Research paper

GROUPS 4 HEALTH: Evidence that a social-identity intervention that builds and strengthens social group membership improves mental health

Catherine Haslam, Tegan Cruwys, S. Alexander Haslam, Genevieve Dingle, Melissa Xue-Ling Chang

University of Queensland, Brisbane, Australia

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A B S T R A C T

Background: Social isolation and disconnection have profound negative effects on mental health, but there are few, if any, theoretically-derived interventions that directly target this problem. We evaluate a new intervention, GROUPS 4 HEALTH (G4H), a manualized 5-module psychological intervention that targets the development and maintenance of social group relationships to treat psychological distress arising from social isolation.

Methods: G4H was tested using a non-randomized control design. The program was delivered to young adults presenting with social isolation and affective disturbance. Primary outcome measures assessed mental health (depression, general anxiety, social anxiety, and stress), well-being (life satisfaction, self-esteem) and social connectedness (loneliness, social functioning). Our secondary goal was to assess whether mechanisms of social identification were responsible for changes in outcomes.

Results: G4H was found to significantly improve mental health, well-being, and social connectedness on all measures, both on program completion and 6-month follow-up. In line with social identity theorizing, analysis also showed that improvements in depression, anxiety, stress, loneliness, and life satisfaction were underpinned by participants’ increased identification both with their G4H group and with multiple groups.

Limitations: This study provides preliminary evidence of the potential value of G4H and its underlying mechanisms, but further examination is required in other populations to address issues of generalizability, and in randomized controlled trials to address its wider efficacy.

Conclusions: Results of this pilot study confirm that G4H has the potential to reduce the negative health-related consequences of social disconnection. Future research will determine its utility in wider community contexts.

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1. Introduction

People who are more socially connected live longer and experience better mental and physical health (e.g., Holt-Lunstad et al., 2010). Research relevant to this question has focused almost exclusively on establishing the benefits of social resources and the mechanisms through which they might emerge. These data are clearly important, but we need to act on them and move towards articulation and rigorous testing of a coherent approach to social intervention. In this paper, we introduce a novel psychological intervention, GROUPS 4 HEALTH, to address this gap, and report findings from the program’s initial evaluation in a study of people presenting with affective disturbance arising from social isolation.

1.1. Management of social disconnection

Social disconnection refers to the lack or loss of social bonds and social separation that ranges in its emotional impact based on the closeness of those relationships. Disconnection arises for many reasons – in response to longstanding social disadvantage, mental health problems, negative experiences of social exclusion and rejection (e.g., ostracism), and even in response to common life transitions (e.g., changing jobs, moving house, retiring). Threats to social connectedness have been shown to be detrimental to survival, and, as highlighted in the social capital literature, has a...
major impact on mental health and well-being irrespective of age (Berkman and Syme, 1979; Marmot, 2005).

A number of reviews have examined the effectiveness of strategies that target social isolation and loneliness. Several focus specifically on older adults given their heightened risk of social isolation. The majority found support for the benefits of social intervention (McWhirter, 1990; Cattan et al., 2005; Perese and Wolf, 2005), with the findings of Cattan et al. (2005) particularly relevant. Of the 30 studies meeting their review criteria, nine of the ten effective interventions were group-based which led the authors to conclude that social group activity was a vital component in managing loneliness and isolation. However, the specific advantage of group-based over individually-based interventions for isolation has been questioned (Masi et al., 2011) and thus has yet to be directly tested.

Managing maladaptive cognitions has been identified as a key intervention strategy (Masi et al., 2011) and this draws largely on cognitive behavior therapy (CBT) approaches, which are recognized as evidence-based treatments for psychological and psychiatric disturbance. Nonetheless, in the social isolation domain, the message that may be communicated by prioritizing a person’s faulty thinking is that the cause of, and thus the solution to, problems of social disconnection reside primarily within the individual. There are also important implications for longer-term prognosis, with several studies now demonstrating greater pessimism in recovery potential among those patients who attribute their psychological disturbance to biological (and hence individually-determined) causes (Lebowitz, 2014).

Arguably, to target social dysfunction effectively, we need a social intervention grounded in theories of social process, in the same way that we draw on cognitive theory to understand and manage distortions in thinking. At the same time, though, as Masi et al. (2011) meta-analysis makes clear, we need one that is more powerful than the social skills and support strategies currently offered. In this regard, Interpersonal therapy (IPT) is an alternative approach that recognizes the influence of social processes. Like CBT, IPT was originally developed as a treatment for depressive disorders (Elkin et al., 1995), but it targets disturbing life events and relationships that either trigger, or are a response to, mood disturbance (Markowitz and Weissman, 2004). IPT clearly places a greater emphasis on the link between social relationships and depression than CBT. However, its analysis is rather narrow – prioritizing a person’s current dysfunctional roles, interpersonal relationships or individual skills deficit, over the wider influence of social group relationships (e.g., with family, work, and friendship groups) that affect a person’s emotional state. Moreover, IPT is typically delivered individually rather than in a group context, and, as we discuss further below, the latter may be an important foundation for building social capital.

While neither CBT nor IPT are established treatments for social disconnection, elements of these approaches are evident in previously trialed strategies to manage symptoms of loneliness and isolation. But such diagnosis-led approaches may be suboptimal when social disconnection is the primary source of dysfunction. What is needed is an intervention derived from the science of social relationships. Groups for health (G4H) addresses this gap. Here we provide initial results of its effects on the mental health of socially isolated young adults, and underlying mechanisms.

1.2 Groups 4 Health

G4H specifically targets social connectedness with the aim of improving general health and life satisfaction. It is a five-module, manualized program that seeks to increase connectedness by building group-based social identifications in the context of an in vivo group experience. In prioritizing social disconnection, G4H was not developed for any specific diagnostic group, though we recognize that where such disconnection is longstanding, it is most commonly expressed in affective disturbance. The program draws on two lines of evidence. The first is the well-established epidemiological literature that recognizes the social determinants of physical health (Holt-Lunstad et al., 2010), mental health (Cruwys et al., 2013), cognitive health (Ertel et al., 2009), and well-being (Helliwell et al., 2013). The second is recent work that applies social psychological theory to account for the conditions in which social relationships are either curative or harmful for health (Jetten et al., 2012), and which explains why social group (as opposed to individual) engagement is especially beneficial in this regard (see Haslam et al. (2014), Cruwys et al. (2014b) and Haslam et al. (2015c)). While there is growing interest in group-based therapies more generally, there is limited recognition of the therapeutic role that the group per se plays in the success of such interventions—in particular, arising from the distinctive properties of group identification (Cruwys et al., 2014a; Gleibs et al., 2011; Haslam et al., 2010) and normative influence (Cruwys et al., 2015). Nor is there a theory-informed understanding of the dynamics of social connectedness that structure health outcomes.

1.3 Theoretical underpinnings of G4H

A major problem with the literature on interventions for social isolation is the lack of a theory of social process that accounts for the effect that social group ties have on our cognitions, emotions, and behavior. One approach that can fill this gap is provided by social identity theory (Tajfel and Turner, 1979) and self-categorization theory (Turner et al., 1987; a.k.a., the social identity approach; Haslam, 2004). Fundamental to these theories is the idea that social group memberships furnish people with a distinctive sense of self arising from internalized social identities that entail ties to other ingroup members (e.g., as ‘us University students’, ‘us Catholics’, ‘us Australians’). Indeed, these social identities are often more central to our self-concept – and hence to our behavior (Turner, 1982) – than our idiosyncratic traits or personal identities. The importance of social identity for psychological functioning derives from the fact that when groups are internalized into our sense of self, they exert a profound influence on the way we think, feel and act, and a critical basis for access to health enhancing social support. Social identities also provide people with grounding and anchoring – what Durkheim (1951) referred to as a sense of ‘existential security’ – that has the capacity to make them stronger, more fulfilled, and more resilient as individuals, particularly when vulnerable or challenged (Postmes and Jetten, 2006).

Informed by social identity theorizing, the social identity approach to health (see Haslam et al. (2009) and Jetten et al. (2012)) extends these concepts into the health domain. For our present purposes, the social identity model of identity change (SIMIC; Iyer et al., 2008) is particularly relevant as it highlights the centrality of social identification to health and well-being outcomes and specifies the social group factors that offer protection in this context. Indeed, while the model focuses on the impact of life transitions (e.g., leaving school, becoming a parent, experiencing illness), the social processes that it highlights (e.g., social identification and social identity continuity) have been shown to have general relevance to the process of managing health and well-being in the world at large (e.g., Haslam et al., 2014).

SIMIC identifies four aspects of group life that serve to buffer well-being in a range of social contexts: (a) multiple group memberships, (b) group compatibility, (c) group maintenance or continuity, and (d) new group acquisition. First, it is apparent that having access to multiple identities increases the likelihood that a person can access useful forms of support when needed (Haslam et al., 2008; Iyer et al., 2009; Sani et al., 2015). Second, greater
compatibility of these groups ensures they are easier to manage and not a source of unwanted interference and stress (Iyer et al., 2009). Third, maintenance of group memberships over time provides a sense of social identity-based self-continuity in the face of change and uncertainty (e.g., Haslam et al., 2008). Finally, where it is neither possible or desirable to retain old identities, such loss can be countered by acquiring new group memberships that afford opportunities to develop new social identities (Haslam et al., 2014; Dingle et al., 2015; Tabuteau-Harrison et al., 2016). Importantly, it is these group processes – which target social connectedness, rather than simply social support and social contact – that are beneficial to health. These aspects of group life, highlighted in SIMIC, have all informed the content of G4H, and provide the focus for program modules.

1.4. The G4H program

G4H’s five modules give people the knowledge and skills they need to manage their social group memberships, and the identities that underpin them, effectively. Each module contains a series of exercises and discussions targeting the different aspects of group life identified within SIMIC.

The first module, Schooling, raises awareness of the beneficial effects that social group memberships have for health. It highlights the costs of ignoring the social dimensions of health and points out that failure to use all the social resources at our disposal generally leads to suboptimal health outcomes. However, the module also makes the point that it is within people’s power to counter these effects by learning how best to develop, maintain and harness group-based social resources.

Module two, Scoping, focuses on the range of group-based resources that people have, or ideally should have at their disposal, to optimize health. This module engages participants in the process of social identity mapping (Cruwys et al., 2015). This tool was developed to explore respondents’ social identities, in order to assess their current social functioning and develop a sense of how they would ideally like to function in the future.

The third module, Sourcing, focuses on identifying and strengthening existing valued social identities with a view to optimizing and sustaining these in the longer term. Module four, Scaffolding, uses the G4H group as a model for establishing and embedding new social group connections whilst at the same time exploring strategies to identify which connections to develop and enact through a social plan of action. The goal is to trial these social plans between this and the final module, which takes place at least one month later.

The final module, Sustaining, is a booster session held one month later that aims to troubleshoot any difficulties that have arisen in the course of implementing these social plans. It also revisits social identity maps, created in Module 2, to see how they have developed in the course of the program. The social foundations that have been identified and developed in the preceding four modules are also reviewed with a view to encouraging their long-term maintenance.

1.5. The present research

The present paper reports the findings of an initial investigation of G4H in young adults experiencing social isolation and associated depression or anxiety, in a non-randomized controlled pilot study. Our aim was to assess the program for its effectiveness in improving health and well-being, and to test hypothesized mechanisms supporting improvement.

Our primary hypothesis is that G4H will improve health and well-being immediately following the program relative to baseline scores (H1a), and be sustained six months later relative to a control group (H1b). We further predict that G4H will achieve these outcomes through the social identity mechanisms outlined in SIMIC – notably, increased identification with one’s new G4H group and multiple (existing and new) group memberships (H2).

2. Method

2.1. Participants

Two groups of participants were recruited. The first comprised young adults, largely university students, who were encouraged to complete a screening questionnaire if they subjectively felt “sad”, “stress or nervous”, or “lonely or socially isolated”. This choice of population reflects concern in the university sector about increasing numbers of students with mental health disturbance due to poor adjustment, especially among those who have moved cities or countries to pursue study, which comprised a substantial minority of our sample.

Participants were all initially screened using two measures to ensure they met eligibility criteria. The first was the Friendship Scale (Hawthorne, 2006) that comprised six items indexing social isolation (e.g., “I felt alone and friendless”). Participants indicated the extent to which they experienced these feelings over a period of four weeks on a five-point scale (0 = never, 4 = almost always). The second, the Kessler Psychological Distress Scale K-10 (K-10; Coombs, 2005), provided a global measure of distress. This comprised 10 items indexing anxiety and depression (e.g., “In the last four weeks how often did you feel nervous”) to which participants responded on a five-point rating scale (1 = none of the time, 5 = all of the time).

All participants either (a) reported feeling “very isolated” or “isolated” according to the Friendship scale (i.e., scored 15 or lower on a 0–24 point scale, which applied to 87.7% of commencing participants), or (b) met the moderate distress criterion on the K-10 (i.e., scored 25 or higher on a 10–50 point scale, which applied to 88.9% of commencing participants). All those who did not report at least mild clinical symptoms of depression or anxiety at baseline on the Depression, Anxiety, Stress Scales (DASS; Lovibond and Lovibond, 1995) were then excluded from analysis (N = 5). Thus all participants presented with some form of mood disturbance and the majority of participants were also experiencing social isolation. Participants were not excluded if they reported having, or were currently receiving treatment for, an existing psychological disorder (e.g., eating disorder, depression, autism spectrum). Applying these criteria, 180 participants were screened with 81 meeting criteria commencing the program; 65.4% of whom were female with a mean age of 20.95 years (SD = 5.05), 54 completed G4H, and 26 completed the six-month follow-up. Participants were deemed to have completed G4H if they were present for at least three modules and attended a “make-up session” with a facilitator to cover the content of missed sessions.

A second group of participants were recruited from a concurrent study with a large undergraduate sample (N = 236), from which a subgroup of 145 participants matched to the G4H sample on variables of age, gender, treatment history (having a diagnosis of mental illness), and clinical symptoms of depression or anxiety were identified. Of these, 75 consented to take part, and 25 were available for follow-up 6 months later. Among this non-treatment group, 76% were female with a mean age of 20.20 years (SD = 2.48). There were no significant baseline differences between the G4H and non-treatment groups in terms of age, gender, depression, anxiety, or stress.

Fig. 1 shows participant progress in the study phases. Participants who were psychology students received course credit for participation. An additional $10 gift voucher was offered to all for...
completing the T2 questionnaire (i.e., on completion of G4H), and a $20 gift voucher for completing the T3 questionnaire (i.e., at 6 month follow-up).

3. Materials and measures

3.1. Manual and workbook

The G4H Therapist Manual (Haslam et al., 2015a) provided facilitators with instructions to deliver modules consistently. The content of modules included facilitator notes to aid preparation (comprising the module aims, content, and materials) and a full description of all exercises together with interwoven suggestions for (a) introducing topics and activities and (b) managing any challenges that might arise in response to these. The purpose of the manual was to support facilitators to run the program and to increase program fidelity. The client workbook (Haslam et al., 2015b) was developed as a participant resource. This comprised a summarized version of the facilitator’s manual highlighting the main activities and learning points for each session, with sufficient space to complete activities (both within the sessions and as homework) and document any relevant notes and plans to achieve particular goals.

3.2. Primary outcome measures

3.2.1. Mental health

This was assessed using two scales. The Depression, Anxiety and Stress Scale-21 (DASS-21; Lovibond and Lovibond, 1995) is a reliable and well-validated scale (see Crawford and Henry (2003)) comprising three seven-item subscales assessing depression, anxiety, and stress symptoms. Participants rated how frequently in the preceding week they had experienced particular symptoms – for example, “I felt like I was not worth much as a person” (depression subscale, \( \alpha_{T1} = .83 \)), “I felt I was close to panic” (anxiety subscale, \( \alpha_{T1} = .79 \)), and “I tended to over-react to situations” (stress subscale, \( \alpha_{T1} = .76 \)) – on a 4-point scale (0 = did not apply to me at all, 3 = applied to me very much, or most of the time). For each subscale, responses were summed and multiplied by two as recommended. At T1, mean scores were in the “moderate” clinical range for depression (\( M = 16.64; SD = 7.67 \)), the “severe” range for anxiety (\( M = 15.93; SD = 8.19 \)), and the “moderate” range for stress (\( M = 20.19; SD = 7.01 \)).

To index anxiety in social contexts, which was hypothesized to be particularly relevant given the content of the intervention, we used the short version of the Social Phobia Inventory (mini-SPIN; Connor et al., 2001). Participants rated each of the three items (e.g., “I avoid activities in which I am the center of attention”) on a 5-point scale (0 = not at all, 4 = extremely). Ratings were summed with higher scores indicating greater anxiety (T1: \( M = 3.48, SD = 0.98; \alpha = .80 \)).

3.2.2. Well-being

This was assessed with two measures. The Satisfaction with Life Scale (Diener et al., 1985) comprised five items (e.g., “If I could live my life over, I would change almost nothing”) each rated on a seven-point scale (1 = strongly disagree, 7 = strongly agree; \( \alpha_{T1} = .83 \)). This sample reported low life satisfaction (T1: \( M = 18.90, SD = 6.87 \)) equivalent to a higher-functioning clinical outpatient sample (Pavot and Diener, 1993). A single-item measure of self-esteem (“I have high self-esteem”) with comparable validity and reliability to the 10-item Rosenberg scale (Robins et al., 2001), was rated on a four-point scale (from “not at all true of me” to “very Fig. 1. Flow diagram showing participant progress in the study.
true of me"). The T1 mean (M=2.23, SD=0.87) was well below established norms for young adults (i.e., 3.32; see Robins et al. (2002)).

3.2.3. Social connectedness

This was assessed with two measures. The Roberts UCLA Loneliness Scale (RULS-8; Roberts et al., 1993) comprised eight items balanced for their positive (e.g., How often do you feel outgoing and friendly?) and negative (e.g., How often do you feel left out?) valence. Participants indicated how often each applied to them on a four-point scale (1 = never, 4 = always; T1: M=2.81, SD=0.38; α=.81). The Social Adjustment Scale (Weissman et al., 1978) measured social functioning in multiple domains (work, home, school, leisure, family, marital, parental), as relevant, in the past two weeks. In each domain there were two questions, relating to role engagement (e.g., “How many days did you miss from work in the past 2 weeks?”) rated on a six-point scale (e.g., ranging from ‘none’ to ‘many’), and shame in performing that role (“How often have you been ashamed of how you did your work in the last 2 weeks?”) rated on a five-point scale (e.g., from never feeling ashamed to feeling ashamed all the time). An overall adjustment score was calculated, based on the sum of all items divided by the number of relevant items. Higher scores indicated greater impairment (T1: M=2.89, SD=.55).

3.3. Process measures

Two measures were used to interrogate the hypothesized mechanisms of social identification via which G4H might enhance outcomes (i.e., H2). The Four-Item measure of Social Identification (FISI; Postmes et al., 2013) was used to index participants’ sense of connectedness with their G4H group (e.g., “I feel committed to this G4H group”) – G4H being the one group common to all participants and the means via which the intervention was delivered. All items were rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree) with the T1 mean being 4.60 (SD=.73; αT1=.75). The multiple group membership rating scale (see Haslam et al. (2008)) was used to assess the strength of connectedness with multiple groups. Its four items (e.g., “I get practical help from lots of different social groups”) were rated on a five-point scale (1 = do not agree at all, 5 = agree completely). The T1 mean was 2.43 (SD=1.00; αT1=.90), which is lower than that documented in other vulnerable samples including people experiencing homelessness (Cruwys et al., 2014b) and acquired brain injury (Haslam et al., 2008).

3.4. Procedure

Ethical approval for the study was granted by the researchers’ university. Participants completed T1 measures at the commencement of G4H (T1). Groups, comprising between 5–8 people, were run in the Psychology Clinic of the researchers’ University. The first four modules of G4H were delivered weekly and the final module a month later with each taking between 60 and 75 min to deliver. Two graduate clinical psychology students facilitated each group. To ensure program fidelity, all received training to deliver G4H, worked to the therapist manual, and received weekly group supervision.

Participants completed T2 measures immediately following the final G4H module. A subset of measures (i.e., DASS, life satisfaction and self-esteem) were administered a third time at 6-month follow-up (T3). Participants in the non-treatment group only completed measures at two time-points, with the first coinciding with G4H commencement (T1) and the second corresponding to the six-month follow up (T3).

4. Results

Of those who commenced G4H, 66.7% were retained at T2, and 48% at six-month follow-up. The average number of sessions attended was 3.89. Attrition reflected the highly mobile nature of the sample, with many being non-local students who did not complete the follow-up as they were no longer residing in the city or country. Chi-square and t-test analyses indicated that retention at T2 and T3 was not significantly predicted by demographic variables (e.g., age, gender), initial symptom severity (e.g., depression, anxiety, stress, life satisfaction), or initial degree of social isolation (e.g., number of group memberships, loneliness). Those retained at T2 and T3 were therefore a representative subsample of those who commenced G4H.

Interrogation of hypotheses was undertaken in two stages to evaluate program outcomes and mechanism.

4.1. Program outcomes

The effectiveness of G4H (H1) was assessed in two ways. First, paired t-tests were used to compare scores on outcome measures obtained from G4H participants at T1 and T2. Significant improvement was found on all variables (see Table 1). Notably, participants’

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Pre-post scores, and degree of change for participants who received G4H.</th>
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<tbody>
<tr>
<td></td>
<td>T1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Mental health</td>
<td></td>
</tr>
<tr>
<td>DASS-Depression</td>
<td>15.70 (7.38)</td>
</tr>
<tr>
<td>DASS-Anxiety</td>
<td>16.63 (8.39)</td>
</tr>
<tr>
<td>DASS-Stress</td>
<td>20.28 (6.69)</td>
</tr>
<tr>
<td>Social anxiety (mini-SPIN)</td>
<td>3.57 (0.99)</td>
</tr>
<tr>
<td>2. Social connectedness</td>
<td></td>
</tr>
<tr>
<td>Loneliness</td>
<td>2.83 (0.38)</td>
</tr>
<tr>
<td>Social functioning (SAS)</td>
<td>2.29 (0.52)</td>
</tr>
<tr>
<td>3. Well-being</td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>3.94 (1.27)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.17 (0.93)</td>
</tr>
<tr>
<td>4. Mechanism</td>
<td></td>
</tr>
<tr>
<td>G4H Identification</td>
<td>4.73 (0.77)</td>
</tr>
<tr>
<td>Multiple group membership</td>
<td>2.39 (1.02)</td>
</tr>
</tbody>
</table>

N=54.

* It is worth noting that the percentages of participants whose scores improved or declined include those with very small changes in either direction that are unlikely to be clinically significant.
average depression score reduced from the “moderate” to “mild” clinical range (p < .05), and their average anxiety and stress scores from “severe” to “moderate” (both ps < .001). There was also significant improvement in social anxiety, life satisfaction, self-esteem, social functioning, and loneliness, with effect sizes ranging between 0.29–0.86. Table 1 also indicates the percentage of participants who completed G4H and either improved, remained stable, or declined relative to baseline scores on each variable. With the exception of self-esteem (which remained stable for most participants), there was evidence of improvement for the majority of participants on all measures between T1 and T2.

A second strategy assessed the extent to which gains at T2 were sustained at T3 (six-month follow-up) in the G4H group (N=26), and comparing these to change over the same period in the non-treatment group (N=25). Five outcome variables were available at T3: DASS-depression, DASS-anxiety, DASS-stress, life satisfaction, and self-esteem. In the G4H group, sustained improvement from T1 was evident for depression, anxiety, stress, and self-esteem (ps < .01). Life satisfaction was not significantly different from baseline, t(25) = −.98, p = .337. Outcomes were sustained in the six months post-intervention, given no differences were found between T2 and T3 (ps > .303), with the exception of self-esteem, which improved significantly between T2 and T3, t(21) = −3.25, p = .004.

In contrast, there were no significant changes for the non-treatment control group in the six-month period between T1 and T3, ps > .133. These results are summarized in Table 2. Together, these findings provide clear support for H1, evident in improved mental health, well-being and social connectedness in both the short and long term following G4H.

4.2. Mechanism

Two mechanisms were examined (H2). The first investigated the influence of change in identification with one's G4H group on outcomes. The second mechanism was participants' identification with multiple groups. As both were theorized to be psychologically important mechanisms of change, they were investigated simultaneously in hierarchical regression analyses, to establish whether improvement was attributable to gains in connectedness to the G4H group or to multiple group memberships in general.

Step 1 of each regression included T1 G4H identification and T1 multiple group memberships and the T1 baseline value of the outcome measure. Step 2 added T2 G4H identification and T2 multiple group memberships. As can be seen in Table 3, these social identity mechanisms collectively explained improvement in five of our eight dependent variables: depression, anxiety, stress, life satisfaction, and loneliness. Both G4H identification and multiple group memberships emerged as significant independent predictors of outcomes for four variables, with some indication that G4H identification was more important for depression recovery and multiple group memberships more important for life satisfaction.

Confirming H2, these data show that the more participants identified with (a) their G4H group and (b) multiple groups across the course of the program, the more they showed broad improvements in areas of mental health, well-being and social connectedness.

5. Discussion

The present study provides an initial investigation of a novel theory-derived psychological intervention that focuses on improving and maintaining social group relationships to counter social isolation and psychological distress. Supporting H1, there was consistent evidence (a) that, relative to a non-treatment control, participation in G4H led to significantly improved mental health, well-being and social connectedness (H1a), and (b) that these effects were sustained six months later (H1b). Supporting H2, we also found evidence that change in social identity was the mechanism underlying these effects, as indexed by participants’ enhanced sense of identification with their G4H group and with multiple groups.

There is no doubt that social disconnection is costly to health. The challenge has been to determine the best way to manage such disconnection to prevent health decline. G4H fills this gap, doing so by explicitly targeting social groups as a psychological resource that protects health through building and sustaining a person's sense of social identity, in ways suggested by previous research (Cruywys et al., 2013; Haslam et al., 2015c, 2009). Moreover, G4H represents a novel and much-needed departure from standard interventions that have to date focused on individualized social and cognitive skills training to support positive engagement with a significant other. Moreover, as the present data show, G4H has strong potential to provide a longer-term solution to managing the psychological distress that social disconnection causes in the absence of diagnostic labeling.

Consistent with our theoretical model – which sees social identification as a critical curative mechanism – we only found evidence of improvement in mental health, well-being and social connectedness to the extent that participants’ social identifications increased over the course of the program. Previous research has highlighted the importance of building social capital, and, consistent with this, our data attest to the particular importance of multiple group memberships in this process. G4H explicitly targets development of multiple social group ties – from educating participants about their value as resources for health, to building and sustaining those relationships in the long term. More generally, we would suggest that the program’s success is due in large part to the fact that it capitalizes on a relatively ‘natural’ source of social cure – the social group – that is central to adaptive function in the world at large (Dunbar and Shultz, 2007; Haslam et al., 2009).

### Table 2

Long-term outcomes for G4H and non-treatment control groups.

<table>
<thead>
<tr>
<th></th>
<th><strong>G4H group (N=26)</strong></th>
<th></th>
<th><strong>Control group (N=25)</strong></th>
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<tbody>
<tr>
<td></td>
<td>Score change T3–T1</td>
<td>p-Value</td>
<td><strong>Effect size</strong></td>
</tr>
<tr>
<td>DASS-Depression</td>
<td>−4.61</td>
<td>.026</td>
<td>.47</td>
</tr>
<tr>
<td>DASS-Anxiety</td>
<td>−5.00</td>
<td>.008</td>
<td>.57</td>
</tr>
<tr>
<td>DASS-Stress</td>
<td>−4.77</td>
<td>.004</td>
<td>.68</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>0.69</td>
<td>.001</td>
<td>0.80</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>1.38</td>
<td>.337</td>
<td>0.19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Score change T3–T1</th>
<th>p-Value</th>
<th><strong>Effect size</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>DASS-Depression</td>
<td>−1.20</td>
<td>.643</td>
<td>−</td>
</tr>
<tr>
<td>DASS-Anxiety</td>
<td>−2.00</td>
<td>.363</td>
<td>−</td>
</tr>
<tr>
<td>DASS-Stress</td>
<td>−3.12</td>
<td>.133</td>
<td>−</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>−0.12</td>
<td>.463</td>
<td>−</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>−0.76</td>
<td>.478</td>
<td>−</td>
</tr>
</tbody>
</table>

Note: T1 was completed prior to commencement of G4H, T3 was completed 6 months after G4H completion.
enced by our sample in response to a signifi-
can be made. Arguably, the social and affective dysfunction experi-
tual test G4H. However, wider community recruitment, from GP
change adds to their legitimacy as an appropriate sample to in-
cacy. Nevertheless, our study design allowed us to test
limits our ability to make strong conclusions about program ef
studies. Our use of a non-randomized control study design also

Table 3

<table>
<thead>
<tr>
<th>Social identity mechanisms</th>
<th>G4H identification</th>
<th>Multiple group memberships</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R²(Change)</td>
<td>p Value</td>
</tr>
<tr>
<td>DASS-Depression</td>
<td>.17</td>
<td>.003</td>
</tr>
<tr>
<td>DASS-Anxiety</td>
<td>.21</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>DASS-Stress</td>
<td>.18</td>
<td>.003</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>.04</td>
<td>.181</td>
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<tr>
<td>Life satisfaction</td>
<td>.26</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.01</td>
<td>.448</td>
</tr>
<tr>
<td>Loneliness</td>
<td>.17</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Social functioning</td>
<td>.05</td>
<td>.100</td>
</tr>
</tbody>
</table>

N=54.
Notes. DASS—Depression, Anxiety and Stress Scale. These analyses control for T1 measures of the outcome variable, G4H identification and multiple group memberships.

* p &lt; .05

5.1. Limitations

As in many psychological interventions, there was some attri-
tion in our study. However, the attrition rates in the present study
were either within the range (Swift and Greenberg, 2012) or lower
(Wierzbicki and Pekarik, 1993) than those reported in previous
studies. Our use of a non-randomized control study design also
limits our ability to make strong conclusions about program effi-
cacy. Nevertheless, our study design allowed us to test – and
support – questions of mechanism central to the theories from
which G4H was derived. The case for generalizability is also yet to
be made. Arguably, the social and affective dysfunction experi-
enced by our sample in response to a significant, but common, life
change adds to their legitimacy as an appropriate sample to ini-
tially test G4H. However, wider community recruitment, from GP
and other health professional practices, would enhance sample
representativeness. These are issues that we are in the process of
addressing in follow-up studies.

The particular benefits that social identification affords are
numerous, including increased access to health-enhancing social
support (Haslam et al., 2012), a greater sense of control (Green-
away et al., 2015), and enhanced self-esteem (Jetten et al., 2012,
2015). Which of these was more influential in the present study
is unclear. While social support has been shown to be more pro-
tective of mental health for women (Kendler et al., 2005) who
were the majority of our study participants, there is evidence that
the control and self-esteem benefits associated with positive
group identification apply both to women and men (Greenaway
et al., 2015; Jetten et al., 2015). Clearly, the present study cannot
differentiate these influences. Rather, it points to social identifi-
cation as the core mechanism on which to focus in intervention as
this is what ultimately delivers the ‘social cure’ from which people
of different gender, class and culture stand to benefit (Jetten et al.
2012).

6. Conclusion

G4H is a novel psychological intervention designed to address
major health problems caused by social isolation. The results of
this initial study suggest that, by building social identifications, the
intervention can play a significant role in helping to overcome
these challenges. Moreover, because G4H does not target any
specific diagnostic group, it has the advantage of being deliverable
either as a stand-alone program or as an adjunct to other forms of
psychotherapy. Indeed, given its focus, the intervention has the
capacity to offer a more coherent treatment for social disconnec-
tion than modules tacked on to existing psychotherapy programs
that target specific conditions (e.g., depression, post-traumatic
stress disorder). Additionally, the program has the potential to
address wider social problems that often exacerbate clinical pre-
sentations – for instance, through helping people with alcohol and
other drug addictions move away from their substance using
networks (Best et al., 2015), or those with psychosis and bipolar
disorder to work towards greater workforce participation. While
more research is needed to establish the efficacy of G4H in these
domains, these early data are promising and give us some con-
fidence that we are homing in on a viable solution to one of so-
ciety’s most pressing clinical issues.

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group memberships protect against future depression, alleviate depression
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