

The relationship between group identification and satisfaction with life in a cross-cultural community sample

Juliet Ruth Helen Wakefield¹, Fabio Sani¹, Vishnu Madhok², Michael Norbury³, Pat Dugard¹, Carlo Gabbanelli⁴, Mario Arnetoli⁴, Giampiero Beconcini⁴, Lucia Botindari⁵, Franco Grifoni⁴, Paola Paoli⁴, & Fabio Poggesi⁴

1 School of Psychology, University of Dundee, Dundee, Scotland, DD1 4HN, UK.

2 Park House Surgery, 6 Park Street, Bagshot, Surrey, England, GU19 5AQ, UK.

3 NHS Lothian Unscheduled Care Service, Astley Ainslie Hospital, Edinburgh, Scotland, EH9 2HL, UK.

4 Cooperativa Medica Valdarno, Castelfranco di Sopra, Arezzo, Italy.

5 School of Psychology & Neuroscience, University of St. Andrews, St Andrews, Fife, KY16 9AJ, UK.

Author Note

Correspondence concerning this article should be addressed to Juliet Ruth Helen Wakefield, Division of Psychology, Chaucer Building, Nottingham Trent University, Burton Street, Nottingham, NG1 4BU, UK.

Email: juliet.wakefield@ntu.ac.uk

Telephone: +44 (0)115 8485518.

Fax: +44 (0)1159 473523.

Word Count (exc. Title Page, Abstract, Acknowledgements, References, Tables, and Figure): 8033.

Funding: This study was funded by a research grant awarded by the Economic & Social Research Council (ESRC) to the second, third, and fourth authors (grant reference number ES/I038349/1).

Conflict of Interest: The authors declare that they have no conflict of interest.

Acknowledgements

This research was made possible by a research grant awarded by the Economic & Social Research Council (ESRC) to the second, third, and fourth authors (grant reference number ES/I038349/1). We were also assisted by the Scottish Primary Care Research Network (SPCRN) during data collection. The ESRC and SPCRN had no involvement in the study's design, data collection, data analysis, data interpretation, or the writing and submission of this article.

Abstract

A variety of studies have shown that *group identification* (a sense of belonging to one's social group, coupled with a sense of commonality with the group's members) is linked to high levels of satisfaction with life (SWL). The aim of the present study was to support and extend this literature by: i) investigating the link between group identification and SWL with a large cross-cultural community sample; ii) examining whether the relationship is moderated by nationality; and iii) considering whether SWL is enhanced by possessing multiple group identifications simultaneously. Utilizing data from Wave 1 of the Health in Groups project, 3,829 participants from both Scotland and Italy completed a questionnaire assessing their identification with their family, their local community, and a group of their choice, as well as their level of SWL. Higher identification with each group predicted higher SWL. Nationality was a marginal moderator of the relationship between family identification and SWL, with the relationship being stronger for Italian participants than for Scottish participants. There was also an additive effect of group identification, with a positive relationship between the number of groups with which participants identified and their SWL. These effects were obtained even after controlling for gender, age, employment status, nationality, and extent of contact with each group. The implications for healthcare professionals and their patients are discussed.

Keywords: social identity; group memberships; wellbeing; social care; Scottish; Italian.

Introduction

There is a general acceptance by researchers from numerous disciplines (e.g., psychology, sociology, and anthropology) that membership of social groups is a vitally-important element in the promotion and maintenance of human wellbeing (e.g., Tuomela 2007). Humans are born into groups (e.g., the tribe, the family, or the community), and generally spend their lives as members of a vast and dynamic array of different collectives (e.g., work groups, sports groups, religious groups, hobby groups, etc.). It is perhaps unsurprising, then, that various authors have suggested that group membership is an integral part of the human condition, and that lack of such memberships can have highly deleterious effects on people's mental and physical health (e.g., Putnam 2000; Jetten et al. 2012).

Much of the early research in this domain investigated the relationships between wellbeing and participants' *social integration*: the number of social groups or connections one possesses, or the amount of engagement one has with these groups/connections (Brissette et al. 2000). Across numerous studies, researchers have shown that individuals who are more socially integrated tend to live happier, healthier, and longer lives (e.g., Berkman and Syme 1979; Cohen et al. 1997; Glass et al. 2006; Wilson et al. 2007). Proponents argue that social integration promotes wellbeing by affording individuals a sense of meaning, purpose, and security, as well as a source of social support during times of stress or crisis (e.g., Cohen 2004).

While these are clearly important conclusions, the concept of social integration is not without its limitations. Perhaps most importantly, it focuses on the idea that high levels of *social contact* (e.g., meeting the members of one's social groups frequently, or participating in group-related activities regularly) is key to wellbeing. This quantitative focus on amount of contact means that it is easy to overlook an important fact about group membership: it also

possesses a qualitative dimension. For instance, we might sometimes consider how it *feels* to be a member of a particular group: does the group matter to me and to my life? Do I enjoy spending time with other group members? Do I feel part of this group? Reflecting on issues such as these allows us to assess the extent of our *group identification* (Tajfel and Turner 1986): our sense of belonging to the group, coupled with our sense of commonality with its members (Sani et al. 2015a). Group membership and group identification are not synonymous: it is quite possible to be a member of a group (and, furthermore, to have high levels of contact with that group and its members), but feel very little sense of actual group identification (Haslam et al. 2015). In this paper, we argue that group identification is a crucial predictor of wellbeing.

The concept of group identification comes from the social identity approach in social psychology (Haslam 2004). Researchers working within this discipline have published a wide range of research showing that group identification affords us various important advantages. For instance, we tend to provide help and support to members of groups with which we identify, and we tend to receive help and support from them in return (e.g., Levine et al. 2002; Levine et al. 2005; Platow et al. 2007). Most importantly for this paper, there is a growing literature which suggests that there is a positive relationship between group identification and one of the key measures of subjective wellbeing: satisfaction with life.

Group Identification and Satisfaction With Life

Satisfaction with life (SWL) is considered to be one of the two facets of subjective wellbeing (the other being an emotional component; Lucas et al. 1996). SWL is a popular way to assess wellbeing because it enables the respondent to decide which criteria to include (and how to weight each of those criteria) in their assessment of overall life satisfaction (e.g., career, finances, relationships, health, etc.; Diener et al. 1985). Researchers out-with the

social identity tradition have highlighted the important positive effects that belonging to groups can have on people's subjective wellbeing. For instance, Delle Fave et al. (2011) investigated participants' understandings of happiness across many cultures, and found that social relations and family relations were strongly linked to feelings of happiness and meaningfulness in life (the latter of which was also linked to happiness and SWL). Indeed, this sense of meaning in life, which can be promoted through close and satisfying relationships with others, is hypothesised to play a key role in mediating the positive link between social relations and subjective wellbeing (e.g., Nakamura 2013). It therefore seems that the meaningfulness promoted by our social relationships can be an integral part of a happy life (e.g., Peterson et al. 2005).

These conclusions are also supported by research within the social identity tradition. Numerous social identity researchers have assessed the link between group identification and SWL, with the popular theory being that group identification has the ability to 'buffer' the individual from the everyday stresses of life by providing a sense of meaning and security, as well as increasing the likelihood of the individual receiving useful social support from fellow ingroup members (Jetten et al. 2010). In turn, these elements are believed to enhance SWL.

For instance, Haslam et al. (2005, Study 1) investigated patients recovering from heart surgery (a notoriously stressful process). The authors found a positive correlation between social identification with family/friends and SWL. Social support was also found to be a significant mediator of the relationship between social identification and SWL. Similarly, Sani et al. (2012) found that family identification in a sample of Polish people (Study 1) and army unit identification in a group of soldiers (Study 2) were both significant predictors of SWL, even after controlling for age, education level/army rank, and extent of social contact. Group identification has even been shown to enhance SWL in stressful circumstances:

recruiting African Americans (a group that is often threatened by discrimination), Outten et al. (2009) found that participants who were higher in racial group identification reported higher SWL. The authors suggest that this effect relates to group identification buffering the psychological stress and harm caused by discriminatory treatment. Indeed, recruiting Turkish-Dutch participants living in the Netherlands (a group known to possess relatively low levels of SWL; de Vroome and Hooghe 2014), Verkuyten (2008) found that although high levels of perceived discrimination predicted low satisfaction with life in the Netherlands, it also predicted high levels of Turkish identification, which itself predicted relatively high levels of overall life satisfaction. This suggests that one way to cope with the pain of being discriminated against is to identify more with one's group (Branscombe et al. 1999), and that this can help create a general satisfaction with life in even the most trying circumstances.

While this research is important and worthwhile, existing studies addressing the relationship between group identification and SWL possess various limitations. First, many of the studies report relatively small sample sizes, or involve samples from relatively small populations. This means that it is difficult to generalize the findings legitimately to larger populations, or to the community as a whole. Second, many of the studies do not control for a range of potentially-important covariates, with the role of the intensity of participants' group contact (i.e., the traditional measure of social integration) being especially neglected. Third, the studies tend to recruit participants from a single culture/country, which limits the authors' ability to test the cultural robustness of the relationship between group identification and SWL.

Our aim in the present study is to address these key limitations, thereby enhancing and extending the literature in this domain. First, we intend to use a large and representative community sample, from which results can be legitimately generalized to the wider

population. Second, we intend to control for a range of potentially-important covariates, including gender, occupational status, age, and (importantly) intensity of group-related contact. The former three covariates all refer to demographic aspects that can affect mental wellbeing, and thus have implications for SWL. For instance, women are twice as likely than men to experience depression (e.g., Nolen-Hoeksema 2001), while being out of work has also been found to be an important predictor of mental ill-health (e.g., Artazcoz et al. 2004). Finally, the incidence of major depression doubles once people become elderly (70-85 years of age; Alexopoulos 2005). Third, we intend to use a cross-cultural sample by recruiting participants from two different countries, thereby allowing us to test the cultural robustness of the group identification-SWL link. Finally, we also intend to expand knowledge in this area by addressing a hitherto under-explored issue: the extent to which multiple group identifications impact upon SWL. The following sections outline these latter two issues (culture and multiple group identifications) in more depth.

The Relevance of Culture

As stated above, existing studies addressing the relationship between group identification and SWL focus predominantly on single cultures/countries. It is important to compare the relationship across cultures for two reasons. First, it helps to ensure that any findings obtained are robust and replicable, even in different nations. Second, it could be the case that the effects of identification with specific groups on SWL might vary across nations due to cultural differences. With these issues in mind, we selected two rather different European countries for our study: Scotland and Italy. Although there are numerous dimensions upon which these two cultures could be compared, the comparison that is perhaps most relevant for the present study can be made by examining the Inglehart-Welzel Cultural Map of the World (Inglehart 2006), which places countries on two specific continua: the

extent to which the nation's values are focussed on survival vs. focussed on self-expression, and the extent to which the nation's values are traditional vs. secular. Although Italy and Britain (which includes Scotland) are very similar in terms of both having slightly secular values, Italy's values are more survival-based than Britain's. This suggests that, compared to Britain, Italian culture is more ethnocentric and untrusting: a conclusion supported by the finding that Italy scores twice as much as Britain on Hofstede's (2003) Uncertainty Avoidance scale, which indicates the extent to which a country's inhabitants feel threatened by unknown situations, and try to prevent such situations occurring. Ultimately, this suggests that SWL might be more strongly related to identification with the family and the local community in Italy than in Britain, since the family and the community are sources of constancy and certainty in a complex and changing world. While it should be remembered that dimensions such as Uncertainty Avoidance are very broad and speak to the nature of a particular culture in general terms (rather than to specific individuals within that culture), we feel that comparing Scotland and Italy will provide us with not only an appropriate test of the robustness of the group identification-SWL link, but will also enable us to examine whether the strength of that link is moderated by cultural differences.

The Relevance of Multiple Group Identifications

Within the social identity literature, the concept of multiple group memberships as being important for SWL/general wellbeing has gained increasing support. It is generally felt that possessing multiple group memberships is a good way to avoid 'putting all of one's eggs into one basket', so that the odds of at least one group membership lasting over time are increased (Ysseldyk et al. 2013). Additionally, having multiple group memberships means that one has access to more social support, as well as to more types of social support (e.g., emotional, informational, instrumental, etc.), during periods of stress or crisis (Haslam et al.

2008). Finally, some researchers argue that multiple group memberships increase our personal complexity and our sense of self-continuity across time and space (Sani 2008), both of which have the potential to be helpful resources when we are attempting to cope with stressful circumstances (Iyer et al. 2009).

There is a range of evidence to support the idea that multiple group memberships enhance SWL, especially during times of stress or identity transition. For instance, Haslam et al. (2008) investigated patients recovering from stroke, and found that possessing multiple group memberships before the stroke predicted relatively high levels of SWL during recovery. The authors concluded that this was because belonging to multiple groups pre-stroke increased the likelihood that the individual would be able to maintain at least some of those memberships post-stroke. Similarly, Iyer et al. (2009) recruited participants who were about to start university, and found that individuals who possessed few group memberships before beginning their studies tended to report low levels of SWL in their first year of study. Again, possessing multiple group memberships seems to provide the individual with more resources to cope with a significant identity transition, leading to relatively high SWL (Jetten et al. 2010).

While there is much evidence to suggest that possessing multiple group memberships has a positive effect on SWL, there is very little evidence to suggest that *identifying* with multiple groups matters for one's wellbeing. One of the only papers to address this issue was by Miller et al. (2015), and involved recruiting Scottish secondary school pupils. The authors assessed the participants' identification with three separate groups: their family, their school, and their main friendship group. The results indicated that identification with each group predicted better mental health. Moreover, there was also an additive effect, whereby the odds

of reporting psychiatric disturbance decreased for each additional group with which participants identified.

The Present Study

In the present study, we wish to explore whether there is a cross-cultural SWL-based advantage to identifying with multiple groups. We therefore intend to measure participants' identification with three separate groups: their family, their local community, and a group of their choice (sports group, hobby group, religious group, etc.). We selected family and community because these are two groups of which practically everybody is a member. This means that almost all participants could answer these questions, thereby reducing amounts of missing data and keeping participants engaged in the questionnaire. As discussed above, it may be the case that the relationship between family/community identification and SWL is particularly strong in Italy, so we also selected these groups in order to allow us to explore this possibility. Overall, we felt that measuring participants' identification with the family, community, and a third key social group would provide us with a well-rounded view of their social world.

Based on the previous literature, we thus have three predictions regarding these data:

Hypothesis 1: Higher levels of identification with each of the individual groups under study (family, local community, and a group of the participant's choice) will predict higher levels of SWL.

Hypothesis 2: Nationality will moderate the relationship between family identification and SWL and between community identification and SWL, so that there will be a stronger relationship between family identification and SWL and between community identification and SWL in Italy (rather than in Scotland).

Hypothesis 3: There will be an additive effect of multiple group identifications, so that the more different groups with which one identifies (from 0 to 3 groups), the higher one's SWL is likely to be.

As stated earlier, we are using a large community sample in order to test these hypotheses. Moreover, these effects are predicted to be observed even after controlling for potentially-important demographic variables, and (importantly) for participants' extent of contact with each of the three groups under study.

Method

Participants and Procedure

This study is based on Wave 1 of the two-wave Health in Groups project. Data were gathered in both Scotland and Italy, and the procedure differed slightly between the two countries.

Scottish Procedure

Five General Practitioner (GP) medical surgeries situated across Scotland posted participation invitations to all their 21,165 patients for whom the study was deemed suitable (those over 18 without terminal illnesses or conditions such as dementia or Alzheimer's disease). 2,508 interested patients returned the reply slip included with the invitation. These individuals then received a consent form and a questionnaire via post, which were completed and returned by 1,824 patients (henceforth participants; 770 males, 1,054 females, $M_{\text{age}} = 57.55$ years, $SD = 14.57$, range: 18-97 years).

Italian Procedure

GPs working in five different surgeries (all based in rural areas in the province of Arezzo, Tuscany) asked patients visiting the surgeries if they wished to participate in a questionnaire. Patients were only asked to participate if they were over 18 and did not possess any terminal illnesses or conditions such as dementia or Alzheimer's disease. Eligible patients were asked to fill out a consent form and then complete the questionnaire either in the surgery waiting room or at home. Patients were instructed to hand the completed questionnaire into their GP surgery. 2,005 patients completed the questionnaire (henceforth participants; 872 males, 1,130 females, 3 unknown, $M_{\text{age}} = 52.66$ years, $SD = 17.18$, range: 18-93 years).

Combining the Data

Although they were in different languages, the contents of the Scottish and Italian questionnaires were identical, so the Scottish and Italian data were combined for the purposes of analysis ($N = 3,829$; 1,642 males, 2,184 females, 3 unknown, $M_{\text{age}} = 54.99$ years, $SD = 16.17$, range: 18-97 years). This paper only deals with variables and data that are relevant to the present topic: for further analyses, see Sani et al. (2015a), Sani et al. (2015b), and Wakefield et al. (2016).

Questionnaire Measures

Group Identifications

Continuous identification variables. To assess *group identification* we used the Group Identification Scale (GIS; Sani et al. 2015a). This is a global scale based on four items tapping one's sense of belonging to the group (e.g., "I have a sense of belonging to [my group]") and one's sense of commonality with in-group members (e.g., "I have a lot in common with the members of [my group]"). Participants specify their disagreement or

agreement with each item using a seven-point scale (1= “strongly disagree”, 7= “strongly agree”). Each participant’s mean score on the four items was obtained.

Participants were asked to complete the GIS three times: once with reference to the family, once with reference to the local community, and once with reference to a group chosen by the participant. This meant that for each participant we calculated a mean family identification value, a mean community identification value, and a mean chosen group identification value. Participants were instructed to define ‘family’ “in any way you wish (e.g., immediate family or extended family, etc.)”, and ‘local community’ as “your neighbourhood, village, city area, or any other way you may define it”. The chosen group was selected from a list which included options such as hobby group, voluntary group, sports team, support group, group of friends, etc.

Number of group identifications. A binary identification variable was also created for each of the three groups. A participant was classified as being either not identified with a particular group, if their mean value on the relevant identification measure was less than 5, or as identified with a particular group, if their mean value on the relevant identification measure was 5 or above. The *number of group identifications* for each participant was then counted. This variable ranged from 0 (indicating the participant did not identify with any of the three groups) to 3 (indicating the participant identified with all three groups).

Contact-Intensive Groups

Continuous contact variables. For each of the three social groups considered (family, local community, and chosen group), we asked three questions assessing the extent to which participants interacted with other ingroup members and participated in group-related activities. The first two questions were identical for all three social groups: “On average, with

how many different members of your [group] do you have a face-to-face conversation in a single week?” and “On average, with how many different members of your [group] do you have a telephone/Internet conversation in a single week?” The third question differed depending on group-type. Concerning the family, we asked: “On average, how many family-related events (for instance meals out, parties, gatherings, trips, etc.) do you attend in a single month?” Concerning the local community, we asked: “On average, how many local community-related events (for instance parties, gatherings, trips, fundraising events, etc.) do you attend in a single year?” Finally, concerning the chosen group, we asked: On average, how many events related to your chosen group (for instance parties, gatherings, trips, etc.) do you attend in a single year?”

Then, for each of the three social groups, we transformed the participant’s responses to the three contact questions into *Z*-scores, and then summed these three *Z*-scores into an overall measure of *contact*. This gave each participant a contact score for each of the three groups. It is necessary to standardize (i.e., *Z*-score) the contact scores for each participant because the three contact items measure very different things involving different time-scales (e.g., number of family members that the participant has a face-to-face conversation with each week, number of family members that the participant has a telephone/internet conversation with each week, and number of family-related events that the participant attends each month). By standardizing these three items so that they exist on the same scale (with a sample mean of zero), it becomes legitimate to sum them in order to create an overall measure of family contact.

Number of contact-intensive groups. A binary contact variable was also created for each of the three groups. If the participant scored below 0 (less than average contact) on the overall measure of contact for a particular group then the group was not considered to be

contact-intensive for the participant. If the participant scored 0 or more (average/more than average contact) on the overall measure of contact for a particular group then the group was considered to be contact-intensive for the participant. Finally, for each participant we counted the *number of contact-intensive groups*. This variable ranged from 0 (indicating the participant did not have any contact-intensive groups) to 3 (indicating the participant had intensive contact with all three groups).

For details of how we handled missing data with reference to the above measures (i.e., group identification and contact), see Appendix 1 in the supplementary material of Sani et al. (2015a).

Satisfaction with Life

Participants were also presented with Diener et al.'s (1985) Satisfaction with Life (SWL) scale. Participants rated their agreement with each of the five statements (e.g., "In most ways my life is close to ideal") using a seven-point scale (1 = "I strongly disagree", 7 = "I strongly agree"). Each participant's mean score on the five items was obtained.

Participants who failed to respond to more than one item out of five were not included in the analysis. When a participant had one missing response, we replaced the missing response with the mean value of the participant's four valid responses.

Demographic Variables

As well as recording their *gender* (female = 0, male = 1) and *age*, participants also indicated their *occupational status*. We coded employed participants as 1 and non-employed participants (unemployed, retired, students, or housewives/househusbands) as 0.

Results

Comparing Scottish and Italian Participants

We began our analyses by comparing the Scottish and Italian sub-samples. As can be seen in Table 1, the Scottish and Italian participants' scores on the key measures were broadly similar, and the two samples were well-matched on demographic variables (gender composition, percentage of participants in employment, and mean age). This indicates that it is legitimate for us to include (and compare) the two sub-samples in our analyses.

(TABLE 1)

Descriptives, Reliabilities, and Inter-correlations

We then investigated the relationships between each of the continuous variables. Table 2 shows the means, standard deviations, and reliabilities (where applicable) for all the continuous variables, as well as the inter-correlations among all the variables. The three group identification measures and the SWL variable all had good reliability, with Cronbach alphas ranging from .90 to .92.

All three of the group identification measures correlated positively with each other, with r -values ranging from .32 to .38 ($ps < .001$). Moreover, all three correlated positively with SWL, with r -values ranging from .37 to .44 ($ps < .001$). This indicates that, as predicted, higher group identification was associated with higher life satisfaction. All three of the group contact measures correlated positively with each other ($ps < .001$). Moreover, all three correlated positively with SWL ($ps < .001$), indicating that higher group contact was associated with higher life satisfaction. All of the group identification variables correlated positively with all of the group contact variables ($ps < .01$). Finally, age correlated positively with family and community identification ($ps < .001$) and with SWL ($p < .001$). This indicates that older people tend to identify more with their family and their community, and tend to have higher life satisfaction.

(TABLE 2)

We repeated the key correlational analyses for the Scottish and Italian sub-samples separately, and again found that, for both sub-samples, all three of the group identification measures correlated positively with each other ($ps < .001$), and all three correlated positively with SWL ($ps < .001$). Moreover, all three of the group contact measures correlated positively with each other ($ps < .001$), and all three correlated positively with SWL ($ps < .001$).

Testing Hypothesis 1: Analysis Including The Three Group Identification & Three Group Contact Variables

Hierarchical multiple regression analysis was used to assess the ability of the three independent constructs (family identification, community identification, and chosen group identification) to predict SWL. The control variables were gender, age, occupational status, nationality, family contact, community contact, and chosen group contact. The analysis featured 3,098 participants (i.e., all participants who had data for each of the variables included in the analysis).

Assumptions. We first checked whether the data met the various assumptions required for linear regression. Tolerance values ranged from .67 to .98, while the highest Variance Inflation Factor value was 1.48, clearly indicating a lack of multicollinearity. We also investigated outliers. 5.36% of cases had a standardized residual above 2.00, which is just above the 5% that would be expected by chance. On the basis of these results, we proceeded with the linear regression.

Analysis. We entered the control variables (gender, age, occupational status, nationality, family contact, community contact, and chosen group contact) at Step 1, while family identification, community identification, and chosen group identification were entered at Step 2. This enables an examination of the unique contribution of each variable in predicting SWL, as well as an assessment of the variance in SWL that family/community/chosen group identification may explain in addition to the variance explained by gender, age, occupational

status, nationality, and family/community/chosen group contact (see Table 3). Supporting Hypothesis 1, family identification, community identification, and chosen group identification at Step 2 were all significant predictors of SWL (β s were .29, .20, and .18 respectively; p s < .001). Among the control variables, family contact, chosen group contact, age, and occupational status were also significant predictors ($\beta = .04, p = .04$; $\beta = .04, p = .01$; $\beta = .04, p = .02$ and $\beta = .04, p = .02$ respectively). Nationality was a marginal predictor ($\beta = .03, p = .07$), while gender and community contact were non-significant predictors (p s = .17 and .14 respectively). Taken together, family, community, and chosen group identification explained a significant amount of variance in addition to the variance explained by gender, age, occupational status, nationality, family contact, community contact, and chosen group contact on SWL ($\Delta R^2 = .23, p < .001$).

(TABLE 3)

Testing Hypothesis 2: Analysis Including The Three Group Identification & Three Group Contact Variables, with Nationality As A Moderator Variable

Hierarchical multiple regression analysis was used to investigate whether nationality moderated the relationship between any of the three group identification variables (family identification, community identification, and chosen group identification) and SWL. The control variables were gender, age, occupational status, nationality, family contact, community contact, and chosen group contact. The analysis featured 3,098 participants (i.e., all participants who had data for each of the variables included in the analysis).

Assumptions. We first checked whether the data met the various assumptions required for linear regression. Apart from the nationality variable and the three interaction variables (family identification multiplied by nationality, community identification multiplied by nationality, and chosen group identification multiplied by nationality), Tolerance values ranged from .022 to .97, while the highest Variance Inflation Factor value was 2.53, clearly indicating a lack of multicollinearity. However, the Tolerance value for the nationality variable was .019,

which is below the recommended value of .02 (Menard 1995), while the Variance Inflation Factor values for the nationality variable and the three interaction variables were 53.05, 42.00, 18.15, and 44.54 respectively, all of which are above the recommended value of 10 (Hair et al. 1995). Nonetheless, Allison (2012) notes that including interaction terms in a regression model can produce artificially low Tolerance/high Variance Inflation Factor values, and that this is not a cause for concern. The fact that the nationality variable had acceptable Tolerance and Variance Inflation Factor values in our Hypothesis 1 analysis supports this idea.

We also investigated outliers. 5.23% of cases had a standardized residual above 2.00, which is just above the 5% that would be expected by chance. On the basis of these results, we proceeded with the linear regression.

Analysis. We entered the control variables (gender, age, occupational status, nationality, family contact, community contact, and chosen group contact) at Step 1. We also entered family identification, community identification, and chosen group identification at Step 1. The three interaction variables (family identification multiplied by nationality, community identification multiplied by nationality, and chosen group identification multiplied by nationality) were entered at Step 2. This enables an examination of the unique contribution of each interaction variable in predicting SWL, as well as an assessment of the variance in SWL that the interaction between nationality and family/community/chosen group identification may explain in addition to the variance explained by gender, age, occupational status, nationality, family/community/chosen group contact, and family/community/chosen group identification (see Table 4). Partially supporting Hypothesis 2, the interaction between family identification and nationality was a marginally significant predictor of SWL ($\beta = -.17, p = .08$). However, the interaction between community identification and nationality was a non-significant predictor of SWL ($\beta = .08, p = .24$), as was the interaction between chosen group identification and nationality ($\beta = -.12, p = .23$). Among the control variables, nationality, age, employment status,

family contact, chosen group contact, family identification, community identification, and chosen group identification were also significant predictors ($\beta = .24, p = .03$; $\beta = .04, p = .02$; $\beta = .04, p = .02$; $\beta = .04, p = .03$; $\beta = .04, p = .01$; $\beta = .32, p < .001$; $\beta = .19, p < .001$ and $\beta = .20, p < .001$ respectively). Gender and community contact were non-significant predictors ($\beta = .02, p = .19$ and $\beta = .02, p = .16$ respectively). Taken together, the interactions between nationality and each of the three identification measures (family, community, and chosen group) did not explain a significant amount of variance in addition to the variance explained by gender, age, occupational status, nationality, family/community/chosen group contact and family/community/chosen group identification on SWL ($\Delta R^2 = .001, p = .14$).

(TABLE 4)

Simple slopes. In order to examine the marginally-significant moderating effect of nationality on the relationship between family identification and SWL in more depth, Hayes' (2012) PROCESS macro was used. The two non-significant interactions (nationality multiplied by community identification and nationality multiplied by chosen group identification) were removed from Step 2 of the model before performing the simple slopes analysis, the results of which can be seen in Figure 1. Both the Italian and Scottish slopes were significant (Italian slope: *Effect* = 0.39, *SE* = 0.03, *t* = 13.08, *p* < .001, *Lower CI* = 0.33, *Upper CI* = 0.45; Scottish slope: *Effect* = 0.32, *SE* = 0.03, *t* = 12.09, *p* < .001, *Lower CI* = 0.27, *Upper CI* = 0.37), and, as expected, both showed a positive relationship between family identification and SWL. However, consistent with Hypothesis 2, the Italian slope was found to be steeper than the Scottish slope, indicating a stronger relationship between family identification and SWL for the Italian participants. This meant that at low levels of family identification, SWL was particularly low for Italian participants.

(FIGURE 1)

Testing Hypothesis 3: Analysis Including The Number of Group Identification & Number of Contact-Intensive Groups Variables

Hierarchical multiple regression analysis was used to assess the ability of the number of group identifications variable to predict SWL. The control variables were gender, age, occupational status, nationality, and number of contact-intensive groups.

Assumptions. We first checked whether the data met the various assumptions required for linear regression. Tolerance values ranged from .69 to .99, while the highest Variance Inflation Factor value was 1.45, clearly indicating a lack of multicollinearity. We also investigated outliers. 5.49% of cases had a standardized residual above 2.00, which is just above the 5% that would be expected by chance. On the basis of these results, we proceeded with the linear regression.

Analysis. We entered the control variables (gender, age, occupational status, nationality, and number of contact-intensive groups) at Step 1, while number of group identifications was entered at Step 2. This enables an examination of the unique contribution of each variable in predicting SWL, as well as an assessment of the variance in SWL that number of group identifications may explain in addition to the variance explained by gender, age, occupational status, nationality, and number of contact-intensive groups (see Table 5). Supporting Hypothesis 3, number of group identifications at Step 2 was a significant predictor of SWL ($\beta = .41, p < .001$). Among the control variables, number of contact-intensive groups, nationality, age, and employment status were also significant predictors ($\beta = .12, p < .001$; $\beta = .07, p < .001$; $\beta = .08, p < .001$ and $\beta = .06, p = .002$ respectively), while gender was a non-significant predictor ($p = .59$). Overall, number of group identifications explained a significant amount of variance in addition to the variance explained by gender, age, occupational status, nationality, and number of contact-intensive groups on SWL ($\Delta R^2 = .15, p < .001$).

(TABLE 5)

Discussion

The results obtained in the present study support Hypotheses 1 and 3, and partially support Hypothesis 2. Concerning Hypothesis 1, we found that higher levels of identification with each of the three groups under study (family, local community, and a group of the participant's choice) predicted higher levels of SWL. We found this result even after controlling for gender, age, occupational status, nationality, and intensity of contact with each of the three groups. Concerning Hypothesis 2, we found that nationality was a marginally significant moderator of the relationship between family identification and SWL, with Italian participants who had low levels of family identification having particularly low levels of SWL. However, nationality did not moderate the relationship between community identification and SWL. We found these results after controlling for gender, age, occupational status, nationality, intensity of contact with each of the three groups, and extent of identification with each of the three groups. However, it must of course be noted that nationality was only a marginally significant moderator of the relationship between family identification and SWL, so this result must be interpreted with caution. Concerning Hypothesis 3, we found that there was an additive effect of multiple group identifications, so that the more group identifications a participant possessed, the higher their SWL was likely to be. Again, we found this result even after controlling for gender, age, occupational status, nationality, and the number of groups with which participants had intensive contact.

These findings are important because they were obtained from a large cross-cultural community sample, suggesting that the positive relationship between group identification and SWL is a widely generalizable and culturally robust phenomenon. Moreover, this is the first study to investigate (and establish) the link between three specific group identifications and SWL simultaneously, and is also the first to highlight the additive effect of identifying with multiple specific social groups.

Group Identification Predicts SWL

Our findings regarding Hypothesis 1 corroborate a range of research which shows a positive relationship between group identification and SWL (e.g., Haslam et al. 2005; Sani et al. 2012; Outten et al. 2009). In a bid to explain this relationship (as well as the relationship between group identification and wellbeing more generally), Haslam et al. (2005) proposed the Integrated Social Identity Model of Stress (ISIS). The core idea of ISIS is that our group memberships have the potential to affect how we appraise stress, both in terms of primary stress appraisal (deciding whether or not to categorize a potential stressor as a threat) and in terms of secondary stress appraisal (once a potential stressor is categorized as a threat, deciding whether one possesses the resources required to cope with that threat; Jetten et al. 2010). For instance, with regards to primary stress appraisal, a potentially stressful task is likely to be seen as less stressful when a member of a group with which you identify tells you that the task is fun and challenging rather than complex and difficult (Haslam et al. 2004). With regards to secondary stress appraisal, identifying with a group allows people to feel that they possess the resources they will require in order to cope with stressors: the sense of stability and belongingness afforded by group identification (as well as the belief that social support will be available from fellow group members) provides an important sense of security during difficult times (Haslam et al. 2008). The ISIS model thus postulates that group identification can both reduce the number of potentially-stressful events that an individual categorizes as threats, and increase the individual's perceived ability to cope with events that are categorized as threats. These important stress-buffering mechanisms are thus hypothesized to enhance SWL, as well as to increase overall wellbeing.

Nationality Moderates The Relationship Between Family Identification and SWL

Our findings regarding Hypothesis 2 lend partial support to our predictions regarding the moderating effect of nationality on the relationship between group identification and SWL.

As predicted, we found that identification with the family had a stronger relationship with SWL in Italy than in Scotland. More specifically, we found that possessing low levels of family identification was associated with particularly low levels of SWL for Italian participants. This is consistent with the idea that SWL levels in people living within the more ethnocentric and untrusting Italian culture are likely to be more bound up with family identification than levels of SWL in people living within the less ethnocentric and more trusting Scottish/British culture, which is more accepting of uncertainty and change. However, it must be remembered that the interaction between family identification and nationality was only a marginally significant predictor of SWL, and the interaction between community identification and nationality (which one would expect to follow the same pattern as the family identification interaction) was a non-significant predictor of SWL. It is unclear why our predictions regarding Hypothesis 2 were not fully confirmed, but it may relate to the fact that while Scotland is part of Britain, it is often felt that Scotland's culture is more community-focused than that of neighboring England (e.g., Béland and Lecours 2008; Findlay and Findlay 2005). This may explain why the Global Leadership and Organization Behavior Effectiveness (GLOBE) research program (House et al. 2004), which is one of the largest studies to compare nations in terms of their cultural values, only assessed the values of England, and not Britain as a whole. This suggests that we may have obtained stronger results regarding Hypothesis 2 if we had compared England and Italy, rather than Scotland and Italy.

Identification With Multiple Groups Predicts SWL

Our findings regarding Hypothesis 3 support and extend the literature which highlights the positive link between multiple group memberships and SWL (e.g., Haslam et al. 2008; Iyer et al. 2009). While there is little doubt that multiple group memberships are likely to have a positive influence on levels of SWL, our results imply that this might only be true to the extent that individuals actually identify with the groups in question. As mentioned in the

Introduction, it is most certainly possible for an individual to be a member of a group with which they do not identify, and we would argue that this type of group membership is unlikely to provide any type of benefit: indeed, the lack of perceived belongingness and support often inherent in such relationships could even be detrimental to SWL (e.g., Rook 1984).

Our finding regarding an additive effect of multiple group memberships (such that increasing numbers of group identifications was associated with higher levels of SWL) was also novel, and supports Miller et al.'s (2015) finding regarding the additive effect of multiple group memberships on adolescent's mental health. Rather than investigating how the possession of multiple group memberships before a life transition helps to promote SWL during/after the transition (e.g., Iyer et al. 2009), the present study suggests that there is a real-time benefit to identifying with multiple groups: it is something from which people can reap the benefits in their day-to-day lives, even if they are not experiencing a life transition. This is probably due to the fact that the advantages of identifying with multiple groups- the stronger sense of meaning and security, and the multiple sources (and types) of social support available during times of stress- have the potential to improve SWL at any life-stage (e.g., Haslam et al. 2008).

Nonetheless, it should be noted that not all researchers suggest that multiple group identifications will inevitably be beneficial: Finkle et al. (2014) note that possessing many group memberships about which one cares deeply can be mentally depleting, as each group membership requires one's time and resources. In this way, multiple group memberships could be perceived as a 'double-edged sword': as well as providing the individual with rich and varied forms of social support, it could also be the case that multiple group memberships may be costly in terms of the mental effort required to participate in each of them (particularly if these memberships compete for one's time, such as in the case of work identity and family identity for many individuals). Future research could usefully address this interesting potential paradox.

Covariates

An important aspect of the present study is that we highlighted the important (and unique) role that group identification plays in predicting SWL by obtaining our predicted results even after controlling for a number of potentially-important covariates: gender, age, occupational status, nationality, and intensity of group contact/number of contact-intensive groups. Including the contact-related variables in our analyses was particularly important, due to the large literature highlighting the relevance of social integration and social contact for overall wellbeing (e.g., Cohen 2004). Although we found family contact and chosen group contact to be significant predictors of SWL, their effect sizes did not come close to those of the identification-related variables. This finding supports and extends Sani et al.'s (2012) conclusion that while social contact plays a role in predicting mental health, its effects are not nearly as strong as those of group identification. Again, this reinforces the idea that mere contact with group members is likely to do little to benefit SWL: it seems that one must identify with the group/s in question in order to experience positive effects.

Limitations and Future Directions

Our study is not without limitations. Perhaps the most important of these is the cross-sectional nature of the research (a limitation which is also relevant to the previous studies investigating this topic which we outlined in the Introduction, e.g. Sani et al. 2012), which means that we are not able to clearly establish a causal link between group identification and SWL. Although we interpret group identification as leading to high levels of SWL, it could equally be the case that high levels of SWL encourage people to identify with more groups. While this latter idea is of course a possibility, the clear message to emerge from the literature (including longitudinal studies) in this area is that group identification tends to promote wellbeing (e.g., Haslam et al. 2009). However, it is also possible that this relationship promotes the creation of a 'virtuous circle' (e.g., Reicher and Haslam 2012), where group identification promotes wellbeing, which in turn encourages further group-related engagement and

identification, and so on. We hope that Wave 2 of the Health in Groups project will shed more light on this important issue.

Moreover, the present study did not investigate variables that may mediate the relationship between multiple group identifications and SWL. For instance, we would suggest that multiple group identifications have a positive relationship with SWL because of the sense of security and meaning they provide, as well as the multiple sources of social support such memberships afford.

There are also a number of covariates which we overlooked in the present study. Perhaps most notably, we neglected the potential importance of personality traits (such as neuroticism and extraversion), which may help to explain some of the variance in our model. For instance, work by Schimmack (e.g., Schimmack et al. 2002) has highlighted the important effects that personality traits can have on levels of SWL, and how the impact of personality on SWL can be culture-dependent. Considering the relevance of personality traits could therefore enhance future work in this area.

It could also have been worthwhile to ask participants how they defined 'family' when they were asked to indicate the extent of their family identification and family contact. Since participants were free to define 'family' in any way they wished (e.g., nuclear, extended, etc.), it could have been interesting to examine whether family type alters the relationship between family identification and SWL. This could be particularly relevant in a cross-cultural context, where meanings and understandings surrounding the family could differ between cultures.

Relatedly, it might be useful in future work to ask all participants to select the same type of group as their third group (e.g., a group of friends), and specify their identification with this specific group. This would eliminate the possibility of group-type impacting upon the relationship between group identification and SWL.

Furthermore, it may have been helpful to ask participants how long they had lived in Italy/Scotland at the time of questionnaire completion, in order to ensure that Italian and Scottish participants had experienced similar levels of exposure to their respective cultures, as well as exposure to any culturally-related norms and values. Nonetheless, over 95% of our Scottish sample defined themselves as Scottish/British, while over 98% of our Italian sample defined themselves as Italian, so this suggests that our participants generally had high levels of exposure to their respective cultures.

Finally, our finding regarding the additive effects of multiple group identifications raises an interesting issue: is there a ‘ceiling’ point after which new group identifications provide no additional SWL-related benefits to the individual? Addressing this issue in future research would be worthwhile because it could help suggest an ‘optimum’ number of groups with which one should identify in order to cultivate high levels of SWL.

Implications and Conclusion

Since SWL is known to be a crucial facet of overall subjective wellbeing, the results of the present study suggest that health professionals, therapists, and community workers should perhaps encourage their patients and clients: i) to join groups with which the individual in question feels that they will be able to identify (e.g., groups involving sports/hobbies that the individual is interested in, or groups promoting values/ideals that are broadly consistent with those of the individual), and; ii) to enhance/maintain their identification with groups of which they are already members. Achieving the latter does not necessarily need to be overly complex or costly: Knight et al. (2010) found that both group identification and SWL were enhanced for elderly care-home residents who were able to make collective decisions regarding how to decorate their living-space (versus those who were not).

Overall, our findings suggest that thinking more about one’s group life (and perhaps putting a plan into action in order to enhance it) could have significant benefits for one’s overall

sense of wellbeing. While this conclusion might appear rather intuitive to many, this is probably because it taps into knowledge that is deep within all of us, but which we often risk forgetting because of the hectically-paced and achievement-focused nature of modern life: that to be your best self, you tend to require the support of others.

References

- Allison, P. (2012, September 10). Statistical Horizons: When can you safely ignore multicollinearity? Retrieved from <http://statisticalhorizons.com/multicollinearity>.
- Alexopoulos, G. S. (2005). Depression in the elderly. *The Lancet*, *365*, 1961-1970. doi: 10.1016/S0140-6736(05)66665-2.
- Artazcoz, L., Benach, J., Borrell, C., & Cortès, I. (2004). Unemployment and mental health: Understanding the interactions among gender, family roles, and social class. *American Journal of Public Health*, *94*, 82-88. doi: 10.2105/AJPH.94.1.82.
- Béland, D., & Lecours, A. (2008). *Nationalism and social policy: The politics of territorial solidarity*. Oxford: University Press.
- Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, *109*, 186-204.
- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, *77*, 135-149. doi: 10.1037/0022-3514.77.1.135.
- Brisette, I., Cohen, S., & Seeman, T. E. (2000). Measuring social integration and social networks. In S. Cohen, L. G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 53-85). Oxford: University Press.

- Cohen, S. (2004). Social relationships and health. *American Psychologist*, *59*, 676-684. doi: 10.1037/0003-066X.59.8.676.
- Cohen, S., Doyle, W. J., Skoner, D. P., Rabin, B. S., & Gwaltney, J. M. (1997). Social ties and susceptibility to the common cold. *Journal of the American Medical Association*, *277*, 1940-1944. doi: 10.1001/jama.1997.03540480040036.
- Delle Fave, A., Brdar, I., Freire, T. Vella-Brodrick, D., & Wissing, M. P. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research*, *100*, 185-207. doi: 10.1007/s11205-010-9632-5.
- de Vroome, T. & Hooghe, M. (2014). Life satisfaction among ethnic minorities in the Netherlands: Immigration experience or adverse living conditions? *Journal of Happiness Studies*, *15*, 1389-1406. doi: 10.1007/s10902-013-9483-2.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71-75. doi: 10.1207/s15327752jpa4901_13.
- Findlay, J., & Findlay, P. (2005). Volunteering and organisational participation. In J. Ermisch and R. E. Wright (Eds.), *Changing Scotland: Evidence from the British Household Panel Survey* (pp. 277-296). University of Bristol: Polity Press.
- Finkel, E. J., Hui, C. M., Carswell, K. L., & Larson, G. M. (2014). The suffocation of marriage: Climbing Mount Maslow without enough oxygen. *Psychological Inquiry*, *25*, 1-41, doi: 10.1080/1047840X.2014.863723.
- Glass, T. A., De Leon, C. F. M., Bassuk, S. S., & Berkman, L. F. (2006). Social engagement and depressive symptoms in late life longitudinal findings. *Journal of Aging and Health*, *18*, 604-628. doi: 10.1177/0898264306291017.

- Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1995). *Multivariate data analysis* (3rd ed.). New York: Macmillan.
- Haslam, S. A. (2004). *Psychology in organizations*. London: Sage.
- Haslam, C., Cruwys, T., Haslam, S. A., & Jetten, J. (2015). Social connectedness and health. *Encyclopaedia of Geropsychology*. doi: 10.1007/978-981-287-080-3_46-1.
- Haslam, C., Holme, A., Haslam, S. A., Iyer, A., Jetten, J., & Williams, W. H. (2008). Maintaining group memberships: Social identity continuity predicts well-being after stroke. *Neuropsychological Rehabilitation, 18*, 671-691. doi: 10.1080/09602010701643449.
- Haslam, S. A., Jetten, J., O'Brien, A., & Jacobs, E. (2004). Social identity, social influence and reactions to potentially stressful tasks: support for the self-categorization model of stress. *Stress and Health, 20*, 3-9. doi: 10.1002/smi.995.
- Haslam, S. A., Jetten, J., & Waghorn, C. (2009). Social identification, stress and citizenship in teams: A five-phase longitudinal study. *Stress and Health, 25*, 21-30. doi: 10.1002/smi.1221.
- Haslam, S. A., O'Brien, A., Jetten, J., Vormedal, K., & Penna, S. (2005). Taking the strain: Social identity, social support, and the experience of stress. *British Journal of Social Psychology, 44*, 355-370. doi: 10.1348/014466605X37468.
- Hayes, A. F. (2012). PROCESS: A versatile computation tool for observed variable mediation, moderation, and conditional indirect effects (White paper). Retrieved from <http://www.afhayes.com/public/process2012.pdf>.

Hofstede, G. (2003). Geert Hofstede Cultural Dimensions. Retrieved from <http://geert-hofstede.com/countries.html>.

House R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.

Inglehart, R. (2006). Inglehart-Welzel Cultural Map of the World. *World Values Survey*.

Iyer, A., Jetten, J., Tsivrikos, D., Postmes, T., & Haslam, S. A. (2009). The more (and the more compatible) the merrier: Multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *British Journal of Social Psychology*, 48, 707-733. doi: 10.1348/014466608X397628.

Jetten, J., Haslam, C., & Haslam, S. A. (Eds.). (2012). *The social cure: Identity, health and well-being*. Hove: Psychology Press.

Jetten, J., Haslam, S. A., Iyer, A., & Haslam, C. (2010). Turning to others in times of change: Social identity and coping with stress. In S. Stürmer & S. Snyder (Eds.), *The psychology of prosocial behaviour: Group processes, intergroup relations, and helping* (pp. 139-156). Oxford: Wiley-Blackwell.

Knight, C., Haslam, S. A., & Haslam, C. (2010). In home or at home? How collective decision making in a new care facility enhances social interaction and wellbeing amongst older adults. *Ageing and Society*, 30, 1393-1418. doi: 10.1017/S0144686X10000656.

Levine, M., Cassidy, C., Brazier, G., & Reicher, S. (2002). Self-categorization and bystander non-intervention: Two experimental studies. *Journal of Applied Social Psychology, 32*, 1452-1463. doi: 10.1111/j.1559-1816.2002.tb01446.x.

Levine, M., Prosser, A., Evans, D., & Reicher, S. (2005). Identity and emergency intervention: How social group membership and inclusiveness of group boundaries shape helping behavior. *Personality and Social Psychology Bulletin, 31*, 443-453. doi: 10.1177/0146167204271651.

Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology, 71*, 616-628. doi: 10.1037/0022-3514.71.3.616.

Menard, S. (1995). *Applied logistic regression analysis: Sage university series on quantitative applications in the social sciences*. Thousand Oaks, CA: Sage.

Miller, K., Wakefield, J. R. H., & Sani, F. (2015). Identification with social groups is associated with mental health in adolescents: Evidence from a Scottish community sample. *Psychiatry Research, 228*, 340-346. doi: 10.1016/j.psychres.2015.05.088.

Nakamura, J. (2013). Pride and the experience of meaning in daily life. *The Journal of Positive Psychology, 8*, 555-567. doi: 10.1080/17439760.2013.830765.

Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science, 10*, 173-176. doi: 10.1111/1467-8721.00142.

Outten, H. R., Schmitt, M. T., Garcia, D. M., & Branscombe, N. R. (2009). Coping options: Missing links between minority group identification and psychological well-being. *Applied Psychology, 58*, 146-170. doi: 10.1111/j.1464-0597.2008.00386.x.

- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6, 25-41. doi: 10.1007/s10902-004-1278-z.
- Platow, M. J., Voudouris, N. J., Gilford, N., Jamieson, R., Najdovski, L., Papaleo, N., ... & Terry, L. (2007). In-group reassurance in a pain setting produces lower levels of physiological arousal: Direct support for a self-categorization analysis of social influence. *European Journal of Social Psychology*, 37, 649-660. doi: 10.1002/ejsp.381.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.
- Reicher, S. & Haslam, S. A. (2012). Beyond help: A social psychology of collective solidarity and social cohesion. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The social cure: Identity, health and well-being* (pp. 289-310). Hove: Psychology Press.
- Rook, K. S. (1984). The negative side of social interaction: Impact on psychological well-being. *Journal of Personality and Social Psychology*, 46, 1097-1108. doi: 10.1037/0022-3514.46.5.1097.
- Sani, F. (Ed.). (2008). *Self continuity: Individual and collective perspectives*. Hove: Psychology Press.
- Sani, F., Herrera, M., Wakefield, J. R. H., Borocho, O., & Gulyas, C. (2012). Comparing social contact and group identification as predictors of mental health. *British Journal of Social Psychology*, 51, 781-790. doi: 10.1111/j.2044-8309.2012.02101.x.
- Sani, F., Madhok, V., Norbury, M., Dugard, P., Wakefield, J. R. H. (2015a). Higher identification with social groups is associated with healthier behavior: Evidence from

- a Scottish community sample. *British Journal of Health Psychology*, *20*, 466-481. doi: 10.1111/bjhp.12119.
- Sani, F., Madhok, V., Norbury, M., Dugard, P., & Wakefield, J. R. H. (2015b). Greater number of group identifications is associated with lower odds of being depressed: Evidence from a Scottish community sample. *Social Psychiatry and Psychiatric Epidemiology*, *50*, 1389-1397. doi: 10.1007/s00127-015-1076-4.
- Schimmack, U., Radhakrishnan, P., Oishi, S., Dzokoto, V., & Ahadi, S. (2002). Culture, personality, and subjective well-being: Integrating process models of life satisfaction. *Journal of Personality and Social Psychology*, *82*, 582-593. doi: 10.1037/0022-3514.82.4.582.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behaviour. In S. Worchel and W. G. Austin (1986), *Psychology of intergroup relations* (pp. 2-24). Chicago: Nelson-Hall Publishers.
- Tuomela, R. (2007). *The philosophy of sociality: The shared point of view*. Oxford: University Press.
- Verkuyten, M. (2008). Life satisfaction among ethnic minorities: The role of discrimination and group identification. *Social Indicators Research*, *89*, 391-404. doi: 10.1007/s11205-008-9239-2.
- Wakefield, J. R. H., Sani, F., Madhok, V., Norbury, M., Dugard, P. (2016). The pain of low status: The relationship between subjective socioeconomic status and analgesic prescriptions in a Scottish community sample. *Psychology, Health, and Medicine*, *21*, 27-37. doi: 10.1080/13548506.2015.1009377.

Wilson, R. S., Krueger, K. R., Arnold, S. E., Schneider, J. A., Kelly, J. F., Barnes, L. L., ... & Bennett, D. A. (2007). Loneliness and risk of Alzheimer disease. *Archives of General Psychiatry*, *64*, 234-240. doi: 10.1001/archpsyc.64.2.234.

Ysseldyk, R., Haslam, S. A., & Haslam, C. (2013). Abide with me: Religious group identification among older adults promotes health and well-being by maintaining multiple group memberships. *Aging & Mental Health*, *17*, 869-879. doi: 10.1080/13607863.2013.799120.

Table 1. Means and standard deviations (unless otherwise stated) for Scottish and Italian participants on each of the key variables. Contact measures have not been included, as these are Z-scored, so descriptive statistics are not informative. Percentages exclude participants who had missing data for that particular variable.

	Scottish (<i>n</i> = 1,824)	Italian (<i>n</i> = 2,005)
Gender (% male)	42.20%	43.60%
Occupation (% employed)	48.90%	50.40%
Age (years)	<i>M</i> = 57.55, <i>SD</i> = 14.57	<i>M</i> = 52.66, <i>SD</i> = 17.18
Satisfaction With Life (1-7)	<i>M</i> = 5.09, <i>SD</i> = 1.36	<i>M</i> = 4.91, <i>SD</i> = 1.24
Family identification (1-7)	<i>M</i> = 6.04, <i>SD</i> = 1.23	<i>M</i> = 5.93, <i>SD</i> = 1.00
Community identification (1-7)	<i>M</i> = 4.67, <i>SD</i> = 1.37	<i>M</i> = 4.55, <i>SD</i> = 1.36
Chosen group identification (1-7)	<i>M</i> = 5.78, <i>SD</i> = 1.05	<i>M</i> = 5.58, <i>SD</i> = 0.95

Table 2. Means, standard deviations, reliabilities, and intercorrelations for continuous variables.

Variable	1	2	3	4	5	6	7	8
1. Family Identification (1-7) (<i>M</i> = 5.98; <i>SD</i> = 1.12; α = .90)	–							
2. Community Identification (1-7) (<i>M</i> = 4.61; <i>SD</i> = 1.36 α = .92)	.36***	–						
3. Chosen Group Identification (1-7) (<i>M</i> = 5.67; <i>SD</i> = 1.01; α = .91)	.32***	.38***	–					
4. Satisfaction with Life (1-7) (<i>M</i> = 5.00; <i>SD</i> = 1.30; α = .91)	.44***	.42***	.37***	–				
5. Age (years) (<i>M</i> = 54.99; <i>SD</i> = 16.17)	.06***	.18***	.01	.08***	–			
6. Family Contact (summed Z-scores) (<i>M</i> = 0.01; <i>SD</i> = 2.22)	.23***	.13***	.05**	.16***	-.05**	–		
7. Community Contact (summed Z-scores) (<i>M</i> = 0.02; <i>SD</i> = 2.27)	.11***	.28***	.11***	.15***	.02	.24***	–	
8. Chosen Group Contact (summed Z-scores) (<i>M</i> = 0.005; <i>SD</i> = 2.10)	.05**	.11***	.24***	.14***	-.08***	.26***	.34***	–

** $p < .01$; *** $p < .001$

Table 3. Summary of hierarchical regression analysis for variables predicting Satisfaction with Life, including separate Family Identification, Community Identification, and Chosen Group Identification variables and separate Family Contact, Community Contact, and Chosen Group Contact variables.

	<i>B</i>	SE	β
<u>Step 1</u>			
Constant	4.31***	.11	
Gender (0 = female, 1 = male)	-.03	.05	-.01
Age (years)	.01***	.002	.13
Occupation (0 = non-employed, 1 = employed)	.16**	.05	.06
Nationality (0 = Italy, 1 = Scotland)	.21***	.05	.08
Family contact (Z-score)	.07***	.01	.12
Community contact (Z-score)	.05***	.01	.09
Chosen group contact (Z-score)	.05***	.01	.09
(R ² = .06)			
<u>Step 2</u>			
Constant	.35*	.17	
Gender (0 = female, 1 = male)	.06	.04	.02
Age (years)	.004*	.002	.04
Occupation (0 = non-employed, 1 = employed)	.11*	.05	.04
Nationality (0 = Italy, 1 = Scotland)	.08†	.04	.03
Family contact (Z-score)	.02*	.01	.04
Community contact (Z-score)	.01	.01	.03
Chosen group contact (Z-score)	.03*	.01	.04
Family identification (1-7)	.35***	.02	.29
Community identification (1-7)	.19***	.02	.20
Chosen group identification (1-7)	.24***	.02	.18
(R ² = .29; $\Delta R^2 = .23$ ***)			

† $p < .10$, * $p < .05$, ** $p < .01$; *** $p < .001$

Table 4. Summary of hierarchical regression analysis for variables predicting Satisfaction with Life, including the three interaction variables (nationality by family/community/chosen group identification).

	<i>B</i>	SE	β
--	----------	----	---------

Step 1

Constant	.35*	.17	
Gender (0 = female, 1 = male)	.06	.04	.02
Age (years)	.004*	.002	.04
Occupation (0 = non-employed, 1 = employed)	.11*	.05	.04
Nationality (0 = Italy, 1 = Scotland)	.08†	.04	.03
Family contact (Z-score)	.02*	.01	.04
Community contact (Z-score)	.01	.01	.03
Chosen group contact (Z-score)	.03*	.01	.04
Family identification (1-7)	.35***	.02	.29
Community identification (1-7)	.19***	.02	.20
Chosen group identification (1-7)	.24***	.02	.18
<u>Step 2</u>	(R ² = .29)		
Constant	.03	.23	
Gender (0 = female, 1 = male)	.05	.04	.02
Age (years)	.003*	.002	.04
Occupation (0 = non-employed, 1 = employed)	.11*	.05	.04
Nationality (0 = Italy, 1 = Scotland)	.63*	.29	.24
Family contact (Z-score)	.02*	.01	.04
Community contact (Z-score)	.01	.01	.02
Chosen group contact (Z-score)	.03*	.01	.04
Family identification (1-7)	.39***	.03	.32
Community identification (1-7)	.18***	.02	.19
Chosen group identification (1-7)	.27***	.03	.20
Nationality x family identification	-.07†	.04	-.17
Nationality x community identification	.04	.03	.08
Nationality x chosen group identification	-.05	.04	-.12
	(R ² = .291; $\Delta R^2 = .001$)		

† $p < .10$, * $p < .05$, ** $p < .01$; *** $p < .001$

Table 5. Summary of hierarchical regression analysis for variables predicting Satisfaction with Life, including the Number of Group Identifications variable and the Number of Contact-Intensive Groups variable.

	<i>B</i>	<i>SE</i>	<i>β</i>
<u>Step 1</u>			
Constant	3.90***	.11	
Gender (0 = female, 1 = male)	-.04	.05	-.01
Age (years)	.01***	.002	.13
Occupation (0 = non-employed, 1 = employed)	.17**	.05	.07
Nationality (0 = Italian, 1 = Scottish)	.19***	.05	.07
Number of contact-intensive groups (1-3)	.34***	.02	.25
		($R^2 = .08$)	
<u>Step 2</u>			
Constant	2.95***	.11	
Gender (0 = female, 1 = male)	.02	.04	.01
Age (years)	.01***	.002	.08
Occupation (0 = non-employed, 1 = employed)	.15**	.05	.06
Nationality (0 = Italian, 1 = Scottish)	.19***	.04	.07
Number of contact-intensive groups (1-3)	.16***	.02	.12
Number of group identifications (1-3)	.63***	.03	.41
		($R^2 = .22$; $\Delta R^2 = .15$ ***)	

** $p < .01$; *** $p < .001$

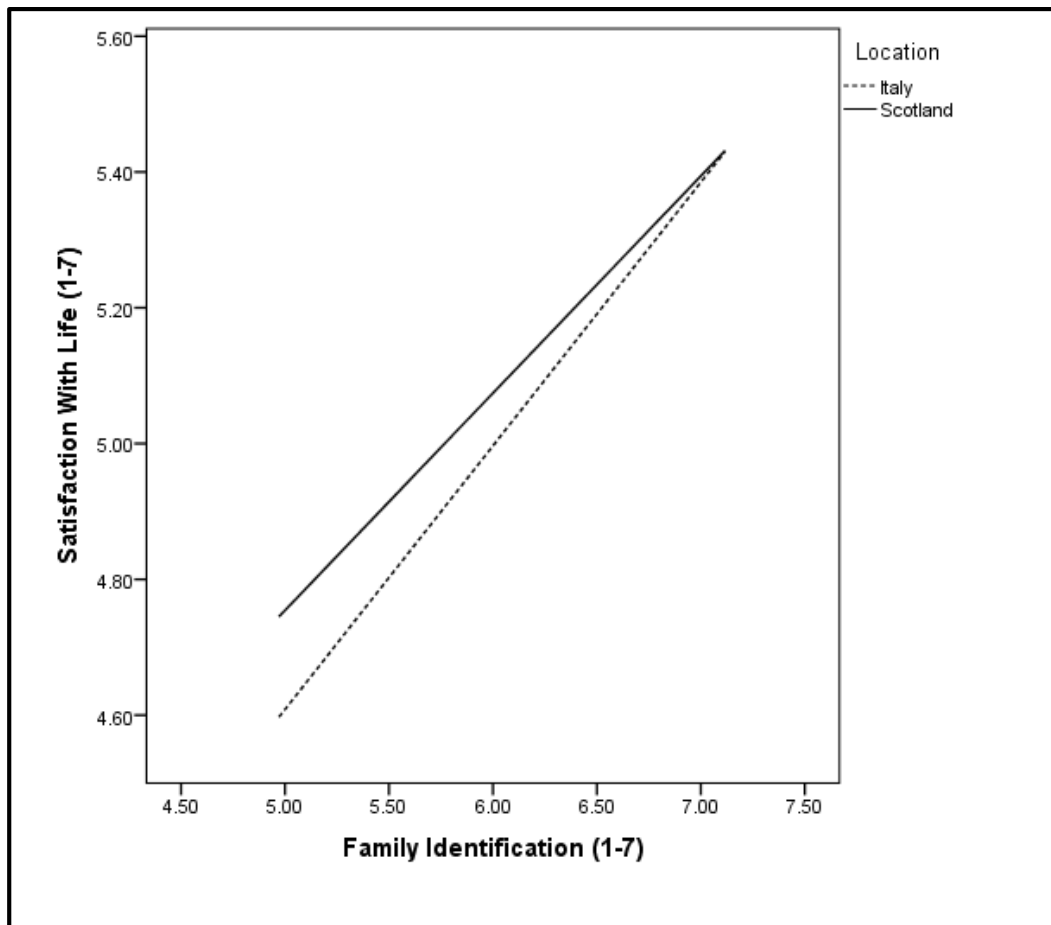


Figure 1. The moderating effect of nationality on the relationship between family identification and SWL, after controlling for the control variables. Both slopes are significant at $p < .001$.