigated the effects of sociometric research: fifth-graders who participated in traditional sociometric testing and a control group of children who answered questions about the school subjects they liked and disliked were given measures of mood and loneliness right before and after the surveys. These children were also observed interacting with each other following the procedures. Children who took part in sociometrics testing did not differ from the control children in their reactions to the approach and there were no differences before or after testing with regards loneliness or mood. Therefore, both studies suggest that the use of sociometrics does not have a detrimental effect on participants. Yet looking for potential harm done by negative nominations may be looking in the wrong place; that is, it may not be the behaviour of the nominating children, but the behaviour of other individuals and the cumulative effect on the social context where harm is done.

The transactional turn

Our argument is that we should be less concerned with isolating simple relationships – who likes who, who dislikes who and how identifying this impacts on behaviour – and more concerned with the role of sociometric techniques in influencing the ongoing interactions within classrooms and other social settings. Sameroff (1991) proposes a transactional model as a way of understanding complex two-way influences. While his concern has been with how infants and parents influence each other, their environments and thereby the infants’ development, this model is applicable here. It allows us to see that as soon as one person interacts with another, this changes that person, and it is this changed person with whom they then interact and who in turn changes them. As Llewellyn and Hogan (2000, 161) put it: ‘behaviour change in one person influences the behaviour and is then fed back transformed to the other’. This process is repeated in ‘continuous dynamic interactions’ (Sameroff 1991, 173), which makes the notion of one-off consequences of our research interventions highly problematic.

Applying a transactional model to understanding children’s social experiences and to the role of sociometric techniques in influencing these experiences recognises all of the players as active synthesisers of information and active agents. A multitude of interaction dynamics lead up to children’s peer nominations, and a multitude of interaction dynamics follow on from them. Some of the disabled children in Connors and Stalkers’ (2007) study talked of dealing with bullies, intervening themselves, but this is invisible to sociometric accounts. Those in McMaugh’s (2011) study showed different trajectories as friendship patterns improved or got worse for them over time. Moreover, the expression and the construction of relationships are
conducted as a social activity such that ‘identity can be created and re-created in relationships’ (Gergen 2001, 146). Yet sociometrics rarely engage with the factors at work (Foster & Ritchey 1979), let alone the dynamics. A core argument in defence of sociometrics is that identifying children on the margins of social groups allows us to do something about them – to intervene in the perceived problem. Vasa, Maag, Torrey, and Kramer (1994) found that 41% of teachers in a state-wide survey used sociometric techniques in the classroom for grouping learners for lessons. Avramidis and Wilde (2009) justified using sociometrics alongside qualitative exploration because they wanted to capture the impacts of inclusion on the behaviour, social skills, attitudes and friendship of children with and without ‘special educational needs’. But understanding the transactional dynamic illustrates that the sociometric process itself is part of re-defining children and their relationship with the social environment. This has the potential to set up patterns of behaviour among teachers and peers and classroom cultures counter to those that are actually desired. A sociometric approach to identifying and addressing social dynamics may neglect those very dynamics – fixing that which is fluid – and reducing that which is transactional to something linear.

Conclusion

We reflect on what we do with this critique and where it takes us, and we suggest three ways in which it might make a difference. The first is to prompt further exploration regarding the extent to which the more sophisticated variations and alternatives to sociometrics, such as Cairns et al.’s (1997) and Avramidis’ (2010) social cognitive mapping and Farmer and Farmer’s (1996) ‘social network perspective’, take better account of the transactional and have less potential for harm. The second is to stimulate further debate among the community of researchers using sociometric techniques about the unintended as well as intended consequences of their work. The third relates to a reminder of the connection between politics and methods. Sociometric methods do not sit outside of the world of disability politics – their use shapes the lens of researchers, the perspectives of teachers, and the social worlds of children. They have potential for harm and they warrant more extensive challenge from disabled people and their allies in the research community.

Note

1. This heading pays homage to Clough and Barton’s (1995) book of the same name.

References


