

Being with others and feeling happy: Emotional expressivity in everyday life

By: Chris J. Burgin, Leslie H. Brown, Amethyst Royal, Paul J. Silvia, Neus Barrantes-Vidal and Thomas R. Kwapil

Burgin, C. J., Brown, L. H., Royal, A., [Silvia, P. J.](#), Barrantes-Vidal, N., & [Kwapil, T. R.](#) (August 01, 2012). Being with others and feeling happy: Emotional expressivity in everyday life. *Personality and Individual Differences*, 53, 3, 185-190.
<http://dx.doi.org/10.1016/j.paid.2012.03.006>

Made available courtesy of Elsevier:

<http://www.sciencedirect.com/science/article/pii/S0191886912001122#bb0180>

*****Reprinted with permission. No further reproduction is authorized without written permission from Elsevier. This version of the document is not the version of record. Figures and/or pictures may be missing from this format of the document.*****

Abstract:

An experience sampling study assessed the relation between psychological functioning in daily life and emotional expressivity as measured by the emotional expressivity scale (EES). Four hundred and twenty-nine participants carried personal digital assistants that signaled them 8 times daily to complete questionnaires assessing affect, activities, and social contact. As predicted, participants high in emotional expressivity were more likely to have elevated state positive affect, but not negative affect. These participants were also less likely to be alone and more likely to demonstrate better social functioning when with others. Cross-level interactions indicated that emotional expressivity moderated the association of social context and functioning in the moment. The findings support the validity of the EES as a measure of emotional expressivity and demonstrate the utility of experience sampling for describing personality traits in daily life.

Article:

Highlights

► We assessed daily life functioning with emotional expressivity scale (EES) ratings. ► High EES scores related to better social functioning and positive affect. ► EES scores moderated the

impact of environmental factors and functioning. ► Findings support the validity of the EES as a measure of emotional expressivity.

1. Introduction

The expression of emotions is an integral part of adaptive human functioning (Dobbs, Sloan, & Karpinski, 2007), and dysfunction in emotional expression is a core feature of many forms of psychopathology (e.g., Kring, 2008). Expressing emotions has been linked to positive physical and mental health in the general population (Sloan & Marx, 2004) and in specific groups such as breast cancer patients (Stanton et al., 2000) and older adults (Shaw et al., 2003). Emotional expressivity is positively associated with the personality traits of extraversion (Riggio & Riggio, 2002), openness to experience, and agreeableness (Leising, Müller, & Hahn, 2007). People with higher levels of emotional expressivity derive greater pleasure from social interactions (Kring, Smith, & Neale, 1994). Conversely, lower levels of emotional expressivity have been linked to social anhedonia (Leung, Couture, Blanchard, Lin, & Llerena, 2010), depression (Sloan, Strauss, & Wisner, 2001), schizophrenia (Earnst & Kring, 1999), and other psychological impairments (Watson, Pettingale, & Greer, 1984).

There are several models of dispositional emotional expressivity (e.g., Gross & John, 1995). For example, older models of emotional expressivity focused on the extent to which individuals self-monitored their presentation of expressive and nonverbal behavior (Snyder, 1974). Others have focused specifically on the behavioral changes (e.g., facial expression) that accompany the experience of emotions (Gross & John, 1995). The current study employs a construct proposed by Kring et al. (1994) that defines emotional expressivity as the extent to which a person outwardly displays emotions regardless of valence or channel. They characterize emotional expressivity as a stable, individual difference characteristic. To assess this construct, Kring and colleagues (1994) developed the self-report emotional expressivity scale (EES). We selected this formulation of emotional expressivity and its corresponding measure because it is applicable to a range of normal and pathological functioning. For example, pathological emotional inexpressivity is associated with flattened affect seen in schizophrenia-spectrum disorders, whereas excessive emotional expression is part of borderline and histrionic personality disorders (e.g., [Crawford et al., 2007], [Freeman et al., 2005] and [Herpertz et al., 2001]). Kring et al.'s construct was carefully operationalized and their measure has demonstrated convergent and discriminant validity based on both self-report, other report, and observational methods of assessment.

Consistent with their conceptualization of the construct as unidimensional and stable, Kring et al. (1994) indicated that the EES demonstrated good internal consistency (Cronbach's alpha of .90–.93) and good short-term test–retest reliability. Coefficient alpha values were replicated by [Barr et al., 2008] and [Dobbs et al., 2007]. In addition, research has supported a one-factor structure of this scale (Dobbs et al., 2007). Barr et al. (2008) reported that the EES is highly correlated with other measures of emotional expressivity, such as the Berkeley Expressivity Questionnaire (Gross & John, 1995) and the Emotional Expressiveness Questionnaire (King & Emmons, 1990). Although Kring and colleagues (1994) indicated that the EES was associated with emotionality, they reported that the EES was not associated with trait-based measures of positive or negative

affect. They did, however, find that the EES is significantly related to affect intensity. Specifically, the more expressive people report they are, the more likely they are to report that they experience these emotions more strongly. Furthermore, their findings indicated that higher levels of emotional expressivity predicted feelings of life satisfaction as measured by the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), which measures global satisfaction, a component of subjective well-being. Kring and colleagues explain that this relationship may reflect the small but significant overlap between emotional expressivity and the satisfaction with life component of subjective well-being. Research using the EES has yet to examine its relationship with levels of state affect. Given these findings, we expected that emotional expressivity would predict levels of positive affect in terms of items relating to daily life subjective well-being (e.g., satisfaction, happiness) but not items relating to negative affect (e.g., sadness, loneliness).

Consistent with the findings that higher levels of emotional expressivity are related to elevated levels of extraversion and reduced levels of social anhedonia, we hypothesized that increased levels of emotional expressivity would also be associated with greater levels of daily social contact and a preference to be with others. This prediction is consistent with the findings from Kring and colleagues (1994) who proposed that the adjectives used to describe extraversion are conceptually related to expression (e.g., open, outgoing). In addition, they found that expressiveness was correlated with surgency, a measure of extraversion. These results suggest that those high in emotional expressivity also tend to be outgoing and sociable. Furthermore, higher levels of emotional expressivity would also be associated with increased positive social experiences when with others, and greater enjoyment of current activities.

Finally, given the relationship between emotional expressivity with extraversion and social anhedonia, we examined how levels of emotional expressivity influenced the levels of positive affect and negative affect when participants were with others or alone. We predicted that those with higher levels of emotional expressivity would report lower levels of positive affect and greater levels of negative affect when they are alone. We also examined how emotional expressivity affects the relationship between levels of liking the people they are interacting with and their feelings towards interacting with them. Again, given emotional expressivity's relationship with extraversion and social anhedonia, we predicted that those with higher levels of emotional expressivity will value their interactions with others more the more they like those people.

Despite the large literature to date, no study thus far has examined the momentary experience of emotional expressivity in daily life. The current study employed experience-sampling methodology (ESM) to assess emotional expressivity in daily life. ESM is a within-day self-assessment technique in which participants are prompted at random intervals to complete questionnaires. Specifically, ESM repeatedly assesses participants in their daily environment (enhancing ecological validity), assesses experiences in the moment (minimizing retrospective bias), and examines the context of participants' experiences.

The goal of the current study was to examine the experience of emotional expressivity in daily life in a large sample of young adults. Specifically, it examines the experience of emotional

expressivity in terms of daily affect, activities, and social functioning. The study should provide additional evidence regarding the validity of the EES as a measure of emotional expressivity.

2. Method

2.1. Participants

Participants included 429 undergraduates (317 female and 112 male) enrolled at the University of North Carolina at Greensboro who volunteered and received credit toward a research option in a psychology course. The sample was 74% Caucasian and 26% African American with mean age of 19.8 years ($SD = 2.9$). Results did not differ by gender, age, or ethnicity, so findings are presented for the entire sample.

2.2. Materials and procedures

Participants completed the EES on one occasion as part of mass-screening sessions. The EES is a 17-item self-report measure that assesses the outward display of emotions across a range of severity. EES items do not mention specific positive or negative emotions; instead, they refer to general displays of emotions. Example items include, “I display my emotions to other people” and “People can read my emotions.” Items are scored from 1 “strongly disagree” to 7 “strongly agree.” EES scores are computed by taking the mean of these scores. Higher means indicate greater levels of emotional expressivity.

ESM data were collected using personal digital assistants (PDAs) running iESP software (Intel, 2004). Compared with other options, PDAs yield good compliance rates and data quality ([Burgin et al., in press] and [Green et al., 2006]). Participants attended an information session in which they were provided with a PDA and informed about the procedures of the study. The PDA signaled participants randomly 8 times daily between noon and midnight for 7 days. Once participants were signaled, they had up to 5 min to initiate the questionnaire. The ESM questionnaire consisted of 36 items inquiring about cognition, affect, activities, and social contact at the time of the signal (see Table 1 for the questions used in this study). The ESM items assessed information about participants’ positive and negative affect, and current social context. Note that because of branching questions participants completed 28 or 32 items at each ESM assessment (depending on whether they were alone or not). The ESM questionnaire was developed as part of a larger study on ecological momentary assessment of psychopathology, and it was used in Brown et al.’s (2011) study of depression and Kwapil et al.’s (2009) study of social anhedonia in daily life. The majority of the items were answered on a 7-point scale from 1 (not at all) to 7 (very much). Several items (e.g., Are you alone at this time?) were answered dichotomously (yes/no). Note that ESM research frequently relies on single item measures. However, Hektner, Schmidt, and Csikszentmihalyi (2007) noted, “the use of a single item is less of a reliability risk in ESM research because repeated measurement takes the place of multiple items” (p. 116).

Table 1. Relationship of emotional expressivity scores with daily life criterion.

Level 1 (ESM daily life) criterion	Level 2 predictor Emotional expressivity scale score γ_{01} ($df = 426$)
<i>Activities</i>	
I like what I am doing right now	0.077 (SE = 0.030)
<i>Social functioning – overall</i>	
Are you alone at this time?	-0.090 (SE = 0.032)
The most important thing that happened to me involved being with other people	0.115 (SE = 0.045)
<i>Social Functioning – when with others</i>	
I like this person (these people)	0.135 (SE = 0.029)
My time with this person (these people) is important to me	0.168 (SE = 0.038)
We are interacting together	0.098 (SE = 0.036)
I feel close to this person (these people)	0.169 (SE = 0.039)
Right now I would prefer to be alone (when with others)	-0.138 (SE = 0.039)
<i>Social functioning – when alone</i>	
I am alone right now because people do not want to be with me	-0.074 (SE = 0.034)
Right now I would prefer to be with other people (when alone)	0.110 (SE = 0.053)
<i>Affect in the moment</i>	
<i>Positive</i>	
I feel happy right now	0.135 (SE = 0.038)
I feel satisfied right now	0.076 (SE = 0.038)
<i>Negative</i>	
I feel lonely right now	-0.021 (SE = 0.040)
I feel sad right now	-0.002 (SE = 0.038)

Note: All items rated from 1 (not at all) to 7 (very much) except items “Are you alone at this time?” and “The most important thing that happened to me involved being with other people” (no/yes). For these two variables, logistic regression was employed. The values listed are raw multilevel regression coefficients indicating the relationship of the level 2 predictor with the level 1 (daily life experience) criteria. $N = 429$.

$p < .05$.

$p < .01$.

$p < .001$.

The questionnaires required about two minutes to complete. After completion of the questionnaire, the PDA would become inactive until the next questionnaire. Participants met with experimenters twice during the week to download their data from the PDA to minimize data loss and increase compliance.

3. Results

The EES mean for the sample was 4.59 (SD = 1.18, coefficient alpha = .93), with an approximately normal distribution, consistent with findings from [Kring and colleagues \(1994\)](#). Participants completed an average of 42 ESM questionnaires (69%) during the course of the week (SD = 11). ESS scores were not significantly associated with the number of completed ESM questionnaires ($r = .01$).

3.1. Analytic model

ESM data have a hierarchical structure in which ratings made in daily life (within-person level) are nested within participants (between-person level). Multilevel modeling provides an appropriate statistical method for analyzing nested data (Affleck, Zautra, Tennen, & Armeli, 1999). Multilevel modeling is an extension of the more commonly used multiple regression analyses (Hox, 2002), and is standard practice for the analysis of ESM data (see [Nezlek, 2001] and [Reis et al., 2000]). Two types of analyses were computed. Initial analyses examined the effects of EES scores on ESM daily life ratings. The coefficients produced by these analyses are comparable to the unstandardized regression weight of the between-person predictor (EES) with the within-person measures (ESM questions). As unstandardized effects, they are not directly comparable. Second, cross-level interactions (Kreft & de Leeuw, 1998) examined whether the association of daily life experiences varied as a function of EES scores. Specifically, cross-level interactions (or slopes-as-outcomes effects, as they are sometimes called) test whether within-person relationships vary as a function of between-person variables (EES Scores).

Analyses were conducted using Mplus 6.1 (Muthén & Muthén, 1998–2010). Within-person predictors were centered at each person's own mean, and EES scores (between-person predictor) were centered at the sample's grand mean (Luke, 2004). Parameter estimates were calculated using maximum likelihood estimation with robust standard errors and both analyses were run as random effects models.

3.2. Main effects

Table 1 presents the association of EES scores with daily life experiences. Higher EES scores were associated with increased reports of daily positive affect, in terms of happiness and satisfaction in the moment. However, EES scores were unrelated to negative affect as assessed by feelings of loneliness or sadness in the moment. Furthermore, levels of emotional expressivity were associated with increased variance in an individual's positive affect, $r = .13$, $p < .01$, but not negative affect, $r = .03$.

With regards to activities, levels of emotional expressivity were significantly related to reporting greater liking of current activities and fewer reports of being alone. Higher levels of emotional expressivity were also related to reporting that the most important event since the last beep involved being with other people.

Finally, higher levels of emotional expressivity were related to better social functioning. Specifically, people with higher EES levels reported greater liking of the people they were with, feeling that their time with those people was important, greater interaction with others, and greater feelings of closeness to others. Conversely, participants higher in emotional expressivity were less likely to endorse the statement that they would prefer to be alone at that moment. When alone, emotionally expressive participants were less likely to endorse the statement that they were alone because others did not want to be with them and more likely to endorse the statement that they would prefer to be with others at that moment.

3.3. Cross-level interactions

We computed cross-level interactions to examine how levels of emotional expressivity moderated the effects of daily life experiences (Table 2). First, we examined whether EES scores moderated the association between social functioning and affect. Not surprisingly, participants who were alone reported lower levels of happiness and satisfaction and greater levels of feeling sad and lonely. Furthermore, cross-level interactions indicated that participants with higher levels of emotional expressivity reported significantly greater levels of feeling lonely and lower levels of satisfaction (see Fig. 1) if they were alone at the time of the beep. Levels of emotional expressivity, however, did not affect the relationship between being alone in the moment and feelings of happiness or sadness.

Table 2. Cross-level interactions of emotional expressivity scores with daily life criterion.

Level 1 (ESM daily life) criterion	Level 1 (ESM daily life) predictor	Relationship of ESM predictor and criterion γ_{10} (df = 426)	Level 2 predictor Emotional expressivity scale score (Cross-level interaction estimate) γ_{11} (df = 426)
<i>Affect in the moment</i>			
I feel lonely right now	Are you alone at this time?	0.658 (SE = 0.039)	0.081 (SE = 0.037)
I feel happy right now	Are you alone at this time?	-0.356 (SE = 0.029)	-0.025 (SE = 0.025)
I feel satisfied right now	Are you alone at this time?	-0.261 (SE = 0.030)	-0.057 (SE = 0.027)
I feel sad right now	Are you alone at this time?	0.302 (SE = 0.029)	-0.002 (SE = 0.025)
<i>Social functioning – when with others</i>			
My time with this	I like this	0.991 (SE = 0.015)	0.034 (SE = 0.012)

Level 1 (ESM daily life) criterion	Level 1 (ESM daily life) predictor	Relationship of ESM predictor and criterion γ_{10} ($df = 426$)	Level 2 predictor Emotional expressivity scale score (Cross-level interaction estimate) γ_{11} ($df = 426$)
person (these people) is important to me	person (these people)		
I feel close to this person (these people)	I like this person (these people)	1.062 (SE = 0.017)	0.034 (SE = 0.014)
We are interacting together	I like this person (these people)	0.696 (SE = 0.017)	0.019 (SE = 0.014)
Right now I would prefer to be alone	I like this person (these people)	-0.532 (SE = 0.018)	0.002 (SE = 0.018)

Note: All items rated from 1 (not at all) to 7 (very much) except items “Are you alone at this time?” (no/yes). The coefficients are raw multilevel regression coefficients indicating the relationship of the level 1 predictors with the level 1 (daily life experience) criteria and cross-level interaction of the level 2 predictors and level 1 predictors. $N = 429$.

$p < .05$.

$p < .01$.

$p < .001$.

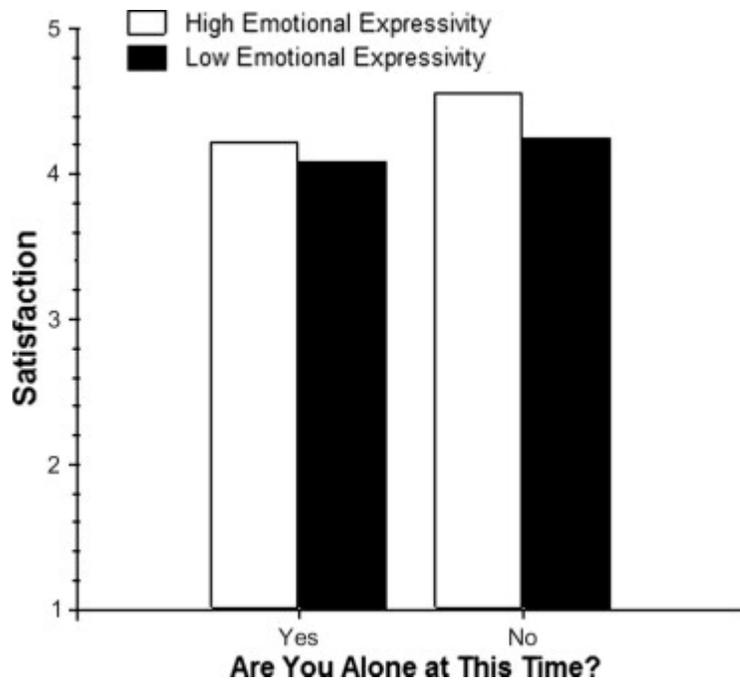


Fig. 1. Cross-level interaction of emotional expressivity scores with alone or not on levels of satisfaction in the moment.

We next looked at the degree to which levels of emotional expressivity moderated the relationship between how much participants reported liking people they were with and how much they enjoyed interacting with those people. Not surprisingly, the more participants liked the people they were with, the more they felt their time with those people was important, felt close to those people, spent time interacting with those people, and did not want to be alone. Cross-level analyses reveal that those high in emotional expressivity demonstrated a stronger relationship between liking the people they were with and feeling their time with those people was important. Those high in emotional expressivity also demonstrated a stronger relationship between liking the people they were with and feeling close to those people (see Fig. 2). Interestingly, levels of emotional expressivity did not affect the relationship between how much participants liked those they were with, their levels of interacting with those people, and their preference to be alone when they were with those people.

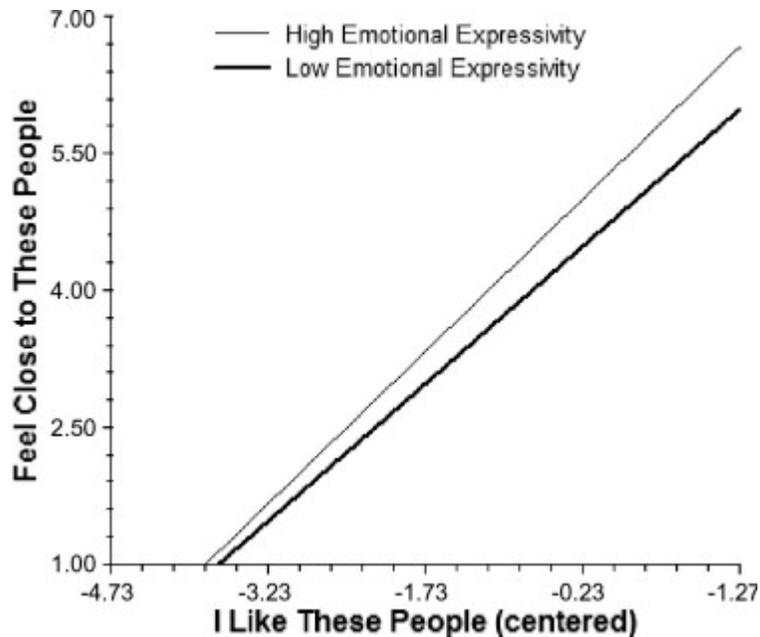


Fig. 2. Cross-level interaction of emotional expressivity scores with liking of people on levels of feeling close to people in the moment.

4. Discussion

The present study provides the first examination of emotional expressivity in daily life using experience-sampling methodology. The results demonstrate that emotional expression is an important aspect of human intrapersonal and interpersonal functioning. Although there is a broad range of healthy individual differences, deficits in emotional expression have been associated with impaired functioning and, in the extreme, with pathological conditions such as depression, schizoid personality, autism spectrum, and alexithymia (e.g., [Gross et al., 1997] and [Thoits, 1985]). Our results illustrate the importance of understanding this construct and its relationship with daily life assessments. Participants with higher levels of emotional expressivity were more likely to demonstrate greater levels of subjective well-being, lower social stress, and higher social functioning when with others. These results also support the assertion put forward by Kring and colleagues (1994) that those who are more emotionally expressive favor and derive pleasure from social interactions because they are generally more outgoing and sociable.

One benefit of using ESM over traditional validation strategies is that we were able to assess the correlates of EES at multiple points during the day throughout the week as opposed to single-time point measures. Our results illustrate how levels of emotional expressivity influence state measures of affect and personality in a similar fashion as they do trait measures. However, these results help to flesh out the specifics of how emotional expressivity influences the daily expression of these elements. For example, while levels of emotional expressivity have been related to a preference to be with others (Kring et al., 1994), now we have a better understanding of what this looks like in daily life. Our results show promise for using the EES to assess emotional expressivity personality correlates in daily life and gives promise to future research to examine other trait-based correlates of emotional expressivity in daily life.

In addition to our main effect findings, cross-level analyses illustrated the dynamic manner by which emotional expressivity affects the relationship between daily life measures. For example, our results indicate that those with higher levels of emotional expressivity showed increased levels of feeling lonely and lower levels of satisfaction when they were alone at the time of the beep. Levels of emotional expressivity, however, did not affect the relationship between being alone at the moment and levels of happiness or sadness. In addition, levels of emotional expressivity influenced the relationship between liking the people one was with and feeling that their time was important in the moment. However, it did not affect the relationship between the degree to which the participants reported liking the people they were with and their preference to interact with those people or to be alone. Thus, emotional expressivity appears to amplify the impact of social contact in the moment. Not only do participants experience stronger state affect, but also they appear to demonstrate greater reactivity to their social context.

As described in the introduction, we selected the EES because it has shown to be a reliable and valid measure of emotional expressivity. However, other measures of emotional expressivity could have been included in the study design. For example, other research has conceptualized emotional expressivity as a multidimensional construct. Specifically, researchers have proposed a two-factor construct of emotional expressivity that measures both positive and negative levels of emotional expression (Trierweiler, Eid, & Lischetzke, 2002). Although research demonstrates a strong correlation between these measures and the EES (Kring et al., 1994), future studies could benefit from using a broad range of measures of emotional expressivity when examining daily life. In addition, though research demonstrates a strong relationship between self-report and other report on measures of emotional expressivity (Kring et al., 1994), future research could benefit from using both other's assessment of emotional expressivity in combination with self-reports to gain a better measure of one's levels of expressivity. Finally, the EES has been used primarily on an American samples, future research should test this measure cross-culturally, to assess the extent to which our findings can be replicated among different cultures.

Obviously, emotional over-expressivity can be associated with impairment in functioning and is characteristic of some forms of psychopathology (e.g., borderline and histrionic personality disorders, as well as mania). However, the present findings suggest that high scores on the EES appear to capture adaptive emotional expressivity, associated with subjective well-being and functioning, as opposed to emotional over-expressivity. This appears to support the conceptualization of the construct proposed by Kring et al. (1994). Overall, these findings support the validity of the EES as a measure of emotional expressivity in a sample of nonclinical young adults. Although the present findings examined emotional expressivity in a nonclinical sample, future study should consider the role of maladaptively high and low expressivity in clinical samples. Furthermore, ESM offers a promising method for examining the association of emotional expressivity and impairment in psychopathological groups.

References

Affleck et al., 1999. Multilevel daily process designs for consulting and clinical psychology: A preface for the perplexed *Journal of Consulting and Clinical Psychology*, 67 (1999), pp. 746–754

Barr et al., 2008. Individual differences in emotion expression: Hierarchical structure and relations with psychological distress *Journal of Social and Clinical Psychology*, 27 (2008), pp. 1045–1077

Brown et al., 2011. An experience-sampling study of depressive symptoms and their social context. *Journal of Nervous and Mental Disease*, 199 (2011), pp. 403–409

Burgin, et al. (in press). Palm or cell? Comparing personal digital assistants and cell phones for experience sampling research. *Social Science Computer Review*.

Crawford et al., 2007. Histrionic personality disorder A. Freeman, M.A. Reinecke, A. Freeman, M.A. Reinecke (Eds.), *Personality disorders in childhood and adolescence*, John Wiley & Sons Inc, Hoboken, NJ (2007), pp. 495–532

Diener et al., 1985. The satisfaction with life scale. *Journal of Personality Assessment*, 49 (1985), pp. 71–75

Dobbs et al., 2007. A psychometric investigation of two self-report measures of emotional expressivity. *Personality and Individual Differences*, 43 (2007), pp. 693–702

Earnst and Kring, 1999. Emotional responding in deficit and non-deficit schizophrenia *Psychiatry Research*, 88 (1999), pp. 191–207

Freeman et al., 2005. Histrionic personality disorder G.O. Gabbard, J.S. Beck, J. Holmes (Eds.), *Oxford textbook of psychotherapy*, Oxford University Press, New York, NY (2005), pp. 305–310

Green et al., 2006. Paper or plastic? Data equivalence in paper and electronic diaries *Psychological Methods*, 11 (2006), pp. 87–105

Gross et al., 1995. Facets of emotional expressivity: Three self-report factors and their correlates. *Personality and Individual Differences*, 19 (1995), pp. 555–568

Gross et al., 1997. Hiding feelings: The acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology*, 106 (1997), pp. 95–103

Hektner et al., 2007. *Experience sampling method: Measuring the quality of everyday life* Sage Publications, Thousand Oaks, CA (2007)

Herpertz et al., 2001. Emotion in criminal offenders with psychopathy and borderline personality disorder. *Archives of General Psychiatry*, 58 (2001), pp. 737–745

Hox, 2002. *Multilevel analysis: Techniques and applications*. Lawrence Erlbaum Associates, Mahwah, NJ (2002)

Intel, 2004. Intel Corp. (2004). iESP [Computer software].

King and Emmons, 1990. Conflict over emotional expression: Psychological and physical correlates. *Journal of Personality and Social Psychology*, 58 (1990), pp. 864–877

Kreft and de Leeuw, 1998. *Introducing multilevel modeling*. Sage, London (1998)

Kring, 2008. Emotion disturbances as transdiagnostic processes in psychopathology M. Lewis, J.M. Haviland-Jones, L. Barrett (Eds.), *Handbook of emotions* (3rd ed.), Guilford Press, New York, NY (2008), pp. 691–705

Kring et al., 1994. Individual differences in dispositional expressiveness: Development and validation of the emotional expressivity scale. *Journal of Personality and Social Psychology*, 66 (1994), pp. 934–949

Kwapil et al., 2009. The social world of the socially anhedonic: Exploring the daily ecology of asociality. *Journal of Research in Personality*, 43 (2009), pp. 103–106

Leising et al., 2007. An adjective list for assessing emotional expressivity in psychotherapy research. *Clinical Psychology and Psychotherapy*, 14 (2007), pp. 377–385

Leung et al., 2010. Is social anhedonia related to emotional responsivity and expressivity? A laboratory study in women. *Schizophrenia Research*, 124 (2010), pp. 66–73

Luke, 2004. *Multilevel modeling*. Sage, Thousand Oaks, CA (2004)

Muthén, L. K. & Muthén, B. O. (1998–2010). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.

Nezlek, 2001. Multilevel random coefficient analyses of event- and interval-contingent data in social and personality psychology research. *Personality and Social Psychology Bulletin*, 27 (2001), pp. 771–785

Reis et al., 2000. Event-sampling and other methods for studying everyday experience H.T. Reis, C.M. Judd (Eds.), *Handbook of research methods in social and personality psychology*, Cambridge University Press, New York, NY (2000), pp. 190–222

Riggio and Riggio, 2002. Emotional expressiveness, extraversion, and neuroticism: A meta-analysis. *Journal of Nonverbal Behavior*, 26 (2002), pp. 195–218

Shaw et al., 2003. Emotional expressiveness, hostility, and blood pressure in a longitudinal cohort of Alzheimer caregivers. *Journal of Psychosomatic Research*, 54 (2003), pp. 293–302

|
Sloan and Marx, 2004. Taking pen to hand: Evaluating theories underlying the written emotional disclosure paradigm. *Clinical Psychology: Science and Practice*, 11 (2004), pp. 121–137

Sloan et al., 2001. Diminished pleasurable response in depressed women. *Journal of Abnormal Psychology*, 110 (2001), pp. 488–493

Snyder, 1974. The self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 30 (1974), pp. 526–537

Stanton et al., 2000. Emotionally expressive coping predicts psychological and physical adjustment to breast cancer. *Journal of Consulting and Clinical Psychology*, 68 (2000), pp. 875–882

Thoits, 1985. Self-labeling processes in mental illness: The role of emotional deviance. *American Journal of Sociology*, 91 (1985), pp. 221–249

Trierweiler et al., 2002. The structure of emotional expressivity: Each emotion counts. *Journal of Personality and Social Psychology*, 82 (2002), pp. 1023–1040

Watson et al., 1984. Emotional control and autonomic arousal in breast cancer patients. *Journal of Psychosomatic Research*, 28 (1984), pp. 474–487

Keywords

Emotional expressivity | Experience sampling | Positive affect | Negative affect | psychology