

Affect Generated by Social Comparisons Among Nurses High and Low in Burnout¹

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The affective consequences of social comparison were examined in 2 field studies among nurses and related to the 3 dimensions of professional burnout: emotional exhaustion, reduced personal accomplishment, and depersonalization. Study 1 was conducted in a sample of 99 nurses of a psychiatric hospital, and Study 2 in a sample of 237 nurses employed in various settings. In general, upward comparisons evoked more positive and less negative affect than did downward comparisons. However, the affective consequences of social comparison were different for those high and low in burnout. Those low in personal accomplishment reported higher levels of negative affect from upward comparisons and higher levels of positive affect from downward comparisons than did those high in personal accomplishment. In addition, in Study 2, those high in depersonalization and emotional exhaustion derived more positive affect from downward comparisons than did those with lower levels of burnout.

How do individuals feel when they see that someone else is doing better than they are? And how do they feel when they learn about someone else who is doing worse? Such issues have been examined in the research tradition that arose out of Festinger's (1954) social-comparison theory. In general, the social-comparison literature has assumed that downward comparisons will predominantly generate positive affect by boosting self-esteem and by improving mood (e.g., Brown & Gallagher, 1992; Collins, 1996; Gibbons, 1986; Gilbert, Giesler, & Morris, 1995; Hakmiller, 1966; Klein, 1997; Kulik & Gump, 1997; Morse & Gergen, 1970; Wills, 1981). Conversely, upward comparisons should induce negative affect by reminding individuals that they are inferior, and by evoking

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envy and hostility (e.g., Diener & Fujita, 1997; Marsh & Parker, 1984; Smith & Insko, 1987; Tesser, 1988; Thornton & Moore, 1993). Relative-deprivation theorists, in particular, have outlined the negative feelings that may be evoked by comparisons with others receiving more favorable outcomes (e.g., Ambrose, Harland, & Kulik, 1991; Crosby, 1984; Major, 1994; Suls, 1986), whereas researchers examining populations under stress have illuminated the positive feelings that may be generated by comparison with others doing worse (e.g., Affleck & Tennen, 1991; Buunk & Ybema, 1995; Wills, 1981; Wood, Taylor, & Lichtman, 1985).

The traditional perspective on social comparison holds that individuals will primarily contrast themselves when comparing themselves with others (cf. Diener & Fujita, 1997; Gibbons & Boney McCoy, 1991; Klein, 1997; Mettee & Smith, 1977; Strack, Schwarz, Chassein, Kern, & Wagner, 1990; Thornton & Moore, 1993), and thus will feel bad when perceiving that others are doing better, and feel good when perceiving that others are doing worse. However, as noted by Diener and Fujita and by others, a social-comparison approach that assumes only contrast effects is oversimplified. In fact, it has been observed that affective responses to social-comparison information may be opposite from what typically has been assumed, in particular when individuals identify with the target person (cf. Brewer & Weber, 1994; Brown, Novick, Lord, & Richards, 1992; Buunk & Ybema, 1997; Collins, 1996; Helgeson & Michelson, 1995; Pelham & Wachsmuth, 1995; Tesser, 1988).

Over 40 years ago, Heider (1958) made a conceptual analysis of how individuals may respond to the lot of another person that seems especially relevant in this context. According to Heider, individuals may not only show antagonism and feel happy when they see that the other is doing worse (malicious joy), and feel bad when they see that the other is doing better (envy). Individuals may also experience sympathetic identification when their feelings are concordant with the lot of the other, in which case downward comparison would generate negative affect (compassion), and upward comparison would lead to positive affect (sympathetic enjoyment). A number of studies have provided evidence for the occurrence of such sympathetic identification. In studies among cancer patients and married couples, Buunk, Collins, Taylor, VanYperen, and Dakof (1990) showed that although downward comparisons installed more positive affect than did upward comparisons, these downward comparisons evoked as much negative affect as did upward comparisons. In a similar vein, cancer patients in a study by Molleman, Pruyn, and van Knippenberg (1986) reported that interactions with fellow patients who were worse off would lead to more negative affect for them. In addition, recent experimental studies in which subjects were confronted with a description of a comparison target have indicated that upward comparisons often generate more positive and less negative affect than do downward comparisons (e.g., Aspinwall &

Taylor, 1993; Collins, 1996; Ybema & Buunk, 1995; Buunk, van der Zee, & Van Yperen, in press).

The present studies were conducted to expand the work of Buunk et al. (1990) by examining naturally occurring affective consequences of upward and downward social comparison in a work setting, in particular as occurring among individuals experiencing professional burnout. It was assessed, in the same manner as Buunk et al., how individuals reported to react affectively to social comparison with their colleagues. Hemphill and Lehman (1991) employed the same methodology to examine the affective consequences of social comparison among people with multiple sclerosis and found similar results to those of Buunk et al. However, no research thus far has been reported using the same method in organizations.

The present research focuses on nursing, a profession in which stress and burnout are rather prevalent, and in which individuals are always surrounded by colleagues who may offer instances of upward and downward comparisons (Buunk & Schaufeli, 1993). The first purpose of the present research is to determine to what extent nurses identify themselves with comparison targets (i.e., experience positive affect from upward comparisons and negative affect from downward comparisons) and to what extent they contrast themselves (i.e., experience negative affect from upward comparisons and positive affect from downward comparisons). We use the term *identification* here to refer to responses that are concordant with the fate of the other (i.e., positive affect in response to upward comparisons and negative affect in response to downward comparisons), and the term *contrast* to refer to responses that are opposite to the fate of the other (i.e., negative affect in response to upward comparisons and positive affect in response to downward comparisons).

The second and major purpose of the current research is to relate the affective consequences of social comparison to professional burnout, a phenomenon that has generated an increasing amount of research in past decades (Schaufeli & Buunk, 1996). The burnout syndrome is particularly interesting to study in relation to social-comparison processes because of its multidimensional nature (Maslach & Jackson, 1982). *Emotional exhaustion*—the core dimension of the syndrome—refers to the depletion or draining of emotional resources as the result of prolonged exposure to difficult and demanding recipients. *Reduced personal accomplishment* concerns the tendency to evaluate oneself negatively with regard to one's accomplishments at work; whereas *depersonalization*, a negative, callous, and cynical attitude toward the recipients of one's care, is considered to be a coping strategy used to deal with interpersonal stress and concomitant exhaustion. These dimensions have been explored in numerous studies in a variety of populations (for recent overviews, see Schaufeli & Buunk, 1996; Schaufeli, Maslach, & Marek, 1993), and reliable scales have been developed to assess these dimensions (Schaufeli & van Dierendonck, 1993).

According to Wills's (1981) theory, individuals facing a decline in well-being will benefit from contrasting themselves with others who are worse off, and thus derive positive affect from downward comparison. Various studies have supported the notion that those who are facing a threat or are under stress prefer downward comparisons, and may feel better after engaging in them (e.g., DeVellis et al., 1991; Gibbons & Gerrard, 1991; Mares & Cantor, 1992; Swallow & Kuiper, 1993). In particular, there is evidence that individuals under stress may try to reconstruct their situation cognitively by emphasizing that they are still better off than others (e.g., Buunk & Ybema, 1995; Wood et al., 1985). The perception of being better off than others appears to be associated with a higher well-being among those under stress (e.g., Affleck & Tennen, 1991; Buunk, 1995; Taylor & Lobel, 1989; Van der Zee, Buunk, & Sanderman, 1995). Therefore, it is predicted that, compared to individuals low in burnout, individuals who are high in burnout will report that downward comparisons have more often generated positive, and less often negative, affect for them. Moreover, particularly for individuals high in burnout, confrontations with others who are better off may bring back feelings of envy and frustration. Thus, it is predicted that, as compared to individuals low in burnout, individuals who are high in burnout will report more contrast in upward as well as downward comparisons. Given the fact that work settings inherently contain some element of competition, contrasting oneself with one's colleagues seems more likely than empathy or identification among those high in burnout. This would apply in particular to those low in personal accomplishment, as this dimension refers directly to one's perceived competence at work. We do not speculate on the way in which depersonalization would affect the affective consequences of social comparison. The major reason to include this variable in the present research is that it is always considered an important aspect of burnout.

When burnout is found to have an impact on affective responses to social comparison, one might question whether such an effect is actually attributable to this variable or if, instead, it is a result of certain personality characteristics that are correlated with burnout, such as low self-esteem. To provide a preliminary test of such alternative explanations, we included two potentially relevant individual-difference variables, and we examined if the effects remained unaltered when such variables were introduced as covariates. These variables were reactivity (Strelau, 1983) in Studies 1 and 2, and self-esteem (Rosenberg, 1965) in Study 2. Specifically, highly reactive individuals exhibit stronger physiological stress reactions than do lower reactive individuals to an objectively identical stimulus. As shown by Schaufeli and Janczur (1994), reactivity is associated with burnout, particularly with emotional exhaustion. In addition, compared to those high in self-esteem, low self-esteem individuals might show less positive and more negative responses from upward comparison, and more positive and less negative responses from downward comparison.

Study 1

Method

Sample and Procedure

The first sample consisted of 99 nurses (69 female, 30 male) in a large psychiatric hospital in The Netherlands. They were selected from a larger sample of hospital employees by including only those who were involved in direct contact with patients and who were employed for 32 hours or more per week (Buunk, Doosje, Jans, & Hopstaken, 1993). A minority (14%) of the subjects were head nurses. Their average age was 31 years, and they had been employed as nurses for an average of 9 years. All of the respondents worked daily with patients. Their work included the instrumental care of patients (e.g., helping with baths and with using the toilet), personal care for patients (e.g., talking about personal problems, stimulating patients to undertake activities), and various contacts with other professionals and family members.

Measures

The questionnaire contained a number of other scales and questions that are not relevant to the present paper. The social-comparison questions used here were posed after burnout was assessed, among other questions on work stress.

Burnout. Burnout was measured with the well-validated, 22-item Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986). According to psychometric studies by Schaufeli and van Dierendonck (1993, 1994), the validity and reliability of the Dutch version is comparable to that of the original MBI. Moreover, norm scores are available for this Dutch version. We included the emotional exhaustion (9 items; $\alpha = .89$), personal accomplishment (8 items; $\alpha = .64$), and depersonalization (5 items; $\alpha = .71$) subscales. The sample did not differ significantly in level of burnout from the population of health care and helping professions on which the norms are based. According to the norms of the Dutch MBI, 30% of the present sample had a high level of emotional exhaustion, 27% had a low level of personal accomplishment, and 19% had a high level of depersonalization. The present sample did not differ significantly in level of burnout from the population of health care and helping professions on which the norms are based.

Social comparison. To assess the affect evoked by social comparisons, respondents were presented with modified versions of the four questions that were employed in Buunk et al. (1990). Specifically, to assess the frequency of positive affect evoked by downward comparison (downward contrast), subjects were asked, "How often does it give you a *pleasant* feeling when you see that

colleagues perform *worse* in their work than you do yourself?" To assess the negative affect evoked by downward comparison (downward identification), respondents were asked, "How often does it give you an *unpleasant* feeling when you see that colleagues perform *worse* in their work than you do yourself?" To assess the frequency of positive affect evoked by upward comparison (upward identification), subjects were asked, "How often does it give you a *pleasant* feeling when you see that colleagues perform *better* in their work than you do yourself?" To assess the negative affect evoked by upward comparison (upward contrast), respondents were asked, "How often does it give you an *unpleasant* feeling when you see that colleagues perform *better* in their work than you do yourself?" All four questions were rated on a 5-point scale ranging from 1 (*never*) to 5 (*often*).

Reactivity. Level of reactivity was measured by a 22-item subscale of Strelau's (1983) Temperament Inventory. Items were scored on a 3-point rating scale consisting of 0 (*No*), 1 (?), and 2 (*Yes*).

Analysis

The four questions on the affective consequences of social comparison were considered as measures of positive and negative affect, with the direction of comparison as a within-subjects factor. For each of the three burnout dimensions, regression analyses were employed to test the effect of the burnout dimension (considered as a between-subjects factor), and the interactions between the burnout measure and the direction of comparison (considered as a within-subjects factor) on positive and negative affect (Judd, McClelland, & Smith, 1996). This procedure is similar to ANOVA with a between-subjects factor with repeated measures, but has the advantage that continuous predictors can be used. Separate regression analyses of positive and negative affect were done for each of the burnout dimensions to prevent problems of multicollinearity.

Results

A preliminary repeated-measures ANOVA, in which the effects of burnout were not considered, revealed a main effect of direction of comparison on positive affect, $F(1, 98) = 50.1, p < .001$, such that upward comparisons ($M = 2.70$) evoked positive affect more often than did downward comparisons ($M = 1.74$). Similarly, a main effect of direction of social comparison on negative affect, $F(1, 98) = 40.3, p < .001$, indicated that downward comparisons evoked negative affect more often ($M = 3.11$) than did upward comparisons ($M = 2.27$).

The first regression analyses showed that emotional exhaustion had significant main effects on both positive ($\beta = 0.24, p < .05$) and negative affect ($\beta = 0.24, p < .05$), as those high in emotional exhaustion experienced more positive

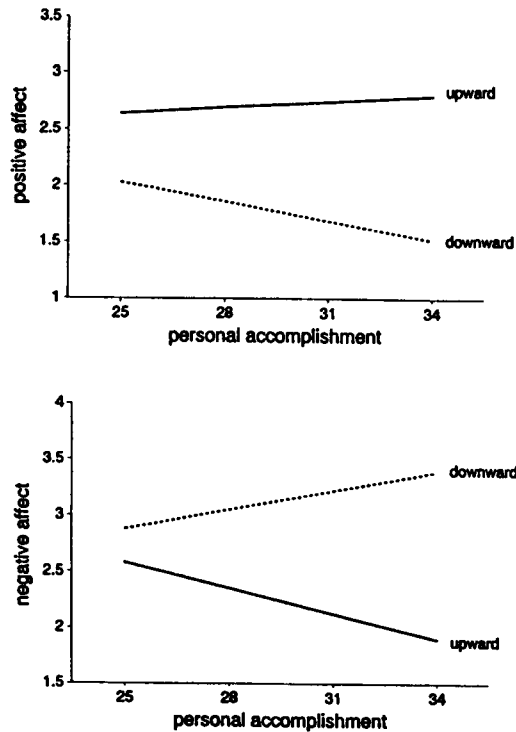


Figure 1. Positive and negative affect in response to upward and downward social comparison as related to personal accomplishment in Study 1.

and more negative affective consequences of comparison than did those low in emotional exhaustion. The two-way interactions between emotional exhaustion and direction of comparison were significant for neither positive ($\beta = 0.09$, *ns*) nor negative affect ($\beta = -0.11$, *ns*). The second burnout dimension, personal accomplishment, did not have significant main effects on positive ($\beta = -0.13$, *ns*) or negative affect ($\beta = -0.05$, *ns*). However, the two-way interactions between personal accomplishment and direction of comparison were significant for both positive ($\beta = -0.21$, $p < .05$) and negative affect ($\beta = 0.41$, $p < .001$). Figure 1 shows the effects of personal accomplishment on positive and negative affect following upward and downward comparison. Additional regression analyses indicate that when comparing downward, nurses who were lower in personal accomplishment (thus experiencing more burnout) experienced negative affect less often ($\beta = 0.24$, $p < .05$) and positive affect more often ($\beta = -0.25$, $p < .05$). In line with the predictions, when comparing upward, nurses who were lower in

personal accomplishment experienced negative affect more often ($\beta = -0.30$, $p < .01$). Thus, the higher the burnout level, the more individuals seemed to experience a contrast with their colleagues, as a better performing colleague evoked negative feelings more often and a colleague performing worse evoked positive feelings more often. Put differently, among those high in personal accomplishment, upward comparison generated positive affect much more often and negative affect much less often than downward comparison, whereas this effect was much less pronounced among those low in personal accomplishment (i.e., high in burnout).

The third burnout dimension, depersonalization, had a main effect on positive affect ($\beta = 0.25$, $p < .05$), but not on negative affect ($\beta = 0.15$, *ns*). Those high in depersonalization experienced more positive affect from social comparisons than did those low in depersonalization. The two-way interactions between depersonalization and the direction of social comparison were significant for neither positive ($\beta = 0.05$, *ns*) nor negative affect ($\beta = -0.16$, *ns*).

All regressions were repeated controlling for reactivity by entering this variable first in the regression. We mention here only those effects for which the level of significance changed either from significant to nonsignificant or vice versa. This proved to be the case for only one effect: The interaction of personal accomplishment and direction of comparison on positive affect became weaker ($\beta = -0.15$, $p < .15$). In all other cases, the effects remained unaltered.

Discussion

Upward Versus Downward Comparison

As in the studies of Buunk et al. (1990) among cancer patients and married individuals, the present study showed that the affective consequences of social comparison are not intrinsic to its direction, and that comparisons may be construed as either positive or negative. Upward comparisons were reported to have evoked positive affect more often than downward comparison, and downward comparisons were reported to have evoked negative affect more often than upward comparisons. It may be noted that these findings are different from those of Buunk et al., who showed that downward comparison evoked more positive affect than did upward comparison, with no difference between the two types of comparisons in negative affect.

There are a number of interesting possibilities as to why the results from the present research in this respect differed from those of Buunk et al. (1990). First, performance on the job may be experienced as more controllable than the quality of one's marriage or the severity of cancer. Consequently, upward comparisons may be inspiring, rather than frustrating for employees. Second, nurses generally may be more altruistically or empathically oriented than most people. Third,

nurses are generally interdependent with their colleagues in their work, such that they often benefit and learn from colleagues performing well, whereas their work may be hindered by colleagues performing poorly (see also Pelham & Wachsmuth, 1995).

Burnout

The central set of results indicates that the affective consequences of social comparison were different for those high and low in burnout. We had predicted that compared to those low in burnout, those high in burnout would experience positive affect more often when comparing downward, and negative affect more often when making upward comparisons. Although one effect became weaker when controlling for the personality variables reactivity, these predictions were clearly confirmed with respect to personal accomplishment. Compared to those high in personal accomplishment, those low in personal accomplishment experienced negative affect relatively often when comparing upward and positive affect relatively often when comparing downward. Moreover, they differed from those high in personal accomplishment by reporting less negative affect from downward comparisons.

As predicted, then, compared to nurses having a positive perception of their own accomplishments at work, those with a negative perception of these accomplishments were inclined to feel bad in response to upward comparisons, and to feel good in response to downward comparisons. The latter finding is in line with Wills's (1991) downward-comparison theory, which states that especially those under stress will derive positive affect from downward comparisons. The fact that the higher the level of stress, the more negative affect upward comparisons generate negative affect is in line with evidence that dysphorics tend to engage in upward contrasting (e.g., Ahrens, Zeiss, & Kanfer, 1988; Alloy, Albright, & Clements, 1987). The fact that the predicted pattern was found only for personal accomplishment, and not for emotional exhaustion and depersonalization, suggests that differential affective responses to social comparisons are related to how one evaluates one's own competence. It may be noted that those high in emotional exhaustion seemed to be more affected in general by social comparisons than those low in emotional exhaustion, as they experienced both positive and negative affect more often as a consequence of comparison than did those low in emotional exhaustion. Possibly, this is a result of a higher uncertainty about and greater instability of one's emotions (Buunk, 1994).

Because Study 1 provided evidence for our predictions only with respect to one burnout dimension, it seemed important to establish the robustness of this finding. Moreover, Study 1 was conducted among a rather specific group of nurses. Indeed, there were a number of reasons to examine affective consequences of social comparison in relation to burnout in a different sample: first, to

establish whether the findings obtained in Study 1 could be replicated; second, to examine the generalizability of the results by investigating the same issues in a sample of nurses that was more heterogeneous with respect to the institutions and settings in which they were involved; and third, to examine not only the role of reactivity, but also that of self-esteem as a potentially confounding variable.

Study 2

Method

Sample and Procedure

Subjects in this study were 237 registered nurses from various health care institutions in The Netherlands who were enrolled in an additional part-time training program for head nurses. The sample was selected from that used by Buunk, Schaufeli, and Ybema (1994) and VanYperen, Buunk, and Schaufeli (1992). To exclude nurses involved primarily in managerial and administrative jobs, only those who spent a substantial part of their time (40% or more) with patients were included. The sample included members of different nursing disciplines and work settings: general nurses (35%), psychiatric nurses (13%), community nurses (9%), nurses working with persons with mental retardation (23%), and nurses working in nursing homes or hospices (13%). The remaining 7% were employed in other health care settings.

Virtually all respondents (96%) were employed for at least 32 hours per week. There were somewhat more female (57%, 135) than male (43%, 102) nurses. Their mean age was 31 years, and they had considerable work experience in nursing ($M = 10$ years). In most cases, the questionnaire was filled out in a classroom situation.

Measures

The same measures were used as in Study 1 to assess burnout, social comparison, and reactivity. Again, the social-comparison questions were posed at the end of a number of questions on social comparison. However, to examine if the results were independent of the order in which the burnout and social-comparison questions were asked, and unlike in Study 1, burnout was assessed after the social-comparison questions. Self-esteem was measured with the Dutch version of Rosenberg's (1965) scale. According to the norms of the Dutch MBI, 26% of the sample had a high level of emotional exhaustion, 11% had a low level of personal accomplishment, and 16% had a high level of depersonalization. The percentage of highly emotionally exhausted nurses was again similar to that in the population of health care and helping professions on which the norms are based,

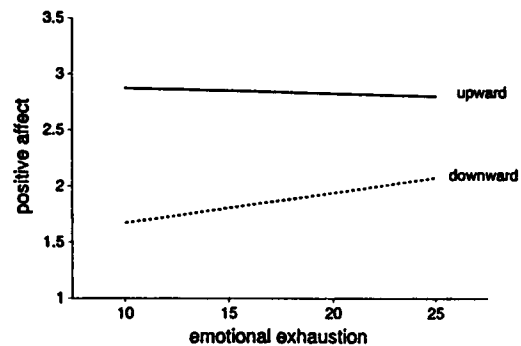


Figure 2. Positive affect in response to upward and downward social comparison as related to emotional exhaustion in Study 2.

$\chi^2(1, N = 229) = 0.68, ns$. However, there were significantly fewer nurses low in personal accomplishment, $\chi^2(1, N = 218) = 22.76, p < .001$, and high in depersonalization, $\chi^2(1, N = 200) = 8.97, p < .01$.

Results

The data were analyzed in the same way as in Study 1, and showed similar results. As in Study 1, a repeated-measures ANOVA, not including the effects of burnout, indicated that direction of comparison had main effects on positive and negative affect, $F_s(1, 227) = 151.5$ and 112.5 , both $p_s < .001$; such that upward comparisons ($M = 2.85$) evoked positive affect more often than did downward comparisons ($M = 1.87$), and downward comparisons evoked negative affect more often ($M = 3.40$) than did upward comparisons ($M = 2.49$).

The regression of positive affect on emotional exhaustion revealed a significant main effect of emotional exhaustion ($\beta = 0.14, p < .05$) and a significant interaction effect of emotional exhaustion with comparison direction ($\beta = 0.21, p < .01$). As can be seen in Figure 2, those who were low in emotional exhaustion felt much better as a result of upward rather than downward comparison, whereas this effect of comparison direction was attenuated among those high in emotional exhaustion. Additional regression analyses show that, in line with the predictions, when comparing downward, nurses experienced positive affect more often ($\beta = 0.26, p < .001$) the higher their level of emotional exhaustion. With regard to negative affect, emotional exhaustion had a marginally significant effect ($\beta = 0.13, p < .10$), such that comparison generated negative affect somewhat more often for nurses who were higher in emotional exhaustion. There was no significant interaction effect between emotional exhaustion and comparison direction for negative affect ($\beta = -0.10, ns$).

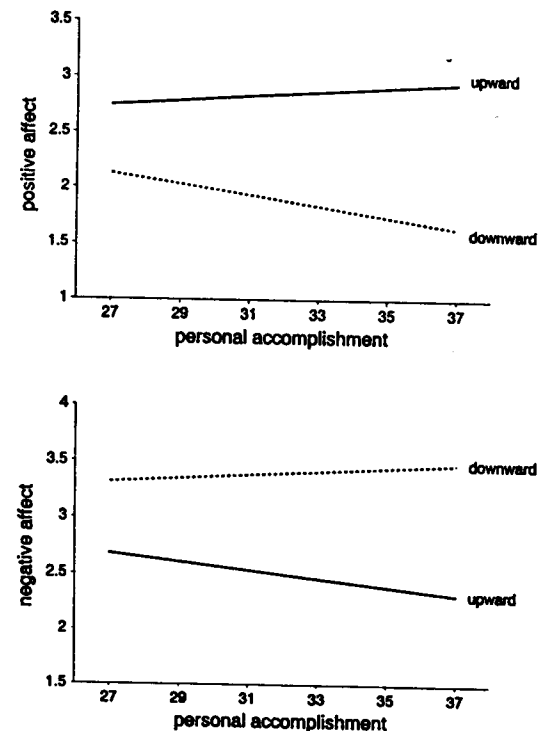


Figure 3. Positive and negative affect in response to upward and downward social comparison as related to personal accomplishment in Study 2.

As in Study 1, personal accomplishment did not have significant main effects on either positive or negative affect ($\beta_s = -0.10$ and $-0.06, ns$). However, the two-way interactions between personal accomplishment and direction of comparison were significant for both positive and negative affect ($\beta = -0.22$ and $0.15, p_s < .01$ and $.05$, respectively). Figure 3 shows that upward comparison generated positive affect more often and negative affect less often than did downward comparison, and that this effect of direction of comparison was stronger for nurses who were high in personal accomplishment. As predicted, additional regression analyses show that nurses who were lower in personal accomplishment experienced positive affect more often when comparing downward ($\beta = -0.23, p < .01$), and experienced negative affect more often when comparing upward ($\beta = -0.16, p < .05$). Thus, those low in personal accomplishment contrasted themselves more with colleagues performing poorly as well as with colleagues performing well.

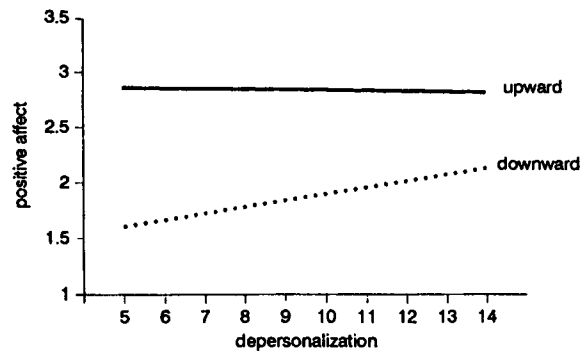


Figure 4. Positive affect in response to upward and downward social comparison as related to depersonalization in Study 2.

In a similar vein, depersonalization had both a significant main effect ($\beta = 0.17, p < .05$) and a significant interaction effect with the comparison direction ($\beta = 0.21, p < .01$) in the regression of positive affect. Figure 4 shows that among those low in depersonalization, upward comparison generated positive affect much more often than downward comparison, whereas this effect of the comparison direction was not as strong among those high in depersonalization. Additional regression analyses show that when comparing downward, nurses experienced positive affect more often ($\beta = 0.28, p < .001$) as they were higher in depersonalization. Depersonalization had no significant main effect ($\beta = 0.06, ns$) or interaction effect ($\beta = -0.05, ns$) in the regression of negative affect following social comparison.

When controlling for reactivity, most results remained unaltered. Again, we confine ourselves here to the effects for which the significance level changed. This was the case only for the interaction effect of personal accomplishment and comparison direction on negative affect, which became nonsignificant. Also when self-esteem was entered in the first step, the results remained essentially the same. The effect of emotional exhaustion on positive affect became somewhat weaker ($\beta = 0.13, p < .10$), whereas the effect of emotional exhaustion on negative affect became somewhat stronger ($\beta = 0.14, p < .05$). The interaction of personal accomplishment and direction of comparison on negative affect became somewhat weaker ($\beta = 0.12, p < .10$).

General Discussion

The findings obtained in Study 2 replicate and extend those obtained in Study 1, thus suggesting that the results from Study 1 are independent of the order in which burnout and social-comparison questions are asked, and may

reflect a robust pattern that holds up for a broad variety of nursing settings. It may be noted that Study 2 showed again that individuals recalled upward comparison as having generated positive affect more often and negative affect less often than downward comparison. More importantly, Study 2 provided more convincing support than did Study 1 for the predictions that the affective consequences of social comparison were moderated by level of burnout. With respect to personal accomplishment, virtually the same findings were obtained as in Study 1: The worse nurses felt about their own accomplishments at work, the more they were inclined to report that they felt bad as a response to upward comparisons, and felt good as a response to downward comparisons. Moreover, whereas in Study 1 comparison direction interacted only with the personal-accomplishment dimension, in Study 2 we found evidence that affective responses to downward comparison were also related to the emotional-exhaustion and depersonalization dimensions. In particular, in line with Wills' (1991) downward-comparison theory, nurses who were higher in emotional exhaustion and depersonalization reported experiencing positive affect more often in response to downward comparisons. Furthermore, it may be noted that those high in emotional exhaustion reported, as in Study 1, more positive and more negative affect in response to social comparison, regardless of its direction. Finally, Study 2 showed that the effects of burnout on the recall of affective responses to social comparison were not only largely independent of reactivity, but also of self-esteem, thus excluding another potential alternative explanation for the findings. The fact that, in general, stronger results were obtained in Study 2 than in Study 1 may be a result of the fact that Study 2 included a more representative and larger sample of nurses.

Despite the similarities with the studies by Buunk et al. (1990) and Hemphill and Lehman (1991), the fact that in the present research downward comparisons generated much more negative affect than positive affect is opposite to the finding of Buunk et al. that downward comparisons more often evoked positive than negative affect. The most frequently mentioned responses were negative feelings when seeing someone else doing worse, followed by positive feelings when someone else is doing better. Only a few reported negative feelings when comparing themselves with others doing better or positive feelings when others did worse. Even among those high in burnout, positive affect as a result of downward comparisons was relatively rare in our sample, suggesting that nurses, in general, seldom engage in *schadenfreude* (enjoyment as a result of others' troubles), and seldom experience relief when others are doing worse.

Several factors may be responsible for the pattern that identification (rather than contrast) with colleagues seemed to dominate among the nurses studied here. First, social desirability could play a role. However, it seems difficult to explain why this would play a less important role in the studies by Buunk et al. (1990) and Hemphill and Lehman (1991). Second, because nurses are frequently

confronted directly with the accomplishments of their colleagues, they often may have had concrete individuals in mind when answering the questions, whereas cancer patients, married individuals, and multiple sclerosis more often may have come up with cognitive constructions of others. Thinking of one's colleagues—with many of whom one will feel a positive bond—probably makes empathy more likely than thinking of imaginary others. Third, it seems likely that among nurses, empathic and altruistic individuals are somewhat overrepresented. A final explanation for the different findings between the present and the earlier studies may be that the present samples as a whole experienced less stress than did the earlier samples, and that therefore in the latter samples (as among the burned-out nurses in the present studies), downward comparisons evoked more positive affect.

The most important set of results is that the affective consequences of social comparison were different for those high and low in burnout. In both studies, as compared to those low in emotional exhaustion, those high in emotional exhaustion contrasted themselves more; that is, obtained more negative affect from upward comparisons and more positive affect from downward comparisons. Apparently, seeing others doing worse may induce a positive mood in emotionally exhausted nurses, and seeing others doing better may evoke a negative mood. Slightly different, but quite compatible results were found with respect to the personal-accomplishment dimension. Those low in personal accomplishment reported, especially in Study 2, not only more contrast, but also less identification with others; that is, less frequent negative feelings in response to downward comparisons, and less frequent positive feelings from upward comparisons. Apparently, nurses feeling bad about their own accomplishments at work are less inclined to feel sympathetic identification with their colleagues.

In Study 2, similar findings were obtained for the depersonalization dimension: Nurses with a high level of depersonalization experienced more positive affect and less negative affect from downward comparisons, and more negative affect and less positive affect from upward comparisons. All of these findings support our reasoning that individuals feeling burned out have a need for self-enhancement. As a result, facing others who are worse off makes them feel better, and seeing others who are better off makes them feel worse; whereas for individuals experiencing little burnout, identification with others doing better is less threatening (cf. Heider, 1956). Thus, in line with Wills's (1981) theory, making downward comparisons seems to play a role in the coping process. Burned-out nurses report downward comparisons that make them feel better more often than do individuals who are not under stress.

The present studies have a number of limitations. First, the affective consequences were assessed with single-item measures, possibly making the findings less reliable than would have been the case had more items been used. Second, although we used the terms *identification* and *contrast* to refer to the affective

consequences of social comparison, we only had measures of these consequences, and not of identification and contrast processes per se. Third, the direction of causality is somewhat equivocal. Those high in burnout may make different types of comparisons than others because they are burned out, or, alternatively, their comparison strategies may lead to burnout. However, it is difficult to argue that contrasting oneself with others who are worse off will lead to burnout. There is substantial evidence that this strategy characterizes those with higher, not lower, levels of adjustment and mental health (cf. Taylor & Brown, 1988), and that those high in self-esteem engage in derogation of others after failure rather than those low in self-esteem (Brown & Gallagher, 1992; Gibbons & Boney-McCoy, 1991). This would mean that the strategy of downward contrast is an adaptive strategy, rather than a strategy that would lead to burnout. Nevertheless, the elevated level of upward contrast among those high in burnout seems to be in line with evidence that other groups characterized by a low level of well-being—such as neurotics (Van der Zee et al., 1995), depressed individuals (Swallow & Kuiper, 1987), and Type A individuals (Yuen & Kuiper, 1992)—seem to do more upward comparison, which probably means that these individuals usually contrast themselves with others doing better, and make themselves unhappy by feeling that “the grass is always greener on the other side.”

Finally, it may be noted that the present results may be relevant for some longstanding issues within social psychology, in particular the issue of the conditions under which individuals become competitive rather than cooperative and thus experience negative rather than positive interdependence (e.g., Deutsch, 1949; Heider, 1958; Kelley & Thibaut, 1978). Our results suggest that under normal conditions, in the absence of stress, individuals tend to show general identification with their colleagues by feeling happy when their colleagues are faring well and by feeling unhappy when their coworkers are doing poorly. When they become burned out, there seems to be less room for such empathic feelings and positive interdependence, and individuals seem to become more competitive and antagonistic. They seem to enjoy the perception of others doing even worse than they do themselves, and to feel envious when they see others doing better. Thus, by outlining some of the conditions under which responses to the lot of others are characterized by antagonism and competition, rather than cooperation and identification, the present studies may link social-comparison theory to other areas in social psychology, and contribute to gaining insight into these fundamental issues in this discipline.

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