


RESEARCH ARTICLE

Social identification, identity integration and wellbeing in people who hear voices

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Abstract

Objectives: Hearing voices is associated with public stigma and this can influence readiness to identify as a voice hearer (VH) and psychological wellbeing. In this study, we investigated the relationships between a VH social identity, the integration of that identity with other important social identities and wellbeing.

Design: Cross-sectional study, with a subset of longitudinal data across three time points.

Methods: People who self-identified as voice hearers completed questionnaires (VH social identity, identity integration, wellbeing and perceptions of in-group and out-group empathy) at three time points, spaced at 3-monthly intervals. The final sample comprised 182 participants at T1, 91 at T2 and 75 at T3. Hierarchical linear multiple regression analyses were used to test all hypotheses.

Results: The integration of a VH social identity was strongly associated with better psychological wellbeing at T1. Identity integration was also associated with static wellbeing scores at 6 months. Effects on wellbeing were not accounted for by either severity of voice-hearing or paranoia. Whilst perceptions of in-group empathy were associated with VH social identification, perceptions of outgroup empathy were important for identity integration.

Conclusions: Integrating a VH social identity with other important identities into a coherent sense of self is important for wellbeing in voice hearers; perceived in-group and outgroup empathy are important in this process.

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KEYWORDS

discrimination, empathy, hearing voices, internalised stigma, psychosis, social identity, stigma, wellbeing

Practitioner points

- Opportunities to connect with other empathic voice hearers is important to developing a VH social identity, or positive sense of self as a voice hearer.
- The integration of a VH social identity with other important social identities is important to well-being; perceiving those who do not themselves hear voices as empathic is important in this integration process.
- Psycho-social interventions should support voice hearers to connect with social groups that are empathic towards voice hearers.
- Public awareness-raising campaigns should continue to demystify voice-hearing and promote empathy towards those who hear voices.

INTRODUCTION

Hearing a voice or voices that others do not hear when there is no speaker around to explain the experience is relatively common, with a median lifetime prevalence across surveys of 13.2% in the general population (Beavan et al., 2011). Reactions to voice-hearing in those affected are often mixed and include distress for some whilst others have more ambivalent or even positive reactions (Jenner et al., 2008; Sanjuan et al., 2004). However, public perceptions of those who hear voices are mostly negative (Phalen et al., 2019; Vilhauer, 2015)). Voice hearers' awareness of, and agreement with, such stigmatised views can become internalised as a negative self-identity, and thereby undermine self-esteem, self-efficacy and positive sense of self (Corrigan et al., 2006; Xu et al., 2016). Vass and colleagues have demonstrated an effect of perceptions of stigma on both symptomatic and subjective recovery from psychosis (Vass et al., 2015), with the effect on subjective recovery being mediated by internalised stigma and self-esteem (Vass et al., 2017). Thus, adopting a 'mental illness' identity may be linked to poorer recovery (Cruwys & Gunaseelan, 2016; Yanos et al., 2010) (although von Hippel and colleagues (2021) found that implicit identification as someone with mental illness did not predict poorer recovery).

There is a growing body of research linking social identification (a felt sense of belonging in groups) with positive psychological health and wellbeing as part of what is described as a 'social cure' (Haslam et al., 2018). Forming social connections with others with similar health challenges can be protective of health and wellbeing. However, much of this work has focussed on less stigmatised social groups such as people with depression (Cruwys, Haslam, et al., 2014), acquired brain injury (Muldoon et al., 2019) and stroke (Haslam et al., 2008). It is yet to be established whether forming social connections with others who hear voices is beneficial or detrimental to wellbeing, given the stigmatising context of such an identity. Stigmatised identities can act as a 'social curse' and have a detrimental effect on wellbeing by causing distress and a desire to distance from the stigmatised group (Kellezi et al., 2019; Kellezi & Reicher, 2012). There is little research to date on social identification and voice-hearing, although McIntyre and colleagues in cross-sectional general population and student analogue samples failed to demonstrate an effect of social identification on severity of audio-visual hallucinations AVH in contrast to paranoia and depression (McIntyre et al., 2018). However, this work explored more general social identities (neighbourhood, friendship group) rather than identification with the group of people who have experienced similar challenges. The primary purpose of the present study is therefore to

investigate the relationship between voice hearer (VH) social identification and wellbeing, and to evaluate psychological factors that might influence this relationship in the service of 'the social cure'.

SOCIAL IDENTITY AND THE SOCIAL CURE

Social identity theory (Tajfel & Turner, 1979) defines social identity as 'aspects of an individual's self-image that derive from the social categories to which (they) perceive (themselves) as belonging' (Tajfel & Turner, 1979, p. 44). In relation to a VH social identity, this would mean a felt sense of belonging to the group of people who also hear voices. Social identity shapes our sense of who we are, what is important in life and may provide an important source of social support (Haslam et al., 2018; Steffens et al., 2016).

The social identity approach to health SIAH (Haslam et al., 2018) has generated testable hypotheses regarding the link between social identity and health outcomes. The principal SIAH hypothesis is that 'because it is the basis for meaningful group life, social identity is central to both good and ill health' (Haslam et al., 2018, p. 17). Accordingly, it is not increasing social activities or social contacts per se that are important for wellbeing, rather, it is the positive sense of self or collective self-esteem derived from a shared identity, or sense of belonging in the group. Consistent with this, group identification has been shown to have superior wellbeing benefits to social contact (i.e. frequency of social interactions and participation in social activities) in both families and army units (Sani et al., 2012). However, these wellbeing benefits are likely to be compromised if being a member of the group is perceived as imposed (Walter et al., 2015), stigmatising (Kellezi et al., 2019) or stressful (Schury et al., 2020); all of which can apply in relation to mental ill health. In these circumstances, group membership might be perceived as a 'social curse' to be avoided, rather than 'social cure'.

Social disconnection is common for people who hear voices and may not only reflect the social impacts of the experience but also represent a motivated strategy to manage the voice-hearing and associated stigma (Hogg et al., 2022; Sheaves et al., 2021). Improvement in wellbeing has been reported among foreign national detainees in British Immigration Removal Centres who rejected a stigmatised identity (Kellezi et al., 2019). However, despite these identity management challenges, people who have experiences consistent with psychosis such as hearing voices report social connections as beneficial to their health and wellbeing (Hogg et al., 2022). Participants in that study referenced connections with those who had similar mental health challenges as well as others with positive attitudes towards mental health. Participants also reported empathy, particularly shared understanding and non-judgemental responses, as key facilitators in the formation of such connections.

EMPATHY, FELT UNDERSTANDING AND SOCIAL IDENTIFICATION

The relationship between perceptions of empathy in others and either social identification or wellbeing is not well understood, probably due to difficulty defining the concept of empathy and distinguishing from related concepts (Hall & Schwartz, 2019; Szanto & Krueger, 2019). Livingstone and colleagues have considered one such related concept, *felt understanding*, in the context of social identification and group processes (Livingstone, Fernández Rodríguez, & Rothers, 2020; Livingstone, Windeatt, et al., 2020). In a cross-sectional study, they present evidence for felt understanding as an indirect effect linking the variables of social identification and multiple group memberships with mental health and wellbeing (Livingstone et al., in prep). Empathy includes both this cognitive understanding of another's perspective and affective understanding (Cuff et al., 2016). The current study builds on the work of Livingstone and colleagues, and the qualitative study of Hogg et al. (2022) to investigate the association between perceptions of empathy in other voice hearers and a VH social identity on the one hand, and wellbeing on the other. We also examine how perceived empathy, particularly in those who do not

themselves hear voices, might relate to the integration of a VH social identity with other important social identities.

SOCIAL GROUP COMPATIBILITY, IDENTITY COMPARTMENTALISATION AND INTEGRATION

There is evidence that some people with mental health challenges keep relationships with people who have similar experiences separate from those involving their other social groups (Hall & Cheston, 2002; Hogg et al., 2022). This can reflect an identity management strategy enabling flexible engagement with the potentially stigmatised group, depending on current mental health and support needs. Belonging to multiple non-overlapping, or distinct groups may be better for wellbeing (Sonderlund et al., 2017), however, this is only likely to be the case if such groups are perceived positively (White et al., 2021) and are compatible with each other (i.e. it is practical to be a member of both and they share similar values and aims). Compatibility between groups has been found to be associated with better life satisfaction (Bentley et al., 2019) and reduced anxiety (Cruwys et al., 2016). However, compatibility in social groups for people with mental health needs may be difficult if some groups endorse norms and hold values indicative of negative attitudes towards mental health. Kyprianides et al. (2019) investigated the relationship between a stigmatised identity (ex-prisoner) and wellbeing and found not only that identification as an ex-prisoner was associated with greater rejection from others and lower wellbeing but also that for this group of ex-prisoners membership of multiple groups further increased exposure to rejection and thereby reduced (rather than enhanced) wellbeing. Identity compartmentalisation (i.e. keeping a stigmatised identity, such as that of voice hearer, separate within the self and enacting this in a distinct group) may feel safer than identity integration within a stigmatising context. Compatibility between groups might then be considered a moderator (i.e. greater compatibility between groups being associated with better identity integration). There is a suggestion that compartmentalisation may also reflect an earlier developmental stage in social identification than integration; social identification is the process by which social identity forms.

Amiot and colleagues have developed a cognitive model for the development of social identification (Amiot et al., 2007, 2015). Within this model, compartmentalisation, in which 'individuals maintain multiple, separate identities within themselves' (Yampolsky et al., 2013, p. 126) is a precursor to integration in the development of social identification. Research indicates that intergroup contact and better identity integration rather than compartmentalisation are associated with improved wellbeing (Rosenthal et al., 2011; Yampolsky et al., 2013). According to Amiot and colleagues, social identity integration represents cohesion between multiple identities and reflects a more stable sense of self in which social identities are complementary and/or encompassed within an over-arching identity, such as *compassionate human being*. By contrast, compartmentalisation can reflect a lack of internal cohesion or fragmentation of sense of self that in the Yampolsky et al. (2013) study related to negative affect and poorer wellbeing. Compartmentalisation, particularly of a concealable identity, is more likely within the context of threat because it is self-protective and allows greater control over disclosure. In a longitudinal study of change in cultural identities, greater perceived cultural discrimination predicted increased identity compartmentalisation (Amiot et al., 2018). Thus, perceptions of discrimination may have damaging effects on individuals' ability to integrate their various cultural identities into a coherent whole. Similarly, perceptions of discrimination against voice hearers may lead to greater compartmentalisation of a VH social identity. By contrast, perceptions of empathy towards voice hearers (from those who do not themselves hear voices) may counteract the effects of stigma and internalised stigma, facilitate the integration of this social identity with other important social identities and thus enhance wellbeing.

We therefore investigated the relationship between social identification as a voice hearer, the integration of this social identity with other important social identities and wellbeing. We also investigated the effects of perceived empathy, both in-group (i.e. from other voice hearers) and out-group (i.e. from those who do not themselves hear voices), on social identity formation and integration processes.

Finally, we explored the associations between perceptions of discrimination/devaluation of voice hearers, internalised stigma as a voice hearer and the compartmentalisation of a VH social identity. The current study has two parts: first, the main cross-sectional analyses examined associations between key variables at a static point in time and second, longitudinal analyses with a smaller subset of participants tested the associations between social identification and identity integration and wellbeing over time.

Consistent with the literature reviewed above, the primary hypotheses for the cross-sectional analyses were that both social identification as a voice hearer and the integration of this social identity with other important social identities would be positively associated with wellbeing, with identity integration contributing additional variance. We anticipated that these associations would hold beyond the influence of possible confounds of depression, severity of voices and paranoia. Further, as a subcomponent of the primary hypotheses, we predicted that longitudinal analyses would demonstrate that social identification as a voice hearer, and integration of that social identity, at time point 1 would be positively associated with wellbeing at subsequent time points.

The secondary hypotheses concerning social identification were that perceptions of empathy in *other voice hearers* would be positively associated with social identification as a voice hearer, whereas perceptions of empathy in *non-voice hearers* would be positively associated with the integration of a VH social identity.

Tertiary hypotheses were that both perceptions of discrimination in those who do not themselves hear voices and internalised stigma as a voice hearer, would be positively associated with identity compartmentalisation.

Hypothesised relationships are identified in the conceptual model in [Figure 1](#).

METHOD

Participants and design

Data were collected across three time points, spaced at 3-monthly intervals to be consistent with the time sampling employed by Cruwys, Alexander Haslam, et al. (2014) to investigate changes in depression with social identification.

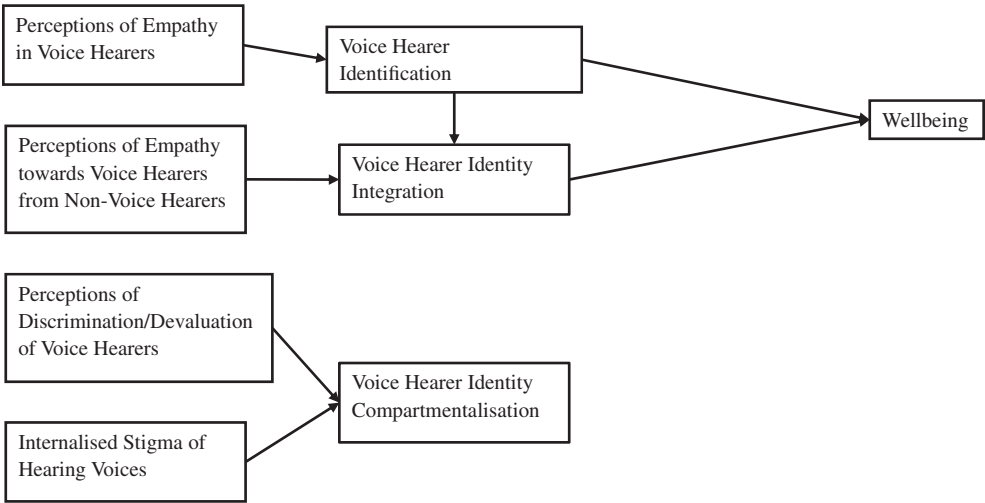


FIGURE 1 Conceptual model of in-group and outgroup empathy, identification as a voice hearer, integration/ compartmentalisation of a voice hearer identity, internalised stigma and wellbeing.

Participants were recruited from a range of sources to maximise diversity, including social media sites such as Facebook groups and Twitter, local and national support groups, two UK universities and via the participant recruitment agency Prolific Academic. Participants had to be aged over 18 years and self-identify as a voice hearer, that is, hear voices when there was no speaker present and outside the context of taking drugs or alcohol. Voice hearers could take part irrespective of whether they were distressed by their voices, had sought professional help, received a psychiatric diagnosis or been prescribed medication, as long as they felt able to answer questions about their voices and complete an online survey in English. The diagnosis was not independently verified. Given that the study hypotheses focused on social identity, individuals' self-categorisation as someone who hears voices was more relevant than that of professionals. A small number of participants (15) preferred hard copies of questionnaires, otherwise all data were collected online via Qualtrics. Participants generated a personal identifier to enable the linking of data across time points. Data were collected over 15 months, from July 2019 to October 2020; ensuring a three-month lag between data collection points for all participants.

A priori power calculations were conducted using G* power 3.1 (Faul et al., 2009). For all cross-sectional and longitudinal analyses using hierarchical multiple linear regression, 107 participants were required given one dependent variable of wellbeing and two predictor variables for power of 95% with a small effect size f^2 of 0.15 and α level of 0.05.

Two hundred and thirty-six participants were recruited at the first point of data collection (T1), of those 110 participated 3 months later (T2) and 82 participated 3 months after that (T3). Participants were required to give final consent once they had completed all measures. After excluding those who did not give final consent and those who stopped before completing all measures, we had a final sample of 182 participants from T1, 91 from T2 and 75 from T3. The attrition rate from T1 to T3 was 59%; this compares with the 65% attrition rate of Csipke and Kinderman (2006) in their 6-month longitudinal study of voice hearers.

Socio-demographic and clinical characteristics collected were age, gender, ethnicity, educational/employment status, living circumstances, time since voices started, contact with mental health services, time since first contact and whether in receipt of a diagnosis or medication for hearing voices. These variables are presented in Table 1.

Measures

Voice Hearer Identification was measured using the In-Group Identification Scale (Leach et al., 2008). The scale has 14 items (sample item: 'I feel a bond with other voice hearers'), each rated from 1 (strongly disagree) to 7 (strongly agree). Higher scores reflect stronger social identification. The measure has good internal consistency, construct, predictive and discriminant validity (Leach et al., 2008).

Identity Integration and Compartmentalisation were measured using subscales from the Multicultural Identity Integration Scale (MULTIIS) (Yampolsky & Amiot, 2016), adapted for voice hearers (Integration subscale sample item: 'My identity as a voice hearer fits within a broader identity', compartmentalisation subscale sample item: 'My identity as a voice hearer and the other social groups I belong to represent separate parts of who I am'). Items are scored on a 1 (Not at all) to 7 (Exactly) scale. Higher scores within each subscale indicate either greater integration or compartmentalisation respectively. The original MULTIIS has good internal consistency, and convergent and predictive validity (Yampolsky & Amiot, 2016).

Wellbeing was assessed using The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al., 2007) (Sample item 'I've been feeling good about myself'). Items are rated on a 1 (None of the time) to 5 (All of the time) scale in relation to the preceding 2 weeks. Higher scores indicate greater wellbeing. The scale has been shown to have good internal consistency, content and criterion validity and test-retest reliability (Tennant et al., 2007).

TABLE 1 Socio-demographic and clinical characteristics.

Variable	T1 (N=182)	T2 (N= 91)	T3 (N= 75)
Age			
Mean	34.46 years	33.05 years	32.01 years
Range	18–75 years	18–72 years	18–61 years
SD	13.17	11.28	10.4
Gender			
Male	64 (35.2%)	35 (38.5%)	28 (37.3%)
Female	108 (59.3%)	54 (59.3%)	45 (60.0%)
Transgender	6 (3.3%)	2 (2.2%)	2 (2.7%)
Other	2 (1.1%)	0	0
Prefer not to say	2 (1.1%)	0	0
Ethnicity			
White British	97 (53.3%)	49 (53.8%)	40 (53.3%)
White Irish	5 (2.7%)	2 (2.2%)	2 (2.7%)
White other	59 (32.4%)	31 (34.1%)	28 (37.3%)
Indian	1 (0.5%)	1 (1.1%)	1 (1.3%)
Pakistani	2 (1.1%)	0	0
Black African	2 (1.1%)	0	0
Black Caribbean	2 (1.1%)	0	0
Other Black	1 (0.5%)	1 (1.1%)	1 (1.3%)
Mixed White and Asian	2 (1.1%)	0	0
Mixed White and Black Caribbean	1 (0.5%)	1 (1.1%)	0
Other Mixed	7 (3.8%)	4 (4.4%)	2 (2.7%)
Any other	2 (1.1%)	2 (2.2%)	1 (1.3%)
Prefer not to say	1 (0.5%)	0	0
Employment status			
Employed (Full-time)	68 (37.4%)	42 (46.2%)	36 (48.0%)
Employed (Part-time)	27 (14.8%)	13 (14.3%)	11 (14.7%)
Unemployed (available for work)	12 (6.6%)	6 (6.6%)	6 (8.0%)
Not able to work/ on benefits	36 (19.8%)	15 (16.5%)	10 (13.3%)
On sick leave	1 (0.5%)	1 (1.1%)	1 (1.3%)
Student	25 (13.7%)	11 (12.1%)	9 (12.0%)
Retired	4 (2.2%)	1 (1.1%)	0
Other	9 (4.9%)	2 (2.2%)	2 (2.7%)
Living circumstances			
Family	108 (59.3%)	56 (61.5%)	44 (58.7%)
Friends	21 (11.5%)	8 (8.8%)	7 (9.3%)
Living alone	43 (23.6%)	21 (23.1%)	19 (25.3%)
Sharing with strangers	5 (2.7%)	2 (2.2%)	2 (2.7%)
Homeless	1 (0.5%)	1 (1.1%)	1 (1.3%)
Other	4 (2.2%)	3 (3.3%)	2 (2.7%)

(Continues)

TABLE 1 (Continued)

Variable	T1 (N=182)	T2 (N=91)	T3 (N=75)
Recruitment source			
Facebook	16 (8.8%)	3 (3.3%)	1 (1.3%)
Twitter	14 (7.7%)	6 (6.6%)	6 (8.0%)
Prolific Academic	101 (55.5%)	62 (68.1%)	54 (72.0%)
Charity	6 (3.3%)	2 (2.2%)	2 (2.7%)
University	7 (3.8%)	3 (3.3%)	1 (1.3%)
Conference event	1 (0.5%)	1 (1.1%)	1 (1.3%)
Hearing Voices Network	9 (4.9%)	4 (4.4%)	2 (2.7%)
Other	23 (12.6%)	9 (9.9%)	7 (9.3%)
Time since Voices started			
Mean	13.23 years	11.48 years	9.62 years
Range	1–70 years	1–70 years	1–50 years
SD	14.7	13.22	10.7
NHS contact for Hearing Voices			
Yes	100 (54.9%)	49 (53.8%)	37 (49.3%)
No	82 (45.1%)	42 (46.2%)	38 (50.7%)
Duration of NHS contact			
Mean	4.73 years	4.53 years	3.69 years
Range	0–35 years	0–30 years	0–27 years
SD	7.5	7.13	6.6
NHS continuing contact			
Yes	65 (35.7%)	34 (37.4%)	27 (36.0%)
No	62 (34.1%)	31 (34.1%)	24 (32.0%)
Currently taking Medication			
Yes	59 (32.4%)	29 (31.9%)	20 (26.7%)
No	123 (67.6%)	62 (68.1%)	55 (73.3%)
Diagnosis			
Schizophrenia	19 (10.4%)	9 (9.9%)	7 (9.3%)
Acute and Transient Psychotic Disorder	1 (0.5%)	1 (1.1%)	0
Schizoaffective Disorder	10 (5.5%)	5 (5.5%)	2 (2.7%)
Schizotypal Disorder	1 (0.5%)	0	0
PTSD	21 (11.5%)	11 (12.1%)	10 (13.3%)
Personality Disorder	16 (8.8%)	10 (11.0%)	9 (12.0%)
Bereavement Disorder	4 (2.2%)	1 (1.1%)	1 (1.3%)
Bipolar Disorder	17 (9.3%)	12 (13.2%)	10 (13.3%)
Other	15 (8.2%)	5 (5.5%)	2 (2.7%)
Never given a diagnosis	78 (42.9%)	37 (40.7%)	34 (45.3%)

Perceptions of voice bearer and other empathy were measured using The Perceived Empathy Scale (PES) (Nambisan, 2011). The scale has eight items scored on a 7-point scale ranging from 1 to 7. A sample item is 'unsympathetic/sympathetic' with lower scores reflecting the most unsympathetic and higher scores the most sympathetic. Higher overall scores indicate greater perceived empathy. The scale has been shown to have one factor and to have good internal consistency (Nambisan, 2011). Participants in this

study completed two versions of the PES, one to rate perceived empathy in voice hearers and the other to rate perceived empathy in people who do not themselves hear voices.

Perception of Discrimination was measured with the 12-item version of The Discrimination-Devaluation Scale (DDS) (Link, 1987). Items are rated on a 4-point scale, from 1 (strongly disagree) to 4 (strongly agree). High scores indicate a high level of perceived stigma. The scale was modified to reflect perceived stigma towards people who hear voices (sample item: 'Most people think less of a person who hears voices'). The original scale has been widely used with adequate internal consistency and strong concurrent validity (Link, 1987).

Internalised stigma was assessed using The Internalised Stigma of Mental Illness Scale (ISMI-9) (Hammer & Toland, 2017) (sample item: 'Stereotypes about voice hearers apply to me'). Items are scored on a 4-point Likert scale from 1 (strongly disagree) to 4 (strongly agree). High scores indicate greater internalised stigma. The scale has good internal consistency, (Hammer & Toland, 2017).

Self-evaluations of voice-hearing, depression and paranoia were included as possible confounds. Measures used were as follows:

Voice-hearing severity was assessed using the voices scale of The Psychotic Symptom Rating Scale (PSYRATS) (Haddock et al., 1999) adapted for online self-report. Voice frequency, duration, location, loudness, beliefs regarding the origin, amount of negative content, amount of distress, intensity of distress and disruption to life caused by voices were measured over the past 2 weeks on a 5-point scale, for example, for duration, from 0 (voices not present) to 4 (voices last for hours at a time). Higher scores indicate greater severity. The original scale has demonstrated good inter-rater reliability and convergent validity in people with persistent psychosis (Haddock et al., 1999) and good inter-rater and test-retest reliability, internal consistency, sensitivity to change and convergent validity in people with first-episode psychosis (Drake et al., 2007).

Paranoia was measured using the Green et al. Paranoid Thought Scales Part B (ideas of persecution) (Green et al., 2008) (sample item: 'I was sure someone wanted to harm me'). Participants rated thoughts and feelings about others over the past 2 weeks, rather than the 1 month usually specified, to be consistent with other study measures. Each item was rated on a 5-point scale from 1 (not at all) to 5 (totally). High scores indicated greater ideas of persecution. The subscale has good internal consistency and convergent validity (Green et al., 2008).

Depression was measured using The Patient Health Questionnaire 9 (Kroenke et al., 2001). Items are rated on a 4-point scale from 0 (not at all) to 3 (nearly every day) regarding how prevalent specific experiences have been for participants (sample item: 'Little interest or pleasure in doing things'). Higher scores indicate more severe depression. The scale has good construct and criterion validity and internal reliability (Kroenke et al., 2001).

Details of scale adaptations are available from the corresponding author. Internal reliabilities for all scales in the present study were good; Cronbach's alpha ranged from .835 to .964 (see Table 2).

Data analytic strategy

Statistics for all hypotheses were calculated using SPSS 28.0. The mode was used to calculate missing values given no more than one missing value per questionnaire and a high degree of repetition in scores across items. Socio-demographic and clinical characteristics were investigated using descriptive statistics. Variables linked to retention patterns across the three data collection points were investigated using one-way ANOVAs. Hierarchical multiple linear regression analyses were used to test all cross-sectional and longitudinal hypotheses. All cross-sectional analyses were conducted with T1 data. In order to examine associations across time in the longitudinal analyses scores for relevant T1 variables were entered into multiple hierarchical regression analyses with wellbeing at T2 as the dependent variable and then again with wellbeing at T3.

TABLE 2 Descriptive statistics, correlations and Cronbach's Alpha for all analyses variables.

Variable	<i>n</i>	<i>M (Range)</i>	<i>SD</i>	<i>a</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. PVHE_T1	182	37.87 (8–56)	10.92	.948	–												
2. POE_T1	182	30.10 (8–56)	10.22	.947	.40**	–											
3. DD_T1	182	35.72 (12–48)	6.18	.873	–.26**	–.27**	–										
4. IS_T1	182	22.11 (10–35)	5.89	.835	–.10	–.24**	.44**	–									
5. VHS_T1	182	30.55 (11–51)	8.42	.873	.22**	–.05	.20**	.35**	–								
6. P_T1	182	35.49 (16–79)	16.38	.964	–.01	–.18*	.26**	.50**	.46**	–							
7. D_T1	182	22.03 (9–36)	7.10	.905	–.03	–.12	.33**	.53**	.36**	.44**	–						
8. VHI_T1	182	49.77 (14–98)	16.18	.903	.51	.15*	–.32**	–.14	.04	.00	–.10	–					
9. II_T1	182	24.73 (8–54)	10.57	.860	.40**	.29**	–.37**	–.23**	–.12	.00	–.20**	.60**	–				
10. IC_T1	182	38.80 (11–63)	11.79	.843	–.06	–.12	.39**	.32**	.13	.23**	.17*	–.08	–.08	–			
11. W_T1	182	40.06 (16–67)	11.05	.936	.13	.33**	–.37**	–.54**	–.35**	–.27**	–.73**	.23**	.36**	–.13	–		
12. W_T2	91	39.19 (14–66)	11.32	.938	.05	.29**	–.14	–.38**	–.29**	–.12	–.42**	.15	.20	–.04	.72**	–	
13. W_T3	75	39.96 (17–62)	11.59	.949	.09	.17	–.25*	–.40**	–.24*	–.05	–.39**	.06	.25*	.05	.65**	.22	–

Abbreviations: D, Depression; DD, Discrimination-devaluation; IC, Identity compartmentalisation; II, Identity integration; IS, Internalised stigma of voice-hearing; P, Paranoia; POE, Perceived other empathy (non-voice hearers); PVHE, Perceived voice hearer empathy; T1, Time point 1; T2, Time point 2 (3 months after T1); T3, Time Point 3 (3 months after T2); VHI, Voice hearer identification; VHS, Voice-hearing severity; W, Wellbeing.

* $p < .05$; ** $p < .01$.

RESULTS

Attrition analyses

Given the extent of attrition at each stage of data collection, that is, 50% of the T1 sample remaining by T2 and only 42% by T3, one-way ANOVAs were calculated comparing three groups (participants who only did T1 (91), those who did T1 and T2 but not T3 (16) and those who did T1, T2 and T3 (75)). Scores on the variables of age, time since voices started, duration of health service contact, severity of voices, depression and paranoia were compared between groups. Statistically significant differences were found between the three groups for time since voices started ($F_{(2,181)} = 4.91, p = .008$) and severity of voices ($F_{(2,181)} = 6.40, p = .002$). None of the other variables were significant: age ($F_{(2,181)} = 2.40, p = .094$), duration of health service contact ($F_{(2,180)} = 2.76, p = .066$), depression ($F_{(2,181)} = 1.82, p = .165$) and paranoia ($F_{(2,181)} = 0.96, p = .387$). Tukey post-hoc tests revealed that those who completed only T1 had on average experienced voices for 5.4 years longer than those who completed all three time points ($p < .05$) and scored an average of 3.62 points more on the PSYRATS total ($p < .05$). Multi-collinearity statistics were calculated for all regression analyses and were satisfactory.

Tests of hypotheses

Primary hypotheses tests: Voice hearer social identification, identity integration and wellbeing

Given that having a social identity as a voice hearer is a prerequisite to integrating this identity with other identities, using T1 data in a cross-sectional analysis, VH social identification was the first variable entered into a hierarchical multiple linear regression analysis, followed by identity integration in combination with identification in the second block, with wellbeing as the primary dependent variable. Both VH social identification and the integration of this social identity with other important social identities were significantly associated with wellbeing at T1, ($R^2 = .05, F_{(1,180)} = 10.03, p = .002$) and ($R^2 = .13, F_{(1,179)} = 13.51, p < .001$) respectively. However, when these two T1 variables were combined, i.e. social identification and integration added in block 2, only identity integration at T1 remained significantly associated with wellbeing at T1 (VH identification ($\beta = .02, p = .80$), integration ($\beta = .35, p < .001$)). All tests of the main hypotheses are presented in Table 3.

Pearson Product Moment Correlations indicated significant associations between wellbeing at T1 and potential confounding variables of depression ($r = -.73, p < .01$), severity of voices ($r = -.35, p < .01$) and paranoia ($r = -.27, p < .01$) all at T1. The correlation between wellbeing and depression was sufficiently high that these variables were considered collinear and therefore depression was left out of all analyses. To check whether severity of voices and paranoia might have accounted for the relationship between social identity integration and wellbeing, we did a follow-up hierarchical regression using the cross-sectional data, adding severity of voices and paranoia at T1 as the first block; together these variables accounted for 14% of the variance in wellbeing at T1 ($R^2 = .14, F_{(2,179)} = 14.36, p < .001$). In block 2, adding VH social identity at T1 added a further 6% of variance ($R^2 = .20, F_{(1,178)} = 14.55, p < .001$) and in block 3 further adding integration at T1 added 5% ($R^2 = .25, F_{(1,180)} = 14.78, p < .001$) resulting in a total 25% of the variance explained by these combined T1 variables in block 3. In block 3, voice-hearing severity scores significantly predicted wellbeing ($\beta = -.251, p < .001$), as did paranoia scores ($\beta = -.152, p = .04$) and identity integration ($\beta = .294, p < .001$), however, strength of voice-hearing identity did not independently predict wellbeing in block 3 ($\beta = .065, p = .43$). The pattern of relationships between social identity integration and wellbeing at T1 was thus preserved despite the addition of severity of voices and paranoia.

Longitudinal analyses: In order to test the value of VH social identification and identity integration in predicting wellbeing over time, we conducted hierarchical multiple linear regression analyses first for wellbeing scores at T2 and then for wellbeing scores at T3. In each analysis, VH social identification

TABLE 3 Hierarchical regression analyses for all hypotheses tests.

Dependent variable	Predictor variables	Unstandardised coefficient <i>B</i>	Standard error of <i>B</i>	Standardised coefficient β	<i>R</i> ²	<i>R</i> ² change	<i>F</i> change	<i>p</i>
<i>Primary hypotheses tests</i>								
Wellbeing T1	Block 1				.053	.053	10.026	.002
	VH identification T1	2.196	.694	.230				.002
	Block 2				.131	.078	16.143	<.001
	VH identification T1	.205	.830	.021				.805
Wellbeing T1	Identity integration T1	2.917	.726	.349				<.001
	Block 1				.138	.138	14.357	<.001
	VH severity T1	−.382	.102	−.291				<.001
	Paranoia T1	−.090	.053	−.133				.089
	Block 2				.197	.059	13.014	<.001
	VH severity T1	−.399	.099	−.304				<.001
	Paranoia T1	−.086	.051	−.128				.093
	VH identification T1	2.319	.643	.243				<.001
	Block 3				.250	.053	12.617	<.001
	VH severity T1	−.329	.098	−.251				<.001
<i>Longitudinal hypotheses tests</i>	Paranoia T1	−.103	.050	−.152				.04
	VH identification T1	.621	.785	.065				.43
	Identity integration T1	2.458	.692	.294				<.001
	Block 1				.023	.023	2.110	.150
	VH identification T1	1.459	1.004	.152				.150
	Block 2				.043	.020	1.819	.145
	VH identification T1	.419	1.262	.044				.741
	Identity integration T1	1.594	1.182	.178				.181
	Block 1				.004	.004	.266	.607
	VH identification T1	.634	1.229	.060				.607

TABLE 3 (Continued)

Dependent variable	Predictor variables	Unstandardised coefficient <i>B</i>	Standard error of <i>B</i>	Standardised coefficient β	<i>R</i> ²	<i>R</i> ² change	<i>F</i> change	<i>p</i>
<i>Secondary hypotheses tests</i> VH identification T1	Block 2				.068	.064	4.964	.080
	VH identification T1	-.995	1.402	-.095				.480
	Identity integration T1	2.899	1.301	.297				.029
	Block 1				.255	.255	61.762	<.001
	VH empathy T1	.428	.054	.505				<.001
	Block 2				.259	.003	.822	<.001
	VH empathy T1	.449	.059	.531				<.001
	Other empathy T1	-.007	.008	-.064				.366
	Block 1				.082	.082	16.157	<.001
	Other empathy T1	.037	.009	.287				<.001
Identity integration T1	Block 2				.180	.097	21.225	<.001
	Other empathy T1	.020	.010	.152				.041
	VH empathy T1	.329	.071	.340				<.001
	Block 1				.105	.105	21.130	<.001
	Internalised stigma T1	.721	.157	.324				<.001
	Block 2				.178	.073	15.884	<.001
	Internalised stigma T1	.426	.168	.192				.012
	Discrimination/Devaluation T1	.766	.192	.301				<.001
	Block 1				.105	.105	21.130	<.001
	Internalised stigma T1	.721	.157	.324				<.001
<i>Tertiary hypotheses tests</i> Identity Compartmentalisation T1	Block 1				.105	.105	21.130	<.001
	Internalised stigma T1	.721	.157	.324				<.001
	Block 2				.178	.073	15.884	<.001
	Internalised stigma T1	.426	.168	.192				.012
	Discrimination/Devaluation T1	.766	.192	.301				<.001
	Block 1				.105	.105	21.130	<.001
	Internalised stigma T1	.721	.157	.324				<.001
	Block 2				.178	.073	15.884	<.001
	Internalised stigma T1	.426	.168	.192				.012
	Discrimination/Devaluation T1	.766	.192	.301				<.001

at T1 was entered in block 1 and identity integration at T1 was added in block 2. Neither variable was associated with wellbeing at T2. However, at T3, although wellbeing was not associated with VH social identification at T1 ($R^2 = .004$, $F_{(1,73)} = 0.27$, $\beta = .060$, $p = .61$), when identity integration was added in block 2, wellbeing was associated with identity integration at T1 ($R^2 = .07$, $F_{(1,72)} = 2.62$, $\beta = .297$, $p = .03$). In order to evaluate whether there was any evidence of reverse causality in the relationship between identity integration and wellbeing, a regression was carried out with wellbeing scores at T1 and identity integration at T3; this was not found to be significant.

Secondary hypotheses tests: Perceptions of empathy in voice hearers and voice hearer social identification, and perceptions of empathy in those who do not themselves hear voices and the integration of a voice hearer social identity

Taking VH social identification at T1 as the dependent variable, perception of empathy in voice hearers, also at T1, was entered into a hierarchical multiple linear regression analysis in block 1 and perception of empathy in those who do not themselves hear voices at T1 added in block 2. Perceptions of empathy in voice hearers were associated with VH social identification at T1 ($R^2 = .26$, $F_{(1,180)} = 61.76$, $\beta = .505$, $p < .001$). No additional variance was explained by adding perceptions of empathy in those who do not themselves hear voices to the analysis in block 2 ($R^2 = .26$, $F_{(1,179)} = 31.26$, $\beta = -.064$, $p = .37$).

Taking the integration of a VH social identity with other important social identities at T1 as the dependent variable, perceptions of empathy in those who do not themselves hear voices at T1 were entered into a cross-sectional hierarchical multiple linear regression analysis in block 1 and perceptions of empathy in other voice hearers at T1 added in block 2. Perceptions of empathy in those who do not hear voices were associated with the integration of a VH social identity with other important social identities at T1 ($R^2 = .08$, $F_{(1,180)} = 16.16$, $\beta = .287$, $p < .001$). Adding perceptions of empathy in voice hearers into the analysis in block 2 added a further R^2 of .1 ($F_{(1,179)} = 19.60$, $\beta = .340$, $p < .001$). Both T1 variables added together in block 2 remained significant (Empathy in non-voice hearers ($\beta = .152$, $p = .041$); empathy in other voice hearers ($\beta = .340$, $p < .001$)). Perceptions of empathy in other voice hearers were also independently associated with the integration of a VH social identity with other identities at T1 ($R^2 = .18$, $F_{(1,179)} = 19.60$, $\beta = .340$, $p < .001$).

Tertiary hypotheses tests: Perceptions of discrimination/devaluation towards voice hearers and internalised stigma as a voice hearer, and identity compartmentalisation

With identity compartmentalisation at T1 as the dependent variable, internalised stigma at T1 was entered into a hierarchical multiple linear regression analysis in block 1 and perceptions of discrimination/devaluation towards voice hearers at T1 in block 2. Internalised stigma was considered the more important variable given it results from the legitimisation and application of discriminatory attitudes to the self. Both IVs of internalised stigma block 1 ($R^2 = .10$, $F_{(1,180)} = 21.13$, $\beta = .324$, $p < .001$) and discrimination/devaluation block 2 ($R^2 = .18$, $F_{(1,179)} = 19.38$, $\beta = .301$, $p < .001$) were significantly associated with identity compartmentalisation at T1.

Statistically significant relationships are presented as a possible model in [Figure 2](#).

DISCUSSION

In this study, we first tested a social identification model at a single time point in people who self-identified as 'voice hearers'. Specifically, we tested the hypotheses that both social identification as a voice hearer and the integration of this identity with other important social identities would be positively associated with wellbeing. This was found to be the case, with identity integration being particularly strongly associated with wellbeing. A secondary hypothesis was that perceptions of empathy in other

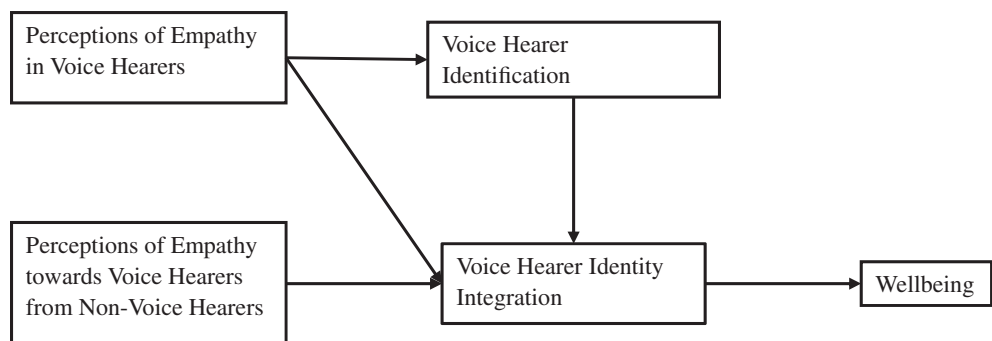


FIGURE 2 Final model of social identification processes for voice hearers.

voice hearers would be positively associated with social identification as a voice hearer. Perceptions of empathy in other voice hearers were found to be associated with both VH identification and identity integration; the perception of empathy in non-voice hearers was also associated with the integration of a VH social identity. As a complementary finding, we found that perceptions of discrimination against voice hearers and VH internalised stigma were both associated with compartmentalisation of a VH social identity. Taken together these results suggest that, for the voice hearer, it is not identifying as a voice hearer per se that is important to wellbeing as the social cure would suggest but being able to integrate this social identity with other important social identities; this in turn may require perceiving those who do not themselves hear voices to be empathic rather than discriminatory.

The second component of the study, a longitudinal analysis, indicated that VH identity integration was associated with wellbeing scores collected 6 months afterwards, suggesting scope for the development of interventions to improve identity integration for voice hearers. Whilst arguably this relationship could be bidirectional, no evidence was found to support this being the case in this sample.

Previous research has indicated that social identification is less relevant to mental wellbeing in those who experience AVH compared to paranoia (McIntyre et al., 2018) and this difference has been attributed to the differing underlying psychological mechanisms; disrupted information processing in AVH compared to attachment disruption in paranoia. The present study did not specifically investigate the relationship between social identification generally and voice-hearing severity, rather the relationship between VH identification specifically and wellbeing. The findings in this study that identification as a voice hearer and the integration of this identity with other important identities are both associated with wellbeing most likely relate to the meaning attached to the experience of hearing voices and implications for the self rather than underlying mechanisms; more positive attitudes to voice-hearing and a more positive sense of self are likely to result from supportive encounters with other empathic voice hearers. Voice-hearing severity may be less relevant to wellbeing than the meaning attached to the experience. However, more research into social identification in voice hearers and wellbeing, together with potential mediators and moderators, is needed.

The association between perceived empathy in other voice hearers and the formation of a voice hearer social identity is consistent with the interactive model of social identity formation (Postmes et al., 2005). This suggests that positive social identities form in small groups through positive and validating social interactions that foster support and solidarity. Having an identity as a voice hearer is a necessary pre-requisite to integrating that identity with other important social identities. However, it is clear that having a VH social identity is not sufficient in itself to foster wellbeing and this may for some reflect the ‘social curse’ of having a stigmatised identity. The identity may need to be integrated with other important social identities into a coherent sense of self to enhance wellbeing. From the current study, perceiving non-voice hearers to be empathic is an additional facilitator of identity integration. People need to feel their identity as a voice hearer is secure, not threatened or associated with lower social status in order to integrate it with other important identities. Perceiving those who do not themselves hear voices to be devaluing and discriminatory towards voice hearers is likely to become internalised in the context of voice-hearing, that is,

belonging to the stigmatised group, and accepting the stigmatised attitudes as being legitimate (Corrigan et al., 2009). This internalised stigma is likely to have impacts on wellbeing including low self-esteem and self-efficacy, as predicted in the 'Why Try model' (Corrigan et al., 2014). It is notable in the current study that perceptions of discrimination towards voice hearers and VH self-stigma were both associated with the compartmentalisation of a VH social identity. Amiot et al. (2018) found a similar association between perceptions of discrimination and compartmentalisation for cultural identities.

Whilst the longitudinal design of this study was a strength, participants with lengthier histories of voice-hearing and more severe voice-hearing experiences were more likely to drop out of the study over time. Such participants may have greater difficulty integrating their VH social identity because of the socially disruptive effects of managing severe voices over the long term. Although the study did not specifically measure negative symptoms, these (particularly cognitive symptoms such as loss of motivation and attentional deficits) may also have contributed to increased dropout. Replication with a more inclusive participant group is needed. A larger sample would also facilitate more complex statistical methods such as longitudinal path analysis that would also enable testing of the direction of relationships between variables.

The results of this study would suggest that psychosocial interventions to develop a positive sense of self as someone who hears voices and feels able to integrate this social identity with other important social identities to enhance psychological wellbeing may be beneficial. Approaches such as Groups for Health (Cruwys et al., 2021, 2022; Haslam et al., 2016, 2019) might be a good option in this respect; psychological strategies are employed within a safe and supportive social group context with the aim of helping people overcome barriers to social connection and develop social confidence. Ultimately, group members use the group as a platform to develop social networks in their local communities. There is some evidence from the treatment of people with social anxiety disorder that group therapies, even those not targeting social identification or integration processes per se, such as cognitive behavioural therapy, can facilitate both closeness to fellow sufferers and non-sufferers (Meuret et al., 2016). From the current study, maximising empathy within group interventions will be important for increasing social connectedness. Important to identity integration will be choosing to connect to social groups that have positive empathic attitudes towards people who hear voices, and this might include groups for voice hearers such as the Hearing Voices Network (www.hearing-voices.org) as well as other groups that hold positive attitudes towards mental health. Addressing stigmatising misconceptions, increasing understanding and facilitating empathy and positive regard towards people who have mental health challenges should continue to be a focus for public mental health awareness-raising campaigns.

In conclusion, this study builds on recent qualitative research (Hogg et al., 2022; Sheaves et al., 2021) indicating that social connections are important to psychological wellbeing in people who hear voices. Findings suggest that important interventions to enhance the health and wellbeing of people who hear voices are empathy from others who have similar voice-hearing experiences to develop a strong sense of self as a voice hearer, and empathy from those who do not themselves hear voices to integrate this social identity into a coherent sense of self. The realisation that specific social identities, such as that of voice hearer, can contribute to overall self-concept in a distinct and positive manner has important implications for wellbeing. Services supporting voice hearers need to increase emphasis on such important psychosocial factors.

AUTHOR CONTRIBUTIONS

Lorna I. Hogg: Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; visualization; writing – original draft; writing – review and editing. **Laura G. E. Smith:** Conceptualization; methodology; supervision; validation; writing – review and editing. **Tim Kurz:** Conceptualization; methodology; supervision; writing – review and editing. **Anthony P. Morrison:** Conceptualization; methodology; supervision; writing – review and editing.

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CONFLICT OF INTEREST STATEMENT

All authors declare that they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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