SPECIAL ISSUE ARTICLE

Darkness into light? Identification with the crowd at a suicide prevention fundraiser promotes well-being amongst participants

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Received: 28 July 2016
Accepted: 31 January 2017

http://dx.doi.org/10.1002/ejsp.2304

Keywords: suicide, bereavement, social identity, crowd identity, psychological well-being, charity

Abstract

Suicide is recognised to be subject to social contagion, with an elevated risk of adverse outcomes amongst those affected. Drawing upon research within the social identity approach, we hypothesised that, for those bereaved by suicide, identifying with similar others could provide ‘a social cure’. A large cross-sectional study and a longitudinal study were carried out at a charity fundraiser for suicide prevention, with participants completing an online survey before and after the event. Results showed that, for those who lost someone they knew (Study 1) or a family member (Study 2) to suicide, there was a significant increase in psychological well-being after the event. This was mediated by identification with the crowd. These findings demonstrate that collective participation in a suicide awareness event can be an effective social intervention for those bereaved by suicide in terms of psychological well-being, with implications for informing best-practice interventions targeting this at-risk group.

With an estimated 800,000 lives lost each year, suicide represents a major global health issue (World Health Organization, 2014). But startling enough as this figure is, the ramifications of each death means that this number represents only a fraction of those affected by suicide; its negative effects are much more far reaching. Suicide risk is acknowledged to be impacted by social contagion, meaning that risk of future suicide and suicidal behaviours amongst those bereaved by suicide is a particular worry (Pitman, Osborn, Rantell, & King, 2016). This finding suggests that suicide risk passes through social networks, implicating social identity factors such as identification with those affected by suicide and altered social support. However, whilst knowing someone who died by suicide is undoubtedly a traumatic experience and can be thought of as a social disadvantage, it is also possible that social identity factors can facilitate ‘a social cure’ for those affected. In this study, we will explore this issue by focusing on the impact of collective participation in an event designed to raise awareness around suicide and consequent identification with others affected by suicide on participants’ well-being.

Our current hypotheses are based on the social identity approach (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which highlights the fact that we do not exist in isolation. Rather, through memberships of social groups, we obtain a sense of belonging, stability, meaning and/or purpose in everyday life. These memberships are internalised and contribute to our sense of self and are referred to as social identities (Haslam, Jetten, Postmes, & Haslam, 2009; Tajfel, 1972). Haslam and colleagues (2009) articulate the psychological and physical health benefits of these memberships as being a form of ‘social cure’. Research demonstrating the benefits of social identification extends from reducing depression (Cruwys, South, Greenaway, & Haslam, 2014), protecting against stress (Gallagher, Meaney, & Muldoon, 2014; Häusser, Kattenstroth, van Dick, & Moijzisch, 2012), improving health behaviours (Haslam et al., 2009), and dealing with dementia, brain injury and strokes (Clare, Rowlands, & Quin, 2008; Haslam et al., 2008; Walsh, Muldoon, Gallagher, & Fortune, 2015). Notably, social identification has also been shown to aid recovery from a wide range of traumatic experiences including the Sivas Massacre in Turkey (Yildiz & Verkuyten, 2011), political violence in Northern Ireland (Muldoon & Downes, 2007) and homelessness (Thomas, Gray, McGinty, & Ebringer, 2011).

To gain from a social identity, we must view ourselves as a part of a social group. This does not necessarily have to be a tight-knit group composed of family or friends. Social identification and group processes can be central to experiences in crowds (Reicher, 2001). Even at very large and diverse collective events that share a distal social identity, there can be a strong sense of unity (O’Donnell et al., 2016). As Alnabulsi and Drury (2014) explain, sharing a social identity with others in a crowd—that is, recognising crowd members as similar
others that are a part of their in-group, as ‘us’ rather than ‘them’—has been shown to have affective consequences and result in greater perceived social support from others in the crowd (Drury & Reicher, 2005). This sense of shared social relationships may well be the basis for the documented improvements in health. For example, a programme of research by Hopkins and colleagues has demonstrated that those who participate in the mass gatherings known as the Mela show improvements in well-being over time (Tewari, Khan, Hopkins, Srinivasan, & Reicher, 2012). This can be explained through the identity framing of the crowd’s experience of the event, which facilitates both social support and the positive interpretation of the difficult conditions endured (Pandey, Stevenson, Shankar, Hopkins, & Reicher, 2014).

In this study we focus on the shared identification of those participating in Darkness into Light (DIL), a large annual fundraiser for an Irish suicide prevention charity. We hope to replicate and extend findings from the social identity approach by testing the hypothesis that, for those who identity strongly with other participants at the event, there are potential benefits for psychological well-being. This would not only reaffirm that social identification can impact well-being within crowds but also extend evidence of ‘a social cure’ to those affected by suicide.

Suicide is an issue that has impacted many people in Ireland and western nations more generally in recent years. A declining trend in the Irish national suicide rate reversed in 2008 to coincide with a major national and global economic downturn (Corcoran, Griffin, Arensman, Fitzgerald, & Perry, 2015). By the end of 2012, the male suicide rate was an estimated 57% higher than if the pre-recession trend had continued (Corcoran et al., 2015). Although overall suicide rates have now stabilised, the suicide rates amongst young people in Ireland remain amongst the highest levels in Europe (National Office for Suicide Prevention, NOSP, 2015). It is not coincidental then that DIL has turned into something of an Irish national phenomenon over the same period. This event has thrived since its inception in 2009, with over 100,000 people at 80 locations in Ireland and amongst Irish diaspora communities rising at 4 am to walk/run 5 km as dawn breaks. With such mass participation, DIL serves as a very effective fundraiser but it is also a collective event aimed at raising suicide awareness. With this communal purpose, the event is an ideal substrate for the creation of a sense of shared social identification, particularly given that commentary from past DIL participants in local and national media suggests that many individuals who choose to participate in DIL have been directly affected by suicide (e.g. Kenny, 2016).

Individuals who have experienced the loss of a loved one due to suicide represent a unique type of the bereaved. The death of a close other as a result of suicide has been heavily linked to a sense of guilt, shame, stigma and a lack of understanding (Grad & Zavasnik, 1996; Jordan, 2001; Miles & Demi, 1992; Peters, Cunningham, Murphy, & Jackson, 2016; Shneidman, 1996). Many of these are socially based emotions meaning that bereavement by suicide can culminate in a strong sense of isolation and lack of belonging (Goffman, 1968). Further, suicide is commonly viewed as an essentially private or individualised issue (Biddle, 2003), and many of those left behind are often excluded from the support and help traditionally afforded to those who have experienced the loss of a loved one (Spinno, Kameg, Cline, Terhorst, & Mitchell, 2016). In this way, we argue that available identity resources are profoundly related to suicide bereavement.

Wertheimer (2013) suggests that one strategy for combatting the shame associated with a stigmatised identity is to seek out and identify with others who have had a similar experience, as it may offer a sense of belonging. DIL therefore serves an important purpose of uniting those who may otherwise have been isolated in their grief. Attending a large crowd event and realising that there is a large group of similar others with whom one can identify may offer a very accessible way for this isolated and silenced group to feel a sense of belonging. Research demonstrates that when the group that we are a part of is stigmatised or marginalised, a shared identity can help protect against negative consequences (Schmitt, Branscombe, Postmes, & García, 2014). Group identification can reduce isolation and help us to cope with prejudice, stigma and rejection of negative stereotypes by emphasising that which is shared with other group members (Schmitt et al., 2014). It can buffer against threats to our well-being (Schmid & Muldoon, 2015); allow us to harness psychological resources necessary to cope with the negative consequences of being a member of a devalued group (Bradshaw, Jay, McNamara, Stevenson, & Muldoon, 2016) and provide a platform for emotional bonding and the giving and receiving of social support (Haslam et al., 2009; Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009). In this way, identity processes can be seen to off-set some of the consequences of negative experiences and positively impact psychological well-being (Haslam et al., 2009).

It is due to the stigmatised or devalued identity of those bereaved by suicide that participants in DIL can be set apart from those partaking in other events. We recognise that it is by no means novel to suggest that involvement with charity events or indeed participation in sporting events may have a positive impact. Older adults, for example, who engaged in more hours of volunteering reported higher levels of well-being (Morrow-Howell, Hinterlong, Rozario, & Tang, 2003), whilst sports participation was shown to have a positive effect upon the subjective well-being of participants in a large-scale survey in the UK (Downward & Rasciute, 2011). In the current study, however, we suggest that participation benefits of DIL may differ amongst those taking part. As outlined above, DIL serves as a unique way in which to unite those bereaved by suicide; a loss
shared by many, but not all, DIL participants. Here, we propose then, orienting as we do to the value of crowd identification as a social cure, that those bereaved by suicide are those most likely to benefit from participation. This is because the solidarity offered by the crowd is directly linked to support for those affected by suicide. We suggest that, for those bereaved by suicide, experiencing the collective participation at DIL by others who have suffered a similar loss may result in a more meaningful shared social identification than that experienced by crowd members who have not had such a loss. This, in turn, may lead to such individuals demonstrating the greatest relative increases in psychological well-being.

The measure of well-being that will be examined in the current study is positive affect. Not only is this the emotional component of subjective psychological well-being (Diener, 1984) but research has also shown that experiencing positive affect triggers an upwards spiral towards overall emotional well-being and improves coping (Fredrickson & Joiner, 2002). As we are interested in whether potential changes in positive affect are influenced by a sense of identification with others taking part in the event due to a common experience of loss, past exposure to suicide will be a key variable of interest. Two studies are carried out in order to assess the impact of participation in DIL. Study 1 investigates our hypotheses (H1) that there is an effect of participation on positive affect, and, second (H2), that this differs based on exposure to suicide. For the purpose of this first study, exposure is conceptualised broadly as knowing someone who died by suicide. We expect that the greatest changes in positive affect will be visible in those who knew somebody that died by suicide. Study 2 replicates and expands upon Study 1 in a longitudinal sample, where our measure of exposure to suicide is more specific and discriminates between those who have lost an immediate family member, any other person, and those who did not know someone that died by suicide. This allows us to determine if, as expected, those who have been most closely impacted by the suicide of a loved one will demonstrate the greatest relative changes in positive affect. This study also tests our hypothesis (H3) that changes in positive affect are predicted by identification with others in the crowd at DIL.

**Study 1**

The purpose of our first study was to ascertain whether or not collective participation in an event designed to raise awareness around suicide has an effect on individual well-being, and how this may be impacted by the participant knowing someone who died by suicide. This was achieved by comparing scores on a measure of well-being before and after participants took part in DIL, with the study sample comprising of different participants at each time point.

**Method**

**Participants**

Individuals who planned to take part/took part in DIL 2015 were invited to participate on two occasions; before the event took place (Time 1) and immediately afterwards (Time 2). Participation at Time 1 was possible from when online registration for the event went live (2 months before the event) until 1 day before the event, with the majority of responses collected in the 2 weeks preceding DIL (the mean response date was 9 days beforehand). Participation at Time 2 was possible only on the day that DIL took place (7 am to midnight). Individuals who completed the survey at either of these time points comprise the sample for Study 1. In total, 2162 individuals clicked on the link to the study at Time 1. Participants were free to discontinue participation at any time throughout the survey and, as is the case in the majority of online surveys, a steady dropout rate was evident as the survey progressed. This resulted in a total of 1780 participants who completed all of the survey. Participant age ranged from 18 to 80 (mean M = 37.54, SD = 11.36), the vast majority of whom were female (n = 1588, representing 89.2% of the sample), which also reflects the gender distribution of the DIL 2015 population. Participation at Time 2 was slightly higher, with 2541 individuals clicking on the link in the first instance, and 2050 responding to all questions in the survey. Individuals who indicated at Time 2 that they had completed the survey at Time 1, but had not provided identifying information so responses could be matched were removed from the sample so that the assumption of independence would not be violated in the analysis (n = 87). Participant age at Time 2 ranged from 18 to 75 (mean M = 37.41, SD = 11.12), again with a much higher concentration of female respondents (n = 1828, 89.2%). Amongst the entire study sample, 79% of participants indicated that their primary reason for taking part in DIL was directly related to the issue of suicide (to raise awareness =30%; to remember somebody who had died =28%; to provide hope to those struggling with this issue =21%). This study received full approval from the Education and Health Sciences Research Ethics Committee at the University of Limerick (2014_06_26_EHS).

**Measures**

**Exposure to suicide.** Exposure to suicide was measured using a single dichotomous question, ‘Do you know somebody who has died by suicide’ with a Yes/No answer format. Responses were coded as No = 0 and Yes = 1.

**Positive affect.** Positive affect was measured using the positive affect items of the International Positive and Negative Affect Schedule Short Form (PANAS; Thompson, 2007). This is an internationally validated scale with excellent psychometric properties designed...
to measure the two dimensions of mood, positive and negative. Although there is continued debate over whether these two dimensions are in fact completely orthogonal, researchers are increasingly in agreement that one is not the opposite of the other and they should therefore be treated as septate entities for analytic purposes (Terracciano, McCrae, Hagemann, & Costa, 2003; Thompson, 2007). In this study, we were interested in whether taking part in DIL resulted in an increase in well-being, with the emotional component of subjective well-being commonly indicated by positive affect alone. Thus, only the positive affect factor of the scale is reported here (preliminary analysis on the negative affect alone. Thus, only the positive affect factor of the scale is reported here (preliminary analysis on the negative affect dimension of the I-PANAS-SF was also conducted, but revealed no significant change in either Study 1 or Study 2). Participants were asked to indicate the extent to which they experienced five emotion words concerned with positive affect (active, determined, attentive, inspired and alert) on a 5-point Likert scale ranging from 1 (very slightly or not at all) to 5 (extremely). At Time 1, participants were asked to consider the extent to which they experienced these emotions over the past few days, whilst at Time 2 participants were asked to consider the extent to which they experienced these emotions today. Scores on each of the five items were summed, with higher scores representing greater positive affect. Cronbach’s α’s were .83 and .82 for Time 1 and Time 2, respectively.

**Procedure**

Individuals taking part in Pieta House’s DIL event at any of their 80 designated locations in 2015 were invited to participate online via advertisements on social media (Twitter and Facebook) and through a link to the survey on the online registration page for DIL. Participation involved completing a battery of questionnaires administered by a web-based interface, SurveyMonkey.

Upon clicking on the link to the online survey, participants were directed to the first page, which outlined the study information and contained screening questions related to the inclusion criteria. These were that the individual was over the age of 18 and planning to take part/take part in DIL 2015. In total, the survey took less than 10 minutes to complete, at the end of which, they were thanked and provided with contact details for support services should they be required. No compensation was offered for participation. Following data collection, all analyses were carried out using IBM SPSS Statistics Version 22.

**Results and Discussion**

Preliminary analysis using Pearson’s correlations revealed no significant correlation between either gender or age and positive affect at Time 1 or Time 2 (p > .11 for all; Table 1), so these variables were not included in further analyses. A univariate analysis of variance (ANOVA) revealed no significant difference in levels of positive affect at Time 1 for different levels of exposure to suicide (F(1) = .03, p = .86). A univariate ANOVA was again used in the main analyses, with time and exposure to suicide as between-subject factors and positive affect as the dependent variable. This revealed that whilst neither the main effect of exposure to suicide (F(1) = .83, p = .36) nor the interaction between exposure to suicide and time were significant (F(1) = 1.37, p = .24), there was a significant main effect of time. Levels of positive affect (total M = 16.00, SD = 4.54) were significantly higher amongst DIL participants at Time 2 (M = 16.26, SD = 4.60) than at Time 1 (M = 15.60, SD = 4.44), F(1) = 6.58, p = .01, np2 = .06. Differences based on exposure to suicide revealed that when looking only at those who did not know somebody who had died by suicide, there was no significant difference in positive affect from Time 1 (n = 248, M = 15.56, SD = 4.27) to Time 2 (n = 268, M = 15.96, SD = 4.81), t(514) = 1.00, p = .32, d = .09. For those who did know somebody who had died by suicide, positive affect at Time 2 (n = 1782, M = 16.42, SD = 4.55) was significantly higher than at Time 1 (n = 1532, M = 15.60, SD = 4.47), t(2845) = 5.04, p < .001, d = .18. See Figure 1.

**Table 1** Pearson’s correlation coefficients for Study 1 and Study 2 variables

<table>
<thead>
<tr>
<th>Study 1 (n = 3830)</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Positive affect</td>
<td>.03</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>4. Exposure to suicide</td>
<td>.07**</td>
<td>.01</td>
<td>.02</td>
</tr>
<tr>
<td>Study 2 (n = 121)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1. Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. T1 positive affect</td>
<td>.14</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>4. T2 positive affect</td>
<td>.15</td>
<td>.12</td>
<td>.54**</td>
</tr>
<tr>
<td>5. Exposure to suicide</td>
<td>.13</td>
<td>-.01</td>
<td>-.09</td>
</tr>
<tr>
<td>6. Identification with the crowd</td>
<td>.13</td>
<td>.07</td>
<td>.21*</td>
</tr>
</tbody>
</table>

Note:
* p < .05;
** p < .01 (two-tailed).

**Fig. 1:** Study 1 mean scores for positive affect from Time 1 to Time 2 based on exposure to suicide with error bars representing standard error.
These findings provide support for the hypotheses that positive affect, our measure of well-being for this study, would increase from Time 1 to Time 2 at group level (H1). Our sample of DIL participants showed significantly higher levels of positive affect after the event than those who were measured prior to the event. We further hypothesised that this effect would differ based on the participant’s exposure to suicide (H2), with those who knew somebody who had died by suicide demonstrating a greater increase in positive affect than those who did not know somebody who had died by suicide. Again, this hypothesis was supported, with significant differences in positive affect from Time 1 to Time 2 only evident in those who had lost somebody to suicide.

These findings provide preliminary evidence that taking part in DIL provides participation benefits that extend beyond those of a traditional fundraiser, with a positive impact on individual wellbeing. Findings also provide support for the idea that this would be especially true for those who find the event personally meaningful, having previously been impacted by the suicide of a person known to them. Several limitations are present in this study however. The sample comprised of different participants at Time 1 and Time 2. This limits our ability to draw conclusions about the processes that may have contributed to the difference in positive affect scores at the two time points. Furthermore, because participants’ relationship with the person who had died by suicide was not measured at Time 1, we were unable to test, for example, if losing an immediate family to suicide contributed to a greater change in positive affect than a more distal relationship (a comparison between Study 1 Time 2 and Study 2 Time 2 scores is outlined below in ‘additional analyses’). This distinction is particularly important given the broad way in which the question was framed, as it could potentially be misinterpreted to include knowing of somebody who died by suicide, rather than having a direct personal relationship with the individual. The need to provide further analysis of this measure is also prompted by the substantially larger proportion of the sample who indicated that they knew somebody who died by suicide, as this group had more power to detect significant changes. These issues are addressed in Study 2.

Study 2

Our second study aimed to replicate and extend Study 1, addressing some of the limitations imposed by the nature of the study sample by replacing this with a longitudinal sample of participants who took part in the survey on two occasions. As in Study 1, we wanted to test if there was a change in positive affect from Time 1 to Time 2 that differed based on exposure to suicide (H2), with those who had greater exposure expected to demonstrate greater increases in positive affect. Our second aim was to clarify the nature of the processes that contributed to the change in positive affect after taking part in DIL. We hypothesised that identification with the crowd would partly explain this change (H3). As Study 1 and Study 2 are similar in nature, only methodological differences between the studies are outlined below. It should also be noted that participants in Study 2 took part in the same event and had the same experiences as participants in Study 1, meaning that the two studies are not entirely independent. However, for the purpose of clarity and ease of explanation they are identified as two separate studies here.

Method

Participants

The sample for Study 2 composed of participants from DIL 2015 who agreed to provide identifying information so that their responses could be tracked across time. This consisted of a total of 121 participants (109 female, 90.1%) who completed all elements of the questionnaire at both Time 1 and Time 2, with a mean age of 41.35 (SD = 11.81, range = 18–69) and a mean response time of 10 days between the two surveys. Study 2 participants were not included in analysis for Study 1.

Measures

Exposure to suicide. The exposure to suicide measure was slightly different in Study 2 in that two questions were used. The first was identical to that used in Study 1 and asked ‘Do you know somebody who has died by suicide’ with a dichotomous Yes/No answer format. The second question asked respondents who had answered ‘Yes’ to indicate their relationship with that person by choosing from a pre-defined list ranging from ‘child’ and ‘partner’ to ‘acquaintance’ and ‘other’. Those who had lost more than one person to suicide were asked to indicate their relationship with the person whose death had the greatest impact on them. Responses were coded into three levels: 2 = immediate family member, 1 = other, 0 = no exposure.

The reason for this difference in measurement in Study 2 related to a shortcoming in Study 1 in that, as noted previously, we were unable to decipher the role that the relationship with the individual who died might have had on changes in positive affect, and also the small number of participants in this study who had no exposure to suicide (n = 9). Small sample sizes are associated with a lack of power (and the spurious identification of significant effects), which would have proved difficult for drawing comparisons with those who had prior exposure to suicide. The decision was therefore made to code the variable into the three levels described above.

Identification with the crowd. Identification with the crowd was measured at Time 2 using a scale developed by Alnabulsi and Drury (2014) to measure pilgrim’s identification with others on the Hajj to Mecca. This consisted of five items scored on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree), which
yielded a Cronbach’s $\alpha$ of .88. For the purpose of this study the wording of two questions were altered to reflect the crowd at DIL. The five items were: ‘I feel that I am part of this crowd;’ ‘I feel at one with the people around me;’ ‘I feel a sense of togetherness with other people at Darkness into Light;’ ‘I feel unity with others;’ and ‘I feel strong ties with other people at Darkness into Light’. Scores on each of the five items were summed, with higher scores reflecting higher identification with the crowd. Cronbach’s $\alpha$ for this measure was .97.

### Analytic Procedure

Following preliminary analysis, an ANOVA was conducted to determine if there was a difference in positive affect from Time 1 to Time 2. As Study 1 found that changes in positive affect differed for those with differing levels of exposure to suicide, this was included in the model as a between-subjects factor with three levels (no exposure, family, other). This resulted in a mixed design factorial ANOVA with time (Time 1 vs. Time 2) as the within-subjects factor. Planned comparisons using simple effects analyses were conducted to establish if, as in Study 1, only those with exposure to suicide would demonstrate significant changes in positive affect from Time 1 to Time 2.

In addition, a mediation analysis using the PROCESS macro v2.15 developed by Hayes (2012) was used to determine if the relationship between positive affect at Time 1 and Time 2 was mediated by identification with the crowd. This was conducted using SPSS with an estimate of the indirect effect obtained by running 5000 iterations of computed samples using the bootstrapping procedure with 95% confidence intervals.

### Results and Discussion

Preliminary analysis using Pearson’s correlations revealed no significant correlation between either gender or age and positive affect at Time 1 or Time 2 ($p > .09$ for all; Table 1), so these were excluded from the main analyses. Univariate ANOVAs revealed no difference in positive affect at Time 1 between the three levels of exposure to suicide, $F(2, 118) = 1.01, p = .34$, and whilst identification with the crowd was higher in those who had lost an immediate family member to suicide than either of the other two levels, again this difference was not significant, $F(2, 118) = .86, p = .43$. For descriptive statistics, see Table 2.

### Analysis of Variance

A $2 \times 3$ mixed-design factorial ANOVA was conducted to assess for changes in positive affect with Time (Time 1 vs. Time 2) as the within-subjects factor and exposure to suicide (no exposure, family, other) as the between-subjects factor. It was found that whilst neither of the main effects of time ($F(1, 118) = 1.35, p = .25$) nor exposure to suicide ($F(2, 118) = .52, p = .60$) were significant, the interaction between time and exposure to suicide was significant ($F(2118) = 3.34, p = .04, \eta_p^2 = .05$). Simple effects analyses revealed a significant increase in positive affect from Time 1 to Time 2 for those who had lost an immediate family member to suicide ($F(1, 118) = 9.44, p < .01, \eta_p^2 = .07$). For those who lost somebody other than a family member, the increase in positive affect was not significant ($F(1, 118) = .45, p = .50$), whilst those who had no prior exposure to suicide displayed a decrease in positive affect, but again this was not significant, $F(1, 118) = .33, p = .57$ (Figure 2).

### Mediation Analysis

The direct effect of Time 1 positive affect on Time 2 positive affect was significant, with higher levels of positive affect at Time 1 predicting increased positive affect at Time 2; this remained significant once identification with the crowd was added to the model. However, the indirect effect of Time 1 positive affect on Time 2 positive affect through identification with the crowd was also significant, with greater identification with the crowd also predicting higher levels of positive affect at Time 2. This suggests that the relationship is mediated by identification with the crowd. Together, Time 1 positive affect and identification with the crowd explained 36% of the variance in positive affect at Time 2, an increase in 6% compared to Time 1 positive affect alone. See Table 3 for parameter estimates and Figure 3 for a portrayal of the direction and size of the effects.

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**Table 2** Study 2 descriptive statistics for positive affect and identification with the crowd for each level of exposure to suicide

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Time 1 M</th>
<th>Time 1 SD</th>
<th>Time 2 M</th>
<th>Time 2 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>121</td>
<td>15.85</td>
<td>4.32</td>
<td>16.55</td>
</tr>
<tr>
<td>0. No exposure</td>
<td>9</td>
<td>15.44</td>
<td>6.29</td>
<td>14.67</td>
</tr>
<tr>
<td>1. Other</td>
<td>84</td>
<td>16.23</td>
<td>3.85</td>
<td>16.52</td>
</tr>
<tr>
<td>2. Family member</td>
<td>28</td>
<td>14.86</td>
<td>4.93</td>
<td>17.21</td>
</tr>
<tr>
<td>Identification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>0. No exposure</td>
<td>9</td>
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</tr>
<tr>
<td>1. Other</td>
<td>84</td>
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<td></td>
</tr>
<tr>
<td>2. Family member</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Fig. 2** Study 2 mean scores for positive affect from Time 1 to Time 2 based on exposure to suicide with error bars representing standard error.
Additional Analyses

In order to determine whether the patterns reported in Study 1 Time 2 (where, as in Study 2, exposure to suicide was measured using three levels: no exposure, family, and other) were similar to those in Study 2 Time 2, additional analyses were carried out. An independent t-test with revealed no significant differences in positive affect scores for the total sample of Study 1 Time 2 and Study 2 Time 2 (t(2169) = .45, p = .66, d = .04). Planned comparisons based on exposure to suicide again revealed no significant differences between the two samples for those who had lost an immediate family member to suicide (t(272) = 1.00, p = .32, d = .21), those who had lost any other person (t(1618) = .03, p = .96, d < .01), and those who did not know somebody who had died by suicide (t(275) = .78, p = .43, d = .23). For descriptive statistics, see Table 4. The only notable difference between the two samples is that a greater proportion of the Study 2 sample comprised individuals who had lost an immediate family member to suicide—suggesting that these individuals had greater motivation to complete the longitudinal study—whilst Study 1 had a greater representation of individuals who did not know somebody who had died by suicide.

Study 2 Discussion

Results from Study 2 confirmed our findings from Study 1, with a longitudinal sample. A significant increase in positive affect from Time 1 to Time 2 was apparent in participants that reported they had been impacted by the suicide of an immediate family member. The increase in positive affect amongst participants who had lost any other person to suicide was not significant, nor was the decrease in positive affect demonstrated by those who did not know somebody who had died by suicide. This provides support for the idea that taking part in DIL has a positive impact on individual well-being (H1), with the results also suggesting that this is only true for those who have been directly affected by suicide (H2). Caution should be advised in interpreting the non-significant decrease in positive affect amongst those with no exposure to suicide due to the very small sample size, particularly given that a (non-significant) increase was noted for those with no exposure to suicide in Study 1.

This study also tested our third hypothesis (H3) that the change in positive affect from Time 1 to Time 2 would be explained by identification with the crowd. This hypothesis was supported, with identification with the crowd found to explain a significant proportion of the variance in the relationship between positive affect at Time 1 and Time 2. Those who experienced greater identification with the crowd at DIL displayed increased positive affect at Time 2 (after taking part in the event). As the combination of positive affect at Time 1 and identification with the crowd explain only 36% of the variance in Time 2 positive affect, this suggests that other factors not included in the model may also have contributed to this change.

General Discussion

The findings of this study show that collective participation in an event focused on suicide awareness positively impacted the well-being of participants. As

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**Table 3** Parameter estimates of the model examining the mediating role of identification with the crowd in the relationship between positive affect at Time 1 and Time 2

<table>
<thead>
<tr>
<th>Model without mediator</th>
<th>Estimate</th>
<th>SE</th>
<th>p</th>
<th>CI (lower)</th>
<th>CI (upper)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>7.96</td>
<td>1.26</td>
<td>&lt; .001</td>
<td>5.46</td>
<td>10.46</td>
</tr>
<tr>
<td>T1PA → T2PA (c)</td>
<td>.54</td>
<td>.08</td>
<td>&lt; .001</td>
<td>.39</td>
<td>.70</td>
</tr>
<tr>
<td>R² (y,x)</td>
<td>.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model with mediator</th>
<th>Intercept</th>
<th>4.10</th>
<th>1.67</th>
<th>.02</th>
<th>.79</th>
<th>7.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>IdC as outcome variable</td>
<td>T1PA → IdC (α)</td>
<td>.34</td>
<td>.14</td>
<td>.02</td>
<td>.05</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>R² (m,x)</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2PA as outcome variable</td>
<td>IdC → T2PA (α)</td>
<td>.15</td>
<td>.05</td>
<td>.001</td>
<td>.06</td>
<td>.25</td>
</tr>
<tr>
<td></td>
<td>T1PA → T2PA (c')</td>
<td>.49</td>
<td>.08</td>
<td>&lt; .001</td>
<td>.34</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>Indirect effect (a x b)</td>
<td>.05</td>
<td>.03</td>
<td>.01</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R² (y,m,x)</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Regression weights for a, b, c and c' are illustrated in Figure 3. R²(m,x) is the proportion of variance explained by x, R²(y,m,x) is the proportion of variance explained by x and m. The 95% confidence interval (CI) for a x b is obtained from the bias-corrected bootstrap with 5000 resamples. Time 1 positive affect (T1PA) is the predictor variable (x), Identification with the Crowd (IdC) is the mediator (m) and Time 2 positive affect (T2PA) is the outcome variable (y). CI (lower) is the lower bound of 95% CI, CI (upper) is the upper bound of 95% CI.

**Table 4** Descriptive statistics for positive affect scores at Time 2 in both Study 1 and Study 2, based on exposure to suicide

<table>
<thead>
<tr>
<th>Exposure to suicide</th>
<th>Study 1 Time 2</th>
<th>Study 2 Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
</tr>
<tr>
<td>Total</td>
<td>2050</td>
<td>16.36</td>
</tr>
<tr>
<td>0. No exposure</td>
<td>268</td>
<td>15.96</td>
</tr>
<tr>
<td>1. Other</td>
<td>1536</td>
<td>16.50</td>
</tr>
<tr>
<td>2. Family</td>
<td>246</td>
<td>16.29</td>
</tr>
</tbody>
</table>
expected, this was particularly true for those who have been affected by suicide, with Study 1 showing significant increases only in those who knew somebody who had died by suicide. Study 2 expanded upon this, revealing that those who have been most closely impacted (experienced the loss of an immediate family member) demonstrated significant increases in well-being. Our second study also revealed that, as we had predicted, the change in well-being amongst DIL participants could be partly explained by identification with the crowd at the event. These findings suggest that, for individuals who have been closely impacted by suicide, attending a collective event and identifying with others who have had a similar experience can enhance well-being.

Theoretical and Practical Implications

In terms of theory, the current study extends evidence of the beneficial nature of social identification in a number of ways. First, by demonstrating its value for those bereaved by suicide; second, by reiterating the role of social identification in recovery from traumatic experiences; and third, by showing how crowd situations can have a positive impact, as identification with a crowd in a common cause (in this case suicide awareness, remembrance and fundraising) contributes to a change in well-being. Mass gatherings and crowds have often had negative connotations, being associated with protest, unrest, health risks and, occasionally, violence. This research however adds to previous findings within the social identity approach showing that being part of a crowd, and importantly sharing a social identification with members in the crowd, can also have many positive psychological implications that include increases in perceived safety (Alnabulsi & Drury, 2014), expectations of social support (Drury & Reicher, 1999) and increased trust of others in the crowd which in turn can enhance collective coping (Drury, Novelli, & Stott, 2015). In particular, this study extends research demonstrating that identifying with a crowd can result in improved physical well-being and self-reported measures of health (Khan et al., 2014; Tewari et al., 2012) but is novel in that it provides evidence that having a personal connection with the cause or reason why that crowd has assembled may be crucial to this effect.

In terms of practical implications, this study has particular relevance for the suicide bereaved. As noted previously, this is a recognised at-risk group for future suicidal behaviours, with research showing that people bereaved by the suicide of a friend or family member have a 1 in 10 risk of a future suicide attempt, significantly higher than if they were bereaved due to other causes (Pitman et al., 2016). The negative outcomes also extend to the workplace where impaired occupational functioning is evident, with those bereaved by suicide 80% more likely to drop out of education or work than those bereaved by a cause other than suicide (Pitman et al., 2016). Associating with others who have had a similar experience has here been shown to serve as a type of targeted intervention for such individuals, with significant increases in positive affect amongst those who had lost a loved one to suicide. When added to the findings of Fredrickson and Joiner (2002) showing that experiencing positive affect can lead to an upwards spiral towards overall emotional well-being and improve coping, it is plausible that participating in a collective event such as DIL may help those bereaved by suicide to cope with their loss, and provide this group affected by a complex loss access to ‘a social cure’. The contributory role of social identification in this study also supports Wertheimer’s (2013) suggestion that associating with others who have had a similar loss may help alleviate some of the negative emotions associated with their identity. Future interventions targeting those bereaved by suicide should take this into consideration and create situations where those who have been affected by suicide can support one another.

Other practical implications of this study include equipping non-profit organisations with evidence that collective charity events may be beneficial not only as a fundraising initiative but also as an intervention in terms of well-being for those who have a personal connection with the cause. This knowledge may help charities to attract larger crowds to their events, which would in turn have benefits that go beyond fundraising to helping those who have been impacted by the designated cause.

Limitations and Directions for Future Research

The current study also has limitations, one of which is being unable to pinpoint the precise role of social identity in contributing to the change in well-being amongst DIL participants. As noted in the introduction, one possible way in which social identification may have applied is by creating a collective environment where the social isolation associated with the shared stigmatised identity is reduced. A second possible way in which crowd identification may work to explain current findings relates to a sense of empowerment and collective action to address the problem of suicide felt amongst crowd members. Meta-analytic research has demonstrated that social identity is a precursor and causal indicator of collective action across a wide range of contexts, with perceived efficacy and perceived injustice mediating the relationship (Van Zomeren, Postmes, & Spears, 2008). Suicide remains a relatively taboo subject in Irish society, with those who have been affected often perceiving stigma and shame (Peters et al., 2016). The lack of support for those affected by suicide and mental health problems in terms of service provision exacerbates a sense of perceived injustice (Richardson, Clarke, & Fowler, 2013). DIL is an embodiment of collective action with large segments of the population in communities across Ireland and amongst the Irish diaspora coming together in an effort to drive social change around suicide and mental health. What is particularly notable for this study is that this collective action
is also associated with individual well-being (Foster, 2014). Given those bereaved by suicide are associated with a feeling of helplessness (Grad, Clark, Dyregrov, & Andriessen, 2004), it is plausible that experiencing collective empowerment, something that can be conceptualised as an outcome of collective action (Drury & Reicher, 1999), may well impact positive emotions (Diener & Biswas-Diener, 2005). Future research should include additional measures to determine causal pathways between these processes and increased well-being so that underlying mechanisms can be fully understood.

Equally, social identification is only one factor contributing to observed changes in well-being over the period of our study. As discussed previously, partaking in exercise and involvement with charities have both been shown to influence psychological well-being (Downward & Rasciute, 2011; Morrow-Howell et al., 2003) and likely contributed to some of the increase evident in this study. Importantly, and strengthening our case that crowd solidarity promoted a social cure, neither of these factors drove increases in well-being amongst those not affected by suicide directly. Given the unequal group sizes, with smaller samples evident in both studies for those who had no exposure to suicide, future research could usefully examine the impact of participation, in those not directly affected by suicide, on their attitudes to suicide and self-harm. The study samples furthermore revealed a gender non-response bias, with an overwhelming majority of female participation (over 89% in both studies). These figures however are, as noted previously, comparable to the overall gender distribution at DIL. Indeed, it is possible that the greater representation of females at DIL could tie in to previous research demonstrating gender differences in adjustment to bereavement (Wijngaards-de Meij et al., 2008; Parkes, 2006). Females have been shown to orient towards the loss experienced and focus on the feelings and emotions associated with bereavement, whilst males tend to be restoration-oriented, focusing on the problems and practical issues associated with bereavement. As DIL serves as a way to remember those who have died by suicide, this relates more to loss-oriented grieving demonstrated by females. Regardless of why the gender bias exists in the current study, however, low participation by males is a common feature in research demonstrating gender differences in adjustment to bereavement (Wijngaards-de Meij et al., 2016) and is something that should be addressed in future with strategies designed to boost male response rates. In terms of study design, the lack of a control group who did not partake in DIL is a potential criticism. Due to the nature of the study this was not feasible to include. However, we suggest that this limitation may potentially be offset due to the study hypothesis that the effects of participation would vary based on how relevant the event was to each participant (i.e., whether they had lost somebody to suicide and their relationship with this person). Indeed, it has previously been argued that such designs are preferable to those that incorporate a no-treatment control on both pragmatic and analytic grounds (Frese, Beimel, & Schoenborn, 2003; Sackett & Mullen, 1993).

Moving forward, efforts should be made to determine whether the findings reported here can be replicated in other mass-participation events in aid of charitable organisations, for example, hospice memorial walks. Although similar in many aspects, the death of a close other as a result of suicide is associated with stigma in a way that deaths due to many other causes are not. If findings differ this would point towards a stigmatised identity as being an important factor in the current study and something that would warrant further investigation to determine its precise role. Additionally, it should be investigated if the findings of the current study can be extended beyond psychological well-being. As noted previously, suicide has an acknowledged social contagion with an elevated risk of future suicidal behaviour amongst those affected. In order to declaratively state that identifying with others who have had a similar experience could help in alleviating this risk, future research should include measures of suicidal ideation and self-injurious behaviour, perhaps in a setting where more enduring identity ties could be developed.

Conclusions

In conclusion, collective participation in an event focused on suicide awareness can serve as an effective intervention for those bereaved by suicide in terms of psychological well-being. This change in well-being can be explained through mechanisms including social identity and social connectedness, adding to what is already known about the vast role social identity plays in individual health and well-being. These findings have implications for informing best-practice interventions targeting those bereaved by suicide, whilst also highlighting the hidden benefits of taking part in charitable events.

Acknowledgement

This research was funded by the Irish Research Council Enterprise Partnership Scheme in conjunction with Pieta House (EPSPG/2014/74).

Conflict of Interest

The authors declare that there are no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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