

Mapping Anxiety

in minimally verbal autistic adolescents

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Introduction

Autistic individuals report that anxiety can have a significant impact on their lives and they are more likely to have to manage clinically significant levels of anxiety than their neurotypical peers. The causes of anxiety are often complex and the causal relationships between different types of anxiety and autism are not well understood.

A central focus for school-based professionals is to develop a better understanding of students' anxiety and how best to work together to then manage it. Anxiety has also been highlighted by parents as the most substantial difficulty their children face. Recent research in psychopathology has used a network approach to better understand what are seen as complex, highly connected networks of mutually associated symptoms of mental health difficulties.

Similar levels of complexity can be seen in anxiety and different hypothesised causes of anxiety (HCA - situations, objects or individuals that are perceived to cause increased levels of anxiety). A networked perspective of anxiety was hypothesised to give a better understanding of how to provide more effective support for minimally verbal (MV) autistic students by highlighting HCA that might be central to a network and therefore might be key areas to focus support.

Aim

To examine the viability of using perceived causal relationship (PCR) scaling and network analysis in better understanding and supporting anxiety in MV autistic students.

Method

Participants

Five students (all male) and 5 members of staff from a government funded, special school in inner-city London took part. Students' ages ranged from 14 years 10 months to 16;7 (M=15;4, SD=1;1).

Procedure

PCR Scaling

HCA were identified for the 5 students taking part in the study by the staff teams that worked with the students. PCR scaling was then carried out on these lists of HCA. A single member of staff who worked closely with the student was asked "How much do you think [student]'s anxiety with ['HCA X'] CAUSES their anxiety with ['HCA Y']?" and vice-versa. Answers to the causal association questions were given on a Likert type scale with response options from 0-10, with 0 and 10 denoting "Not at all" and "Strong cause," respectively.

Staff then rated how frequently students experienced anxiety as a result of each HCA. The eight response options ranging between "Not at all in the past month" and "Daily or almost daily for most of the day" and scored 0-7, respectively.

Focus Group

Four members of staff who took part in the study and two additional members of staff, new to the study, (a total of six members of staff) took part in a focus group examining the process of generating the network maps as well as evaluating the utility of the maps themselves.

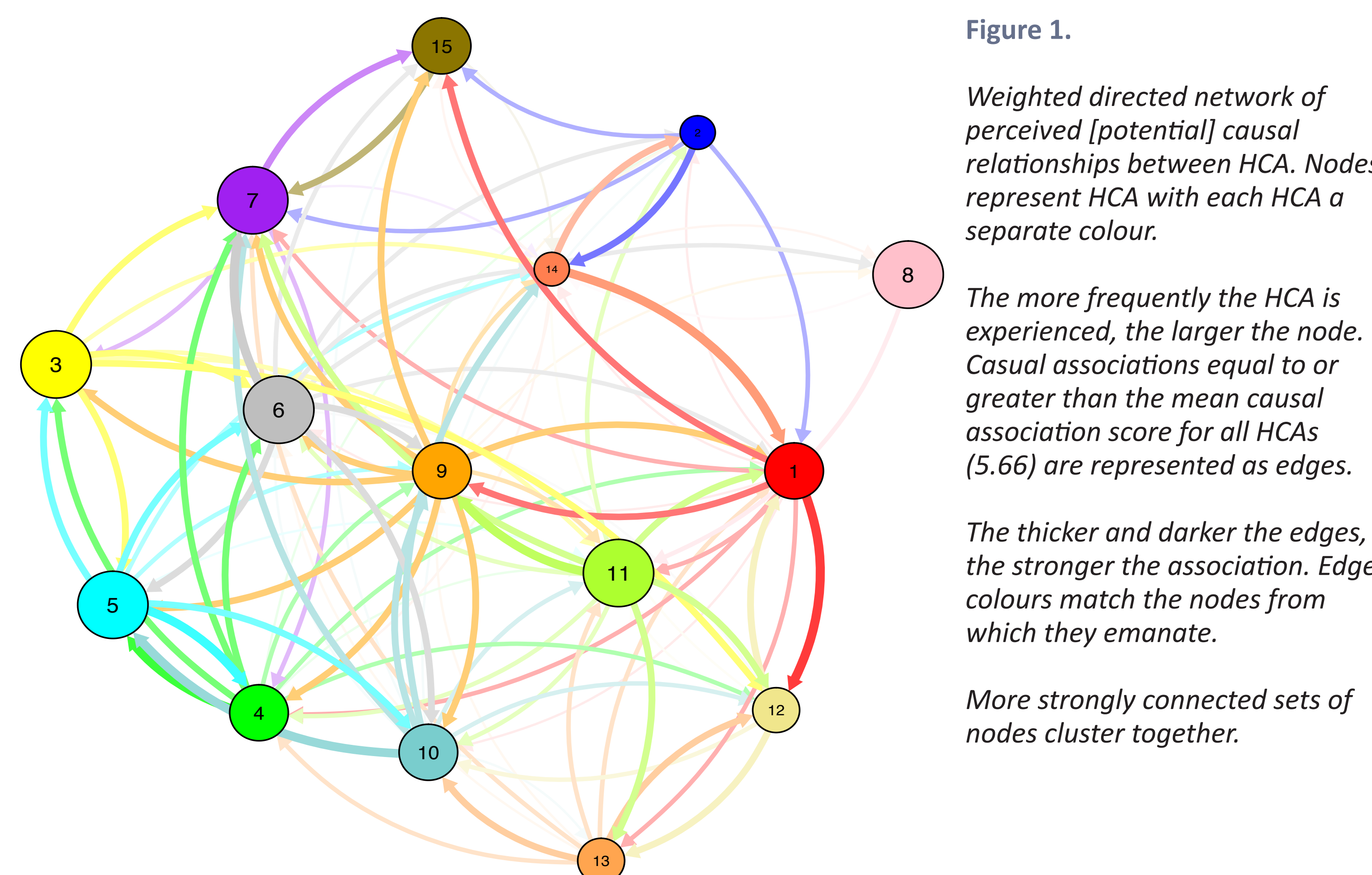


Figure 1.

Weighted directed network of perceived [potential] causal relationships between HCA. Nodes represent HCA with each HCA a separate colour.

The more frequently the HCA is experienced, the larger the node. Casual associations equal to or greater than the mean causal association score for all HCAs (5.66) are represented as edges.

The thicker and darker the edges, the stronger the association. Edge colours match the nodes from which they emanate.

More strongly connected sets of nodes cluster together.

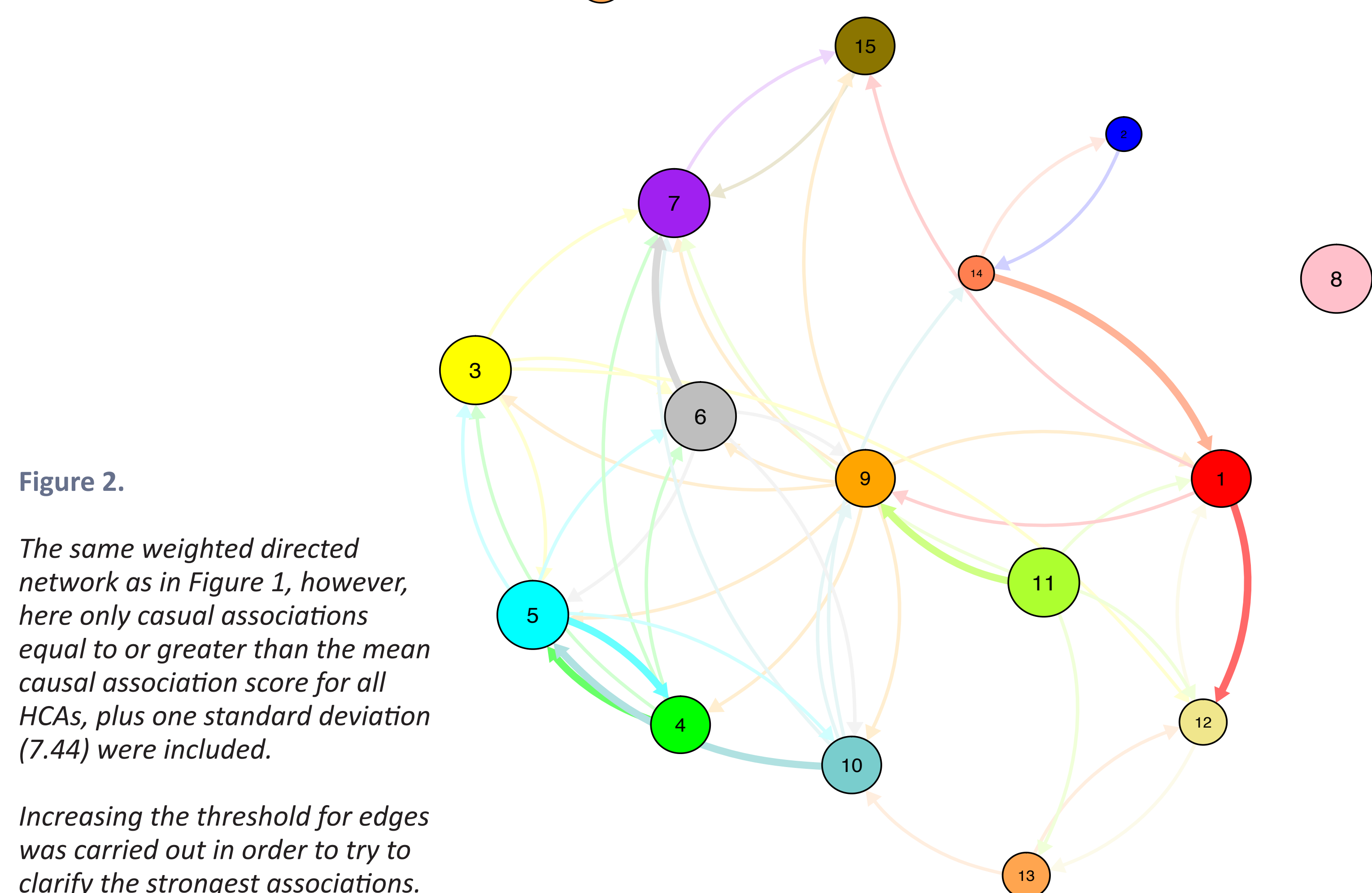


Figure 2.

The same weighted directed network as in Figure 1, however, here only casual associations equal to or greater than the mean causal association score for all HCAs, plus one standard deviation (7.44) were included.

Increasing the threshold for edges was carried out in order to try to clarify the strongest associations.

Results

PCR and Network Map

To map anxiety a directed network of PCR scores was generated using the R-package qgraph. To examine clustering and centrality in the HCA space, we employed an algorithm that minimizes edge crossing and takes symmetry into account leading more strongly connected nodes to cluster together (see Figures 1 and 2).

1. Uncertainty around food and drink
2. Wanting to vomit
3. Other students
4. Busy places
5. People in his personal/social space
6. When asked to do something he doesn't want to
7. Control of the environment
8. Private time
9. Unfamiliar staff
10. Perceived pressure to choose something
11. Permission to ask for something
12. Waiting
13. AAC system not available
14. Not feeling well
15. Clothing

Focus Group

Thematic analysis was used to analyse the focus group transcript. Four main themes were identified:

The Process

Cumbersome and time heavy to complete PCR; the process of discussing HCAs and relationships was valuable in itself; input of more staff/parents; moderation concerns

The Function

Not to be used for assessment; how does it add to existing documents IEPs/ECHPs; it can inform support; provides a 'snapshot'; supports deeper understanding of HCA

Student Voice

Pathologizing; subjective; the individual must be at the heart of it

Utility

Clarity; accompanying explanatory material; potential for further, deeper analysis; makes implicit knowledge explicit; highlights the impact of transactional support that is in place

Conclusions

"I think they would be so useful, I can understand [student] more than I could ever have done reading through several different reports"

The network maps provided a novel visual representation of the inter-relationship between HCA that was considered to be a useful resource for teaching staff. The maps may have utility in providing a method for better understanding anxiety and where support is targeted, as well as examine the potential impact of that support.

"Incredibly cumbersome"

The process by which professionals complete the PCR scaling needs to be streamlined to make it quicker and easier.

"I like that this does try to talk about the causes and that this and this and this are potentially linked. This is a slightly different way to how we think about it"

We found that PCR scaling provide a valuable method to evaluate "what causes what" amid the myriad HCAs often presented by individuals with complex needs, at least as conceived by those who work closely alongside them. Whilst the maps were found to be a useful visual tool, we also found that the process of discussing HCAs and their interactions was a highly valuable exercise in and of its own right.

"Can help as we keep working to better understand what our pupils are telling us but we must not lose the pupil, it cannot just become an exercise"

The question, to what extent professionals' causal attributions overlap with actual causal relations, is beyond the scope of this pilot study. It may provide the first steps to examining this. Future work will examine the extent to which targeting a central node initiates a beneficial therapeutic cascade that mitigates the impact of other HCA, addressing anxiety more effectively in terms of time and resources and more rapidly reducing individuals' potential distress.