

# The influence of community occasions on satisfaction with life and wellbeing

### Abstract

This study aimed to assess the influence of the royal wedding on the wellbeing of individuals who participated in the celebrations. We hypothesised that individuals who celebrated the national event with their community would score higher on subjective wellbeing (SWB) scales. Participants included 215 male and females of the general population attending royal wedding celebrations and 104 individuals who did not attend royal wedding celebrations ( $n=319$ ). The study was a 2x2 between participants ANOVA, using two positive psychology measures: Satisfaction With Life Scale (SWLS) and Scale of Positive and Negative Experiences (SPANE). Overall, attendees, particularly males, scored significantly higher in SWB and were more likely to experience more positive, as opposed to negative, emotions than non-attendees.

### Key points

- Males benefit significantly more than females from shared celebration during community events
- Satisfaction with life was significantly higher within those that participated in celebratory events
- The data supports and adds to what we currently know regarding the 'hive hypothesis'

### Key words

Community events, Satisfaction with Life Scale, SPANE, hive hypothesis

### Kate Hefferon

Senior Lecturer,  
School of Psychology,  
University of East London

### Nesrin Gocken

PhD Student,  
School of Psychology,  
University of East London

### Joan Painter

Senior Lecturer,  
School of Psychology,  
University of East London

### Mark Davies

Dean of Psychology,  
School of Psychology,  
University of East London

### Iiona Boniwell

Principal Lecturer,  
School of Psychology,  
University of East London

Just like a nation can mourn together, can it rejoice together, from a scientific perspective? In 1997, Shelvin et al (1997) conducted a study reviewing the presence of post-traumatic stress disorder (PTSD) in the wake of Princess Diana's death. Results showed that there was a significant increase in PTSD symptoms following her death (Williams et al, 1997). What is less known, is the positive psychological effects of public events, such as the royal wedding, on the public's wellbeing. This study sought to scientifically analyse the collective wellbeing of the British and visiting public during a countrywide celebration, the royal wedding of newly-crowned Duke and Duchess of Cambridge. High levels of subjective wellbeing have been found to enhance longevity, health, success, social relationships and overall happiness (Deiner, 2009a).

Citizen participation, defined as 'involvement in any organised activity in which the individual participates without pay in order to achieve a common goal' (Zimmerman and Rappaport, 1988: 726) has been hypothesised to buffer against stress, increase confidence and skills, divert from antisocial behaviour, and increase subjective and collective wellbeing

through shared emotional experiences (McMillan and Chavis, 1986; Kagan et al, 2005). Furthermore, the hive hypothesis claims individuals can reach greater levels of human flourishing by participating in community festivities that emphasise collective movement and voice, such as dance and music (Haidt et al, 2008). Such festivities are thought to increase happiness and overall wellbeing of communities by enabling individuals to 'escape' their selves and reach a type of 'existential togetherness' with others. Indeed, higher levels of wellbeing are commonly experienced while watching sport events (Wann, 2006) and at wedding ceremonies. Niedenthal and Dalle (2001) found that male and female invitees at two weddings in France were both happier and less sad than controls recruited in the street.

One reason such experiences may enhance wellbeing is through their effects on group cohesiveness and trust, which are defining features of social capital, generally conceptualised as 'the features of social organisation such as civic participation, norms of reciprocity and trust in others that facilitate cooperation for mutual benefit' (Kawachi et al, 1997). Social capital has been found to contribute to economic growth, positive mental health outcomes, greater subjective wellbeing, and lower crime and mortality rates (Putman, 1995; Kawachi et al, 1997; Wilkinson, 1997; Putman, 2001; Woolcock, 2001; McKenzie et al, 2002).

Live giant-screen broadcasts, community festivities and street parties held in London on the day of the royal wedding 2011 actively encouraged attendees to participate in the celebrations by 'singing along' to live entertainment and engaging in collective dance. Those attending the royal wedding festivities could therefore, according to the hive hypothesis, be expected to have higher levels of wellbeing compared to individuals who did not attend.

## Methods

### Participants

Ethical clearance for the project was granted by the University of East London. The participants were a convenience sample that attended the Hyde Park, Green Park and Trafalgar Square festivities on April 29 2011. The

two main authors recruited the attendee participants in the hours leading up to the broadcast of the Royal wedding. Once the research purpose was explained to them, they were asked if they would like to take part, agreed their consent and completed the two chosen questionnaires. The participants were then debriefed and given the main researchers card for follow up if necessary.

The control group (non-attendees) were recruited between 1 and 7 days after the royal wedding. This again was a convenience sample comprising of mainly university students. Participants were asked to participate if they had not attended any community-based celebratory festivities pertaining to the royal wedding.

In sum, 319 participants (112 males and 207 females) took part in the study. In the attendees group there were 73 males and 142 females aged 16–74 (mean age 32.21, SD 12.04), whereas in the non-attendees group there were 39 males and 65 females aged 19–59 (mean age 33.19, SD 10.77).

## Outcome measures

The Satisfaction With Life Scale (SWLS) consists of 5 questions on a 7-point Likert scale (Pavot and Diener, 1993). It has high internal consistency (0.87) and good test-retest reliability (.82) (over two months). Furthermore, it has strong correlations with other mental wellbeing measures (around 0.7) and between self-reported scores and experimenters.

Participants are asked to decipher to what extent they agree or disagree with 5 statement, using a 7 point Likert scale: 1 = Strongly Disagree- 7 = Strongly Agree. Items include 'In most ways my life is close to my ideal', 'So far I have gotten the important things I want in life'. The average individuals score ranges from 21–25 (slightly satisfied), therefore anything above is considered above average (satisfied) (26–30) and extremely satisfied (31–35).

The SPANE (Diener, 2009b) is a new scale containing 12 items, which are argued to focus on a broad range of both positive and negative emotions equally. Participants are asked to rate how much they have experienced the following feelings (e.g. pleasant, happy, bad, angry) over the past 4 week, using a five point likert scale (1–5 very rarely or never to very often or always). Positive feelings (SPANE-P) scale is scored by summing 6 (positive, good, pleasant, happy, joyful, and contented) items, with scores ranging from 6 (lowest possible) to 30 (highest positive feelings score).

The negative scale (SPANE-N) is calculated by summing 6 items (negative, bad, unpleasant, sad, afraid, and angry). The score can range from 6 (lowest possible) to 30 (highest negative feelings score).

The Affect Balance scale (SPANE-B) is calculated by subtracting the negative feelings score from the positive

**Table 1. Mean and standard deviations SWLS scores as a function of attendance and gender**

	Attendees		Non-attendees	
	Mean	SD	Mean	SD
Male	27.39	0.57	23.15	0.77
Female	27.10	0.41	26.21	0.60

feelings score, ranging in scores from -24 (unhappiest possible) to 24 (highest affect balance possible).

## Results

The raw scores from the SWLS and the SPANE Positive Affect scale, the SPANE Negative Affect Scale, the SPANE Balance Scale comprised the data upon which the statistical analyses reported below were performed.

### Satisfaction with life (SWL)

The SWL data averaged across participants are presented in Table 1 with standard deviations.

Initially a descriptive statistics analysis was carried out to establish if the assumptions of the following analyses were met. Seven outliers were found in the attendees group and three in the non-attendees group. These were trimmed to the next highest value. The distribution of the data in each condition was approximately normal and the result of Levene's test indicated that the homogeneity of variance assumption had not been violated

The data were then analysed with a 2x2 between participants ANOVA with group (attendees vs non-attendees) and gender (male vs female) as factors. The main effect for attendance achieved significance, ( $F(1,311) = 18.48, p < 0.001$ ), indicating that SWL was higher in the attendees group than in the non-attendees group. The main effect for Gender was also significant ( $F(1,311) = 5.47, p < 0.05$ ), with females showing a greater SWL score than males.

A significant interaction was obtained between group and gender ( $F(1,311) = 7.54, p < 0.01$ ). A simple effects analysis was carried out on the interaction data, with the criterion value for significance set to .001 in order to control the familywise error rate. This revealed significant comparisons between males and females in the control group ( $F(1,311) = 9.818, p < 0.01$ ) and between the attendees and non-attendees ( $F(1,311) = 19.45, p < 0.001$ ). No other comparisons achieved significance.

The results would appear to indicate therefore that overall people who attended community events were significantly more satisfied with life than non-attendees, and females scored more highly on SWL than males. However, whereas Males and Females who attended the community events were approximately

**Table 2. Mean and SD SPANE-P responses as a function of attendance and gender**

	Attendees		Non-attendees	
	Mean	SD	Mean	SD
Male	20.49	0.36	18.25	0.48
Female	20.35	0.26	18.73	0.37

**Table 3. Mean and SD SPANE-N responses as a function of attendance and gender**

	Attendees		Non-attendees	
	Mean	SD	Mean	SD
Male	8.16	0.34	9.28	0.46
Female	9.28	0.24	9.41	0.36

**Table 4. Mean and SD SPANE-B responses as a function of attendance and gender**

	Attendees		Non-attendees	
	Mean	SD	Mean	SD
Male	12.31	0.60	8.97	0.80
Female	11.25	0.43	9.52	0.62

equivalent in terms of SWL, Males who did not attend were significantly less satisfied with life than females who did not attend.

### SPANE Positive Affect

The SPANE-P data averaged across participants are presented in *Table 2* with standard deviations.

Initially a descriptive statistics analysis was carried out in order to establish if the assumptions of the following analyses were met. Seven outliers were found in the attendees group and these were trimmed to the next highest value. The distribution of the data in each condition was approximately normal, but Levene's test indicated that the homogeneity of variance assumption had been violated. Nevertheless, the critical value on Hartley's Fmax test was not exceeded indicating non-violation.

The data were then analysed with a 2x2 between participants ANOVA with attendance (attendees vs non-attendees) and gender (male vs female) as factors. The main effect for attendance achieved significance, ( $F(1,310) = 26.055, p < 0.001$ ), indicating that positive affect was higher in the attendees group than in the non-attendees group. No other effects achieved significance.

### SPANE Negative Affect

The SPANE-N data averaged across participants are presented in *Table 3* with standard deviations.

Initially a descriptive statistics analysis was carried out in order to establish if the assumptions of the following analyses were met. Three outliers were found in the attendees group and these were trimmed to the next highest value. The distribution of the data in each condition was approximately normal and the result of Levene's test indicated that the homogeneity of variance assumption had not been violated.

The data were then analysed with a 2x2 between participants ANOVA with attendance (attendees vs non-attendees) and gender (male vs female) as factors. The main effect for attendance achieved significance, ( $F(1,310) = 4.729, p < 0.001$ ), indicating that negative affect was higher in the non-attendees group than in the attendees group. No other effects achieved significance.

### SPANE Balance

The SPANE Balance data averaged across participants are presented in *Table 4* with standard deviations.

Initially a descriptive statistics analysis was carried out in order to establish if the assumptions of the following analyses were met. Six outliers were found in the attendees group and three in the non-attendees group. These were trimmed to the next highest value. The distribution of the data in each condition was approximately normal, but Levene's test indicated that the homogeneity of variance assumption had been violated. Nevertheless, the critical value on Hartley's Fmax test was not exceeded indicating non-violation.

The data were then analysed with a 2x2 between participants ANOVA with attendance (attendees vs non-attendees) and gender (male vs female) as factors. The main effect for attendance achieved significance, ( $F(1,309) = 16.300, p < 0.001$ ), indicating that the Balance score was higher in the attendees group than in the non-attendees group. No other effects achieved significance.

### Discussion

The literature supports the claim that that people who celebrate events in groups report higher scores on wellbeing, whether this be a family event (Niedenthal and Dalle, 2001) or a public one (Haidt et al, 2008). Alternatively, the shared affective state can be one of distress as illustrated by Shevlin et al (Shevlin et al, 1997). The results of this study support that not only negative events, such as a loss of a public figure, can have a marked impact, but positive ones, such as the royal wedding, may have an impact through their contribution to collective flourishing.

The SWLS data supports a differential sense of life satisfaction as function of gender and whether the person attended the public event. The interaction

shows that women generated a satisfied score (26–30) independent of the celebration while men were more likely to be slightly satisfied (21–25) with life if they did not take part in the public celebrations compared to satisfied with life (26–30) if they were in attendance. The data pattern offers up the prospect that involvement in public events may afford a degree of inoculation (improved resilience) to negative societal factors for men.

The more temporal aspects of positive and negative feelings picked up by SPANE show main effects for attendance only. There was a significant effect associated with gender and no interactions. These results suggest that the temporal impact of such a public factor is limited in scope to one of general enhancement of feeling positive during a social engagement.

### Strengths and weaknesses

One of the major strengths of this study was its focus on a unique event. Celebrations, such as the royal wedding, are significant, unique events that are often overlooked by behavioural scientists, but resonate with the public media and society at large. Furthermore, this study considers positive capital associated with such events in contrast to the traditional deficit model developed for large public gatherings (e.g. aggression at sporting events).

A proposed weakness of the study surrounds the fact that membership of Attendance groups could not be controlled. Therefore a causal relationship can only be tentatively suggested from the present study. The challenge is that people with high SWLS scores are predisposed to attend the public event. A similar view applies to the SPANE scores. However, this does not

explain the gender difference. Future research should attempt to record SWLS and SPANE scores prior to a significant event, during the event and post the event. It is also important to note that the population used was a mixed sample of British and non-British individuals. To enrich the data drawn upon from such a diverse sample, it would be advantageous to explore the experiential component of attending using suitable qualitative methods such as IPA.

### Conclusion

In support of the hive hypothesis (Haidt et al, 2008), individuals who attended community celebratory events for the royal wedding, scored significantly higher in subjective wellbeing and positive affect, experienced less negative affect and were more likely to experience more positive, as opposed to negative, emotions than non-attendees. Males in particular significantly benefited from the ‘hive’ effect. Males who attended the event had significantly elevated levels in wellbeing than males who did not. This is a striking finding as men are more likely to dismiss the value of such public events.

In conclusion, this study enhanced our current understanding of the evolutionary based ‘hive hypothesis’, demonstrating evidence to suggest that community integration has more positive implications for male subjective wellbeing, than for females. In terms of implications for practice, researchers and policy makers can use the unique findings whilst designing and implementing interventions aimed at increasing societal happiness. One design challenge is that group membership was self-selecting so a causal relationship has to be cautiously approached. Nonetheless, the findings offer lots of opportunity for future work in this area.

**BJW**

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