*The ‘doing’ or the ‘being’? Understanding the roles of involvement and social identity in peer-led addiction support groups.*

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# Abstract

While the efficacy of peer-led support groups such as AA are well established for people recovering from addiction, the ‘active ingredients’ which underpin their efficacy are less well understood. Drawing on social identity perspectives, in particular the Social Identity Model of Cessation Maintenance, the current study aimed to explore the relative effects of two possible processes; social identification and involvement with the group’s activities. A sample (n = 44) of AA members completed measures pertaining to their social identification with AA, their involvement in the group’s activities and their quit efficacy.The findings suggest that AA involvement was significantly related to identity. Mediation analysis revealed a relationship between involvement and efficacy meditated by identity. However, in contrast, the identity-efficacy link was not mediated by involvement.The findings suggest social identification with AA is as, or more important than, simple involvement in the group’s activities. This suggests that group planners and facilitators should therefore encourage opportunities to generate a sense of belonging alongside the activities the group revolve around.

Keywords: social identity, alcoholism, addiction, alcoholics anonymous, public health

# The ‘doing’ or the ‘being’? Understanding the roles of involvement and social identity in peer-led addiction support groups.

For many, the path to recovery from alcohol misuse features several cycles of cessation / controlled behaviour and relapse before full recovery is achieved (Scott, Foss, & Dennis, 2005). Although both residential and non-residential treatment services are effective at maintaining treatment goals whilst underway, they are time limited in duration, and the risk of relapse increases significantly upon discharge (Gossop, Green, Phillips, & Bradley, 1989). The current paper explores how peer-led support groups which provide continuing support, in particular Alcoholics Anonymous [AA], may operate to maintain recovery and decrease relapse rates. Specifically, it tests two features of such groups; the generation of a *social identity* (aspects of the self-associated with social categories; Tajfel & Turner, 1979) and the opportunity for *involvement in group activities* (i.e. social contact combined with partaking or supporting the organised activities of, the group) which may be ‘active ingredients’ for peer-led support groups in general.

In the realm of addiction, identification with protective social categories are associated with quit efficacy (a proxy for success; Buckingham, Frings, & Albery, 2013; Gulliver, Hughes, Solomon, & Dey, 2006; Kelly & Greene, 2014; Miller, Westerberg, Harris, & Tonigan, 1996) in a variety of populations such as gamblers, drinkers, smokers and other substance users (Buckingham et al., 2013; Dingle, Stark, Cruwys, & Best, 2015; Frings, Collins, Long, Pinto, & Albery, 2016; Wolff, von Hippel, Brener, & von Hippel, 2015). Similarly, involvement in the activities of the group has been linked to better recovery outcomes in studies exploring the offering of help to others, being a sponsor, getting involved in practical issues such as setting up rooms before meetings, or taking strategic leadership roles within the organisation (Hutchinson, Cox, & Frings, 2018; Kelly, Stout, Magill, Tonigan, & Pagano, 2010; McKellar, Stewart, & Humphreys, 2003; Montgomery, Miller, & Tonigan, 1995; Tappin et al., 2015). Involvement has been shown also been shown in some studies to be more important than mere attendance (Sani, Herrera, Wakefield, Boroch, & Gulyas, 2012; Sheeren, 1988). However, in the extant addictions literature, little work has simultaneously explored the possible relationships between social identity and involvement. The current study investigated these two processes in the context of people seeking peer-led support for alcohol addiction. In particular, it tested the role of identity and involvement amongst members of Alcoholics Anonymous.

### Alcoholics Anonymous

AA is an effective form of peer-led support for those seeking to address alcohol related problems (Gossop et al., 2003; Humphreys, Blodgett, & Wagner, 2014; Kelly et al., 2010). It is also prevalent: AA itself reports there are 3,585 groups in England and Wales and 902 in Scotland (Alcoholics Anonymous, 2018). They estimate their membership in these territories as being between 33,000 and 40,000, leading to 3 million attendances a year. Independent research also suggests it is also a popular choice of support, with around 80% of US drinkers who are trying to quit attending one or more sessions (Dawson, Grant, Stinson, & Chou, 2006). Evidence also suggests that active involvement in AA leads to positive outcomes, observed 16 years from initial help seeking behaviour (Moos & Moos, 2004, 2006).

### The Social Identity Model of Cessation Maintenance

The Social Identity Model of Cessation Maintenance (SIMCM; Frings & Albery, 2015, 2017) argues that group processes in addiction recovery are related to the level of social identity (aspects of the self which are associated with social categories, see Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) related to being ‘in recovery’, (or ‘an ex …’, etc.). Social identities around recovery can be based on the immediate support group an individual attends, associated with recovery (or similar) movements (e.g. ‘12 stepper’, ex-gambler etc), or a more general identity developed through association with other quitters. These are likely to form part of individual’s self-concept but, when activated, also guide behaviour. Research suggests that social identities supportive of recovery are protective of cessation as they (i) increase self-esteem and quit efficacy (Buckingham et al., 2013; Dingle, Stark, et al., 2015; Wolff et al., 2015), (ii) contextualise the risks and rewards of the addictive behaviour, and provide group based social norms to follow in high risk situations (Frings et al., 2016) (iii) provide a source of beneficial social support and control, including the opportunity to both receive and give support (Frings et al., 2016; Hutchinson et al., 2018). Recovery-based identities also provide a rationale for pursuing other, non-addiction related, aspirational identities and social networks which are themselves protective (Best et al., 2016; Dingle, Cruwys, & Frings, 2015).

*Identification and involvement*

Identity and involvement are related constructs. Taking part in group activities has been shown to bolster levels of identification across a variety of populations, and within different domains such political activism, sexual orientation identity, educational / adolescent peer groups affiliation (Eccles, Barber, Stone, & Hunt, 2003; Haggard & Williams, 1992; McKenna & Bargh, 1998; Pugh & Hart, 1999). Having a strong social identity also increases participation in group activities (Becker, Wagner, & Christ, 2011; Leach et al., 2008). As such, identity and involvement they can be seen as reciprocal processes - both closely related and self-reinforcing (Asch, 1955). Thus, from both the perspective of SIMCM and evidence drawn from the wider literature, having a social identity associated with a group may be an ‘active ingredient’ in peer led groups such as AA, promoting positive recovery outcomes such as increased quit efficacy. Moreover, identity may relate both directly on such outcomes, and via its relationship with involvement. Similarly, involvement may have a direct effect on efficacy, and an indirect one via its relationship with identity. The current study tested two mediation models to explore these possibilities. In the first, the unique relationship between involvement and a recognised proxy of quit success (quit efficacy; Buckingham et al., 2013; Dingle, Stark, et al., 2015) was modelled, alongside a test of the mediation of this effect with social identification with AA. In the second, the unique relationship with social identity on quit efficacy, and those mediated through involvement, were tested.

## Methods

### Participants

31 males and 13 females took part in the study (total *n* = 44). Ages ranged from 20 to 83 years (*M* = 45, *SD* = 14.35). All participants were recruited through opportunity sampling via a link posted on a Facebook group. To be eligible to take part, participants had to be over 18 years old and had to have attended AA in the three months prior to the study. Post-hoc sensitivity analysis revealed the sample size was sufficient to detect an effect size f2 = 0.24, (α = .05, and power = .80) in a linear regression with two predictors.

### Design

A correlational design was used, with measures comprising involvement with AA, abstinence efficacy, recent relapse history and social identification with AA. Demographic information (age and gender[[1]](#footnote-1)) and number of AA sessions attended in last 90 days were also measured).

### Materials

*Involvement in AA.* Involvement in AA was assessed using 22 items adapted from the Alcoholics Anonymous Involvement Scale (AAI) developed by Project MATCH (Tonigan, Connors, & Miller, 1996). The first question asked how many meetings the individual has attended in the past 90 days (scored as; No attendance (0 days = 0); quarterly to monthly (1-3 days = 1); less than 1-2 times/week (4-24 days = 2); most days of the week (25-85 days = 3); daily (86-90 days = 4). The second section asked 21 questions about behaviours relating to engagement in self-help. For example, ‘in the last 90 days have you had a sponsor; shared in a meeting; helped another member of AA?’. Participants responded ‘Yes’ (coded 1) or ‘No’ (coded 2). These 21 items were summed, with higher total scores indicating a greater level of involvement in AA. Internal reliability was high (Cronbach’s α = .98).

*Abstinence self-efficacy.* Participants’ abstinence self-efficacy was measured using 19 questions taken from the Situational Confidence Questionnaire (Annis, 1982). The questionnaire yields an overall self-efficacy rating based on a variety of high-risk situations that may cause relapse, scored on a 5-point Likert scale; (1 = not at all confident; 2 = not very confident; 3 = moderately confident; 4 = fairly confident and 5 = extremely confident). The questionnaire comprises four dimensions; *negative affect related* (e.g. ‘When I am feeling depressed; when I feel angry inside’); *positive/social affect* *related* (e.g. ‘When I am being offered substances in a social situation’); *physical* (e.g. ‘when I have a headache’) and *withdrawal and urge related* (e.g. ‘When I feel a craving for a substance’). The second section of the questionnaire asked 2 questions; (i) How difficult is it for you to abstain despite attending AA? (1 = extremely difficult, 2 = fairly difficult, 3 = moderately difficult, 4 = not very difficult, 5 = not difficult); (ii) How much do you agree that giving and receiving help in AA as the main factor for preventing you from relapsing? (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). Mean scores were calculated such that higher scores show stronger efficacy. Internal reliability of the scale was high (Cronbach’s α = .92).

*Relapse rates.* Participants were asked ‘how many times have you relapsed since attending AA in the past 90 days’ and given a number of response options; 0-2 times [coded 4], 3-5 times [3], 2 = 6-8 times [2], 9-11+ times [1]. Higher scores indicated low number of relapses.

*Social identification with AA.* Social identification with AA was measuredusing items drawn from Leach et al., (2008) multicomponent social identity scale. The items used were ‘I feel committed to AA’, ‘The fact that I am in AA is an important part of my identity’, ‘Being in AA is an important part of how I see myself’, ‘I am similar to many members of AA’. Responses to these items were based on a seven-point Likert type scale; (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree). Mean scores were calculated such that higher scores show stronger identification with AA. Internal reliability of the scale was high (Cronbach’s α = .94).

*Procedure*

 Participants followed a link to the study (hosted on a Qualtrics platform). They provided informed consent online, completed the scales (in the order presented in the design section above) and were thanked and debriefed. On a separate occasion, all participants were followed up to collect demographic information.

## Results

### Variable characteristics.

As can be seen in Table 2, all variables in the study correlated positively. To explore the potential risk of multicollinearity between identity and the other variables to be included in our main analysis, bootstrapped Pearson’s correlation were undertaken. The upper and lower 95% confidence intervals for the relationship with involvement were .68-.90. For efficacy, they were .59-.90.

Table 1.

*Descriptive statistics of study variables and their zero-order relationships.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *M (SD)* | *1.* | *2.* | *3.* | *4.* | *5.* |
| 1. Number of meetings attended in last 90 days | 30.90 (27.17) | -- | .67\*\*\* | .55\*\*\* | .39\*\* | .80\*\*\* |
| 2.Involvement | 15.17 (7.49) |  | -- | .64\*\*\* | .59\*\* | .80\*\*\* |
| 3.Efficacy | 3.80(1.02) |  |  | -- | .62\*\*\* | .79\*\*\* |
| 4. Relapse in last 90 days. | 3.68 (0.83) |  |  |  | -- | .65\*\*\* |
| 5. Identity  | 5.09 (1.87) |  |  |  |  | -- |

*Note:* \*\* = *p* <.01, \*\*\*\* *p* <.001.

### Mediation analyses

The first mediation model (see Figure 1) was tested with involvement as a predictor, identity as a mediator and efficacy of the outcome variable was tested using the Hayes (2013) Process macro (Model 4, with 5,000 bootstrap samples). Confidence intervals (CIs) are reported at the 95% level. The overall model was significant. *R2* = .62, F(2,41)= 33.36, *p* <.001. Identity was predicted by involvement (*aij*= 0.21,SE = 0.02, *t* = 8.89, p <.001, CIs = 0.16, 0.25). Efficacy was predicted by identity (*bij*= 0. 41,SE = 0.09, *t* = 4.70, *p* <.001, CIs = 0.23, 0.59), but not by involvement (*c'*1= < 0.01, SE = 0.02, *t* =0.22, CIs =-0.04, 0.05). The indirect effect of involvement mediated by identity was positive and significant, *a*1j*b*1*j* =0.09 SE = 0.03, CIs = 0.03, 0.15.


The second mediation model reversed the predictor and the mediator, in order to estimate the indirect effect of identity via involvement. The overall model predicted (as expected) the same level of variance; *R*2 = .62, *F*(2,41)= 33.36, *p* < .001. Involvement was predicted by identity (*aij*= 3.11, SE = 0.36, *t* = 8.69, *p* <.001, CIs = 2.39, 3.84). Efficacy was not predicted by involvement (*bij*< 0.01, SE = 0.02, *t* = 0.02, *p* = .823, CIs = -0.04, 0.05), but was positively predicted by identity (*c'1*= 0.41, SE = .09, *t* =4.70, CIs = 0.24, 0.59). The indirect effect of identity mediated by involvement was not significant, *a*1j*b*1*j* = 0.02, SE = 0.08, CIs = -0.21, 0.15.

In summary, involvement was significantly related to identity. Higher levels of involvement were also related to increased efficacy, but this effect was mediated fully by increases in social identity. Identity was positively related to involvement and efficacy, but had no indirect on efficacy via involvement.

## Discussion

Drug and alcohol treatment services provide effective interventions and treatments to support recovery for those seeking to desist from addiction. However, the psychological mechanisms which underpin these effects are still poorly understood. The current paper tests the role of two processes – active involvement and the generation of a social identity associated with the research group, which may underpin the effectiveness.

In the current study, both active involvement in the activities of a peer-support group (in this case, activities such as supporting the logistical operation of the group, directly mentoring others, outreach, etc) and having a strong social identity associated with it were both significantly related to self-reported quit efficacy (an established proxy for past and future quit success; Geen, 1991; Gulliver et al., 2006; Miller et al., 1996). Identity and involvement were also strongly related (with 64% of variance in one dimension being predicted by the other). Mediation analysis revealed a relationship between involvement and efficacy meditated by identity. However, in contrast, the identity-efficacy link was not mediated by involvement.

These findings have several theoretical and practical implications. In the field of addiction, models such as SIMCM and SIMOR (the Social Identity Model of Recovery) both argue that social relationships and identities are an important part of the recovery process (Best et al., 2016; Frings & Albery, 2015, 2017). SIMCM explores the processes through which social identity associated with recovery operates and highlights factors such as increases in efficacy, reframing the meaning of events, social support, and normative control. SIMOR highlights the importance of social network change to include a greater number of, and identification with, multiple social groups which have no bearing on substances use or misuse (Best et al., 2016; C. Haslam et al., 2019). It also considers the transition from a substance related to a recovery related social identity. The current findings support and expand both approaches- highlighting the importance of social identification with recovery, and suggesting that there are important processes which are unique to identity above and beyond taking part in the activities of the group – social identity could thus be considered one of the ‘active ingredients’ of group life in therapeutic contexts.

The current findings also have relevance for models of social identity which consider behavioural enactment. For instance, identity motives approach such as Vignoles’ (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006) argues that the ability to behave in line with social norms and standards and fulfil group goals are key determinants of of how we subsequently construct the *content* of our social identities. Similarly, the Situated Identity Enactment model (Cruwys, Platow, Rieger, Byrne, & Haslam, 2016) argues that taking part in the activities is a form of identity enactment, which is produced by an interaction of social context, social identity and social norms (see also Cross et al., 2017). In the current study, the observed links amongst, and differentiation between, identity and involvement supports both of these notions.

Insights into the ‘active ingredients’ of groups – in this case AA – also has practical implications for those running activity based or therapeutic groups, both within and beyond the realm of addiction. The finding that developing a sense of social identity is important to positive outcomes, to the same or greater extent than actual involvement, suggests group facilitators should aim to provide opportunities for such an identity to develop, and referrers should evaluate the extent these are present while selecting appropriate groups for clients. People in recovery should also consider the extent a particular group is likely to be one they can affiliate with meaningfully, to ensure higher retention rates (Marshall, Albery, & Frings, 2018). In particular, attention should be paid to the extent that groups have a good *normative fit* (i.e. the norms of group are similar to what the one expects), *comparative fit* (i.e. the distinction of what defines the group from others is psychologically meaningful) and that one’s past experiences and goals allow *perceiver readiness* (i.e. that there is overlap between experiences and goals which make the identity cognitively accessible). These constructs, drawn from social categorisation theory, are theoretically and empirically supported means of helping foster social identity (S. A. Haslam, Postmes, & Ellemers, 2003; S. A. Haslam, Powell, & Turner, 2000; J. Turner, 1982). In terms of the actual operation of groups themselves, evidence suggests that inter-dependency, mutual goals and opportunities for social interaction which is not task-focussed have all been linked to development in social groups (Brown, 2001). These can be facilitated by a systematic approach to the design of sessions (Borek, Abraham, Smith, Greaves, & Tarrant, 2015; Tarrant et al., 2016).

The current study has a number of limitations. The sample size was relatively small. This is not uncommon in research with populations undergoing addiction recovery (i.e Frings et al., 2016) and the achieved power was sufficient to detect effect medium to large effects sizes, which can be argued to be of a magnitude required to reach clinical significance in psychosocial settings. However, it may limit the generalisability of the findings. A larger sample, incorporating a wider range of treatment modalities (i.e. SMART recovery – a form of group CBT - or online groups, for instance) would effectively address this in future research. The sample was also self-selecting. As such, it may be that the high levels of social identification and efficacy observed was in part due to the inclusion of people who chose to remain in AA, rather than a sample of people who may not be well-matched to the program. Finally, as the study adopted a cross-sectional, rather than longitudinal/prospective, approach, causation cannot be inferred. However, we note that where longitudinal work has been conducted on variables such as social identity and addiction-related outcomes, causational links have been observed (Dingle, Stark, et al., 2015; Wolff et al., 2015). In a similar vein, dimensions such as involvement and identity are also conceptually likely to be reciprocal processes which interact dynamically over time, rather than having static relationships (Vignoles et al., 2006). A final related limitation is the current operationalisation of group involvement, which combined measures of social contact and engagement in group activities. Whilst this definition draws upon established approaches in the addiction field (Tonigan et al., 1996) it is possible these three components (contact, activities and identity) have differential effects on outcomes (Sani et al., 2012). Equally, levels of contact could be high whilst levels of engagement are low (or vice-versa). Both of these nuances represents avenues for future research.

In conclusion, the current study suggests identity is an active ingredient of peer-led support groups which relates to positive health outcomes. It appears to do so to an equal, or perhaps greater extent than does involvement in the group’s activities (as well as being closely linked to such involvement). To that end, the key implication of the study is that peer led and therapeutic groups should foster social identity where possible.

# References

Alcoholics Anonymous (Great Britain). (2018). Interesting Statistics. Retrieved August 21, 2018, from https://www.alcoholics-anonymous.org.uk/professionals/interesting-statistics

Annis, H. . (1982). *Situational Confidence Questionnaire*. Toronto: Addiction Research Foundation of Ontario.

Asch, S. E. (1955). Opinions and social pressure. *Scientific American*, *193*, 31–35. https://doi.org/10.2307/24943779

Becker, J. C., Wagner, U., & Christ, O. (2011). Consequences of the 2008 financial crisis for intergroup relations. *Group Processes & Intergroup Relations*, *14*, 871–885. https://doi.org/10.1177/1368430211407643

Best, D., Beckwith, M., Haslam, C., Alexander Haslam, S., Jetten, J., Mawson, E., & Lubman, D. I. (2016). Overcoming alcohol and other drug addiction as a process of social identity transition: the social identity model of recovery (SIMOR). *Addiction Research & Theory*, *24*, 111–123. https://doi.org/10.3109/16066359.2015.1075980

Borek, A. J., Abraham, C., Smith, J. R., Greaves, C. J., & Tarrant, M. (2015). A checklist to improve reporting of group-based behaviour-change interventions. *BMC Public Health*, *15*, 963. https://doi.org/10.1186/s12889-015-2300-6

Brown, R. (2001). *Group processes: Dynamics within and between groups.* Oxford: Blackwell.

Buckingham, S. A., Frings, D., & Albery, I. P. (2013). Group membership and social identity in addiction recovery. *Psychology of Addictive Behaviors*, *27*, 1132–1140. https://doi.org/10.1037/a0032480

Cross, W. E., Seaton, E., Yip, T., Lee, R. M., Rivas, D., Gee, G. C., … Ngo, B. (2017). Identity work: Enactment of racial-ethnic identity in everyday life. *Identity*, *17*, 1–12. https://doi.org/10.1080/15283488.2016.1268535

Cruwys, T., Platow, M. J., Rieger, E., Byrne, D. G., & Haslam, S. A. (2016). The social psychology of disordered eating: The Situated Identity Enactment model. *European Review of Social Psychology*, *27*, 160–195. https://doi.org/10.1080/10463283.2016.1229891

Dawson, D. A., Grant, B. F., Stinson, F. S., & Chou, P. S. (2006). Estimating the effect of help-seeking on achieving recovery from alcohol dependence. *Addiction*, *101*, 824–834. https://doi.org/10.1111/j.1360-0443.2006.01433.x

Dingle, G. A., Cruwys, T., & Frings, D. (2015). Social identities as pathways into and out of addiction. *Frontiers in Psychology*, *6:1795*. https://doi.org/10.3389/fpsyg.2015.01795

Dingle, G. A., Stark, C., Cruwys, T., & Best, D. (2015). Breaking good: Breaking ties with social groups may be good for recovery from substance misuse. *British Journal of Social Psychology*, *54*, 236–254. https://doi.org/10.1111/bjso.12081

Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues*, *59*, 865–889. https://doi.org/10.1046/j.0022-4537.2003.00095.x

Frings, D., & Albery, I. P. (2015). The social identity model of cessation maintenance: Formulation and initial evidence. *Addictive Behaviors*, *44*, 35–42. https://doi.org/10.1016/j.addbeh.2014.10.023

Frings, D., & Albery, I. P. (2017). Developing the social identity model of cessation maintenance: theory, evidence and implications. In Sarah Buckingham & David Best (Eds.), *Addiction, behavioural change and social identity. The pathway to resilience and recovery* (pp. 128–148). Oxon: Routledge.

Frings, D., Collins, M., Long, G., Pinto, I. R., & Albery, I. P. (2016). A test of the Social Identity Model of Cessation Maintenance: The content and role of social control. *Addictive Behaviors Reports*, *3*, 77–85. https://doi.org/10.1016/j.abrep.2016.02.003

Geen, R. G. (1991). *Human Aggression*. Buckingham: Open University Press.

Gossop, M., Green, L., Phillips, G., & Bradley, B. (1989). Lapse, Relapse and Survival among Opiate Addicts after Treatment. *British Journal of Psychiatry*, *154*, 348–353. https://doi.org/10.1192/bjp.154.3.348

Gossop, M., Harris, J., Best, D., Man, L.-H., Manning, V., Marshall, J., & Strang, J. (2003). Is attendance at Alcoholics Anonymous meetings after inpatient treatment related to improved outcomes? A 6-month follow-up study. *Alcohol and Alcoholism*, *38*, 421–426. https://doi.org/10.1093/alcalc/agg104

Gulliver, S. B., Hughes, J. R., Solomon, L. J., & Dey, A. N. (2006). An investigation of self-efficacy, partner support and daily stresses as predictors of relapse to smoking in self-quitters. *Addiction*, *90*, 767–772. https://doi.org/10.1046/j.1360-0443.1995.9067673.x

Haggard, L. M., & Williams, D. R. (1992). Identity Affirmation through Leisure Activities: Leisure Symbols of the Self. *Journal of Leisure Research*, *24*, 1–18. https://doi.org/10.1080/00222216.1992.11969868

Haslam, C., Best, D., A. Dingle, G., Staiger, P. K., Savic, M., Bathish, R., … Lubman, D. I. (2019). Social group membership before treatment for substance dependence predicts early identification and engagement with treatment communities. *Addiction Research & Theory*, *27*, 363–372. https://doi.org/10.1080/16066359.2018.1537393

Haslam, S. A., Postmes, T., & Ellemers, N. (2003). More than a Metaphor: Organizational Identity Makes Organizational Life Possible. *British Journal of Management*, *14*, 357–369. https://doi.org/10.1111/j.1467-8551.2003.00384.x

Haslam, S. A., Powell, C., & Turner, J. (2000). Social Identity, Self‐categorization, and work motivation: Rethinking the contribution of the group to positive and sustainable organisational outcomes. *Applied Psychology*, *49*, 319–339. https://doi.org/10.1111/1464-0597.00018

Hayes, A. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression‐based approach.* New York, NY: The Guildford Press.

Humphreys, K., Blodgett, J. C., & Wagner, T. H. (2014). Estimating the efficacy of Alcoholics Anonymous without self‐selection bias: an instrumental variables re‐analysis of randomized clinical trials. *Alcoholism: Clinical and Experimental Research*, *38*, 2688–2694. https://doi.org/10.1111/acer.12557

Hutchinson, P., Cox, S., & Frings, D. (2018). Helping you helps me: Giving and receiving social support in recovery groups for problem gamblers. *Group Dynamics: Theory, Research, and Practice*, *22*, 187–199. https://doi.org/http://dx.doi.org/10.1037/gdn0000090

Kelly, J. F., & Greene, M. C. (2014). Beyond motivation: Initial validation of the commitment to sobriety scale. *Journal of Substance Abuse Treatment*, *46*, 257–263. https://doi.org/10.1016/J.JSAT.2013.06.010

Kelly, J. F., Stout, R. L., Magill, M., Tonigan, J. S., & Pagano, M. E. (2010). Mechanisms of behavior change in alcoholics anonymous: does Alcoholics Anonymous lead to better alcohol use outcomes by reducing depression symptoms? *Addiction*, *105*, 626–636. https://doi.org/10.1111/j.1360-0443.2009.02820.x

Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., … Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology*, *95*, 144–165. https://doi.org/10.1037/0022-3514.95.1.144

Marshall, S. W., Albery, I. P., & Frings, D. (2018). Who stays in addiction treatment groups? Anxiety and avoidant attachment styles predict treatment retention and relapse. *Clinical Psychology & Psychotherapy*, *25*, 525–531. https://doi.org/10.1002/cpp.2187

McKellar, J., Stewart, E., & Humphreys, K. (2003). Alcoholics Anonymous involvement and positive alcohol-related outcomes: Cause, consequence, or just a correlate? A prospective 2-year study of 2,319 alcohol-dependent men. *Journal of Consulting and Clinical Psychology*, *71*, 302–308. https://doi.org/10.1037/0022-006X.71.2.302

McKenna, K. Y. A., & Bargh, J. A. (1998). Coming out in the age of the Internet: Identity &quot;demarginalization&quot; through virtual group participation. *Journal of Personality and Social Psychology*, *75*, 681–694. https://doi.org/10.1037/0022-3514.75.3.681

Miller, W. R., Westerberg, V. S., Harris, R. J., & Tonigan, J. S. (1996). What predicts relapse? Prospective testing of antecedent models. *Addiction*, *91*, 155–172. https://doi.org/10.1046/j.1360-0443.91.12s1.7.x

Montgomery, H. A., Miller, W. R., & Tonigan, J. S. (1995). Does Alcoholics Anonymous involvement predict treatment outcome? *Journal of Substance Abuse Treatment*, *12*, 241–246. https://doi.org/10.1016/0740-5472(95)00018-Z

Moos, R. H., & Moos, B. S. (2004). Long-term influence of duration and frequency of participation in Alcoholics Anonymous on individuals with Alcohol Use Disorders. *Journal of Consulting and Clinical Psychology*, *72*, 81–90. https://doi.org/10.1037/0022-006X.72.1.81

Moos, R. H., & Moos, B. S. (2006). Participation in treatment and Alcoholics Anonymous: A 16-year follow-up of initially untreated individuals. *Journal of Clinical Psychology*, *62*, 735–750. https://doi.org/10.1002/jclp.20259

Pugh, M. J. V., & Hart, D. (1999). Identity development and peer group participation. *New Directions for Child and Adolescent Development*, *84*, 55–70. https://doi.org/10.1002/cd.23219998406

Sani, F., Herrera, M., Wakefield, J. R. H., Boroch, O., & Gulyas, C. (2012). Comparing social contact and group identification as predictors of mental health. *British Journal of Social Psychology*, *51*, 781–790. https://doi.org/10.1111/j.2044-8309.2012.02101.x

Scott, C. K., Foss, M. A., & Dennis, M. L. (2005). Pathways in the relapse—treatment—recovery cycle over 3 years. *Journal of Substance Abuse Treatment*, *28*, S63–S72. https://doi.org/10.1016/J.JSAT.2004.09.006

Sheeren, M. (1988). The relationship between relapse and involvement in alcoholics anonymous. *Journal of Studies on Alcohol*, *49*, 104–106. https://doi.org/10.15288/jsa.1988.49.104

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.

Tappin, D., Bauld, L., Purves, D., Boyd, K., Sinclair, L., MacAskill, S., … Cessation in Pregnancy Incentives Trial Team. (2015). Financial incentives for smoking cessation in pregnancy: randomised controlled trial. *BMJ (Clinical Research Ed.)*, *350*, h134. https://doi.org/10.1136/BMJ.H134

Tarrant, M., Warmoth, K., Code, C., Dean, S., Goodwin, V. A., Stein, K., & Sugavanam, T. (2016). Creating psychological connections between intervention recipients: development and focus group evaluation of a group singing session for people with aphasia. *BMJ Open*, *6*, e009652. https://doi.org/10.1136/bmjopen-2015-009652

Tonigan, J. S., Connors, G. J., & Miller, W. R. (1996). Alcoholics Anonymous involvement (AAI) scale: Reliability and norms. *Psychology of Addictive Behaviors*, *10*, 75–80. https://doi.org/10.1037/0893-164X.10.2.75

Turner, J. (1982). Towards a cognitive redeﬁnition of the social group. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 15–40). Cambridge: Cambridge Univeristy Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory.* Basil Blackwell.

Vignoles, V. L., Regalia, C., Manzi, C., Golledge, J., & Scabini, E. (2006). Beyond self-esteem: Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology*, *90*, 308–333. https://doi.org/10.1037/0022-3514.90.2.308

Wolff, N., von Hippel, C., Brener, L., & von Hippel, W. (2015). Implicit identification with drug and alcohol use predicts retention in residential rehabilitation programs. *Psychology of Addictive Behaviors*, *29*, 136–141. https://doi.org/10.1037/adb0000004

# Conflict of Interest Statement

On behalf of all authors, the corresponding author states that there is no conflict of interest.

# Ethics statement

This research received ethical oversight from London South Bank University’s Division of Psychology Research Ethics Panel and has been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments. This research was undertaken as partial fufillment of a taught course and and, as such, local ethics processes did not assign a specific reference number to the project.

1. Ages and gender were collected from the sample separately from the main measures. [↑](#footnote-ref-1)