

The Importance of Social Versus Temporal Comparison Appraisals Among Older Adults¹

SUSAN ROBINSON-WHELEN² AND JANICE KIECOLT-GLASER

*Department of Psychiatry
Ohio State University College of Medicine*

It has been suggested that social comparisons become less frequent and less important to one's self-evaluation, and temporal comparisons become more frequent and more important to self-evaluation in later life. In this study, the influence of social and temporal comparison appraisals on global self-ratings in 3 domains (health, income, and memory) was assessed among individuals ranging in age from 53 to 90 years. Although social comparison appraisals were significantly related to self-ratings in all 3 domains, temporal comparison appraisals were only related to self-rated memory. There was also no evidence that the effect of social or temporal comparison appraisals on self-evaluations differed with age among our sample of middle-aged and older adults. Social comparison appraisal appears to be a viable mechanism by which esteem can be preserved in old age, despite increasing loss and impairment.

Heidrich and Ryff (1993a, 1993b) have suggested that social comparison processes may be an important mechanism by which older adults report good health and a positive outlook, despite significant chronic illness and increasing loss and impairment. Nevertheless, research on social comparison processes among older adults has been quite limited. Suls and his colleagues (Suls & Mullen, 1982; Suls & Sanders, 1982) developed a life-span model of comparison processes, but the late-life stage of their model has received little empirical examination.

According to Suls and his colleagues (Suls, 1986; Suls & Mullen, 1982), comparisons with similar others, dissimilar others, and the self at a different time in life (temporal comparisons) occur throughout the life span; however, the relative frequency of these comparisons and the influence of these comparisons on self-evaluations changes with age. Specifically, they suggest that old age is a time when temporal comparisons become relatively more frequent and more important to self-evaluations than social comparisons. They propose that this

¹This study was supported by grants R37 MH42096 and R01 MH50538 from the National Institute of Mental Health.

²Correspondence concerning this article should be addressed to Susan Robinson-Whelen, Ohio State University Stress and Health Study, 1670 Upham Drive, Columbus, OH 43210-1228.

occurs largely because of decreased opportunities for social comparisons. They also argue that declines in sensory sensitivity and declines in cognitive abilities may interfere with older adults' ability to engage in comparisons with others (Suls, 1986; Suls & Mullen, 1982).

Although several studies have examined social comparison processes among older adults (Heckhausen & Krueger, 1993; Heidrich & Ryff, 1993a, 1993b; Ryff & Essex, 1992), only two studies have examined both social and temporal comparisons in late life (Suls, 1986; Suls, Marco, & Tobin, 1991). Consistent with his theory, Suls (1986) reported that older adults relied more on temporal comparison information in making self-assessments than did younger subjects. In a second study, Suls et al. (1991) examined the role of social and temporal comparisons in older adults' evaluations of their health. Although they found that use of temporal comparison information was associated with lower self-rated health (temporal comparisons were assumed to be with a better off past self), the effect of social comparisons on self-assessed health was ambiguous.

The positive health evaluations among older adults in their study, despite the fact that 40% of them were nursing home residents, led Suls et al. (1991) to suggest that participants may have created an image of frail older adults with whom they compared quite favorably. Suls and his colleagues were not able to explore the influence of comparisons with such self-generated others because they only asked their subjects about comparisons with specific individuals and groups. Helgeson and Taylor (1993) also questioned whether participants in their study may have engaged in downward comparisons with cognitively manufactured comparison others. Thus, contrary to Suls' original theory (Suls & Mullen, 1982), older adults' self-evaluations may continue to rely heavily on social comparison information, albeit possibly self-generated comparison information.

In this study, we examined the influence of social and temporal comparisons on self-evaluations among older adults in three different domains (health, income, and memory), and we explored Suls' original hypothesis (Suls & Mullen, 1982) that temporal comparisons become relatively more important in the self-evaluative process than social comparisons in the later years of life. In contrast to Suls et al.'s (1991) examination of these questions, we were able to examine the influence of imaginary comparison others, as well as actual comparison others. In all three domains, we asked participants how they compared to others their same age and how they compared to themselves 5 years ago. This allowed us to examine the relation between social and temporal comparison *appraisals* and more global self-evaluations.

What we refer to as comparison appraisals Heidrich and Ryff (1993a) have referred to as the *consequences* of social comparisons. Positive social comparison appraisal is thought to reflect greater reliance on downward social

comparison information sources (comparisons with a worse off individual or group), while a negative social comparison appraisal is thought to reflect greater reliance on upward social comparison information (comparisons with a better off individual or group). Most importantly, comparison appraisals reflect the consequences of engaging in comparisons with imagined as well as actual comparison others.

By assessing comparison appraisals rather than the frequency of particular comparisons, we were also able to eliminate the problem of subjects misreporting their use of comparisons. Suls et al. (1991) questioned whether individuals have access to their own judgment processes and know what comparisons most influence their self-evaluations. Helgeson and Taylor (1993) similarly speculated that some of their cardiac patients may either have been unaware of making social comparisons or may have been unwilling to acknowledge and report making these comparisons.

To summarize the questions explored in this study, we examined the influence of participants' social and temporal comparison appraisals of three different domains (health, income, and memory) on their global self-ratings in those same domains. Based on Suls' developmental theory of comparison processes (Suls, 1986; Suls & Mullen, 1982), we expected temporal comparison appraisals to be significantly associated with self-evaluations and more highly correlated with self-evaluations than social comparison appraisals. Further, we expected that the association between temporal comparison appraisals and self-evaluations would increase with age, while the association between social comparison appraisals and self-evaluations would decrease with age. Finally, because both comparison appraisals and global self-ratings may reflect the individual's actual life circumstances, we examined the influence of comparison appraisals on global self-ratings, while factoring out more objective indicators of each domain.

Method

Participants

Participants were middle-aged and older adults participating in a longitudinal study examining the effects of stress on psychological health, physical health, and immune function. Participants were recruited through newspaper advertisements, senior citizens centers, area newsletters, church groups, university alumni publications, and referrals from other participants. While some participants of the larger study are caring for a spouse with Alzheimer's disease (AD), only noncaregiving participants were included in these analyses because we were interested in examining social comparison processes among a more

representative sample of older adults. Caregiving subjects were excluded because caring for a relative with AD is generally recognized as a profound stressor that can create financial strain and can affect psychological as well as physical health (Gatz, Bengtson, & Blum, 1990).

The sample included in these analyses consisted of 70 women and 21 men. The average age was 70 years (range = 53-90 years, $M = 70.40$, $SD = 8.30$), and the average family income was between \$20,000 and \$30,000 per year. Nearly all of the sample (97%) had completed high school, and many (41%) had completed college.

Measures

Comparison appraisals. Within each domain, individuals were asked how they were doing compared to others their same age (social comparison appraisal) and compared to themselves 5 years ago (temporal comparison appraisal). Participants were asked to indicate if they were doing *worse* (1), *about the same* (2), or *better* (3) than the comparison reference. The format of these comparison items paralleled items from the Older Americans Resources and Services (OARS) Multidimensional Functional Assessment Questionnaire (Multidimensional Functional Assessment, 1978). Same-age comparisons were considered the most appropriate social comparison reference because comparisons with similar others are considered to be most relevant (Festinger, 1954). The 5-year reference for temporal comparisons was used because previous research on older adults has demonstrated 5 years to be a meaningful reference for assessing temporal comparisons (Suls, 1986; Suls et al., 1991).

Global self-evaluations. Global self-ratings in three different domains (health, income adequacy, and memory) were assessed using single-item rating scales from the OARS Multidimensional Functional Assessment Questionnaire. Health and memory ability were rated on a 4-point scale (0 = *poor*, 1 = *fair*, 2 = *good*, 3 = *excellent*), whereas the adequacy of income to meet one's needs was rated on a 3-point scale (0 = *poorly*, 1 = *fairly well*, 2 = *very well*). The self-rated memory item is not from the OARS Multidimensional Functional Assessment Questionnaire but was modeled after the health item of the OARS Multidimensional Functional Assessment Questionnaire.

Objective indicators of health and income. To assess health, participants were provided a list of health conditions and were asked to indicate if they had any of the conditions listed. The list of medical conditions, most of which reflect chronic conditions, was adapted from the OARS Multidimensional Functional Assessment Questionnaire with a few items added (e.g., gout, shingles) and a few omitted (e.g., epilepsy, anemia). This measure served as a more objective measure of health status. Although physician ratings or medical

records would have provided a better measure of objective health status, such data were unavailable to us. To assess income, participants reported their current income by indicating which of 13 income ranges reflected their own family income. The income classifications, which were taken from the OARS Multidimensional Functional Assessment Questionnaire, ranged from 1 (*\$0 - \$500 per year*) to 13 (*\$40,000 or more per year*). We did not have an objective measure of memory performance.

Life satisfaction. The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) was administered to participants to assess overall life satisfaction. This measure contains five statements (e.g., I am satisfied with my life) to which subjects express agreement or disagreement using a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The measure has demonstrated high internal consistency among older adults as well as among young college samples. Cronbach's coefficient alpha in our sample was .87.

We attempted to determine which domains were most relevant to our sample of older adults by examining the relation between self-ratings in each domain and overall life satisfaction. Because individuals respond differently to comparison information depending on the esteem relevance of the domain (Tesser, 1991), the influence of comparison appraisals on self-evaluations might be expected to differ as a function of the esteem relevance of the domain.

Results

On average, participants described their health as good ($M = 2.21$, $SD = 0.59$) and reported their health to be the same as 5 years ago ($M = 1.96$, $SD = 0.42$) and slightly better than their similar-aged peers ($M = 2.40$, $SD = 0.56$). Although participants were community-residing adults, they were certainly not free of medical illnesses and chronic health conditions. Participants had on average 3.11 ($SD = 2.45$) health conditions, with most (91%) having at least one such condition. Participants described having incomes that met their needs fairly well to very well ($M = 1.50$, $SD = 0.58$) and described having incomes that were the same as their peers ($M = 2.22$, $SD = 0.51$) and the same as 5 years ago ($M = 2.06$, $SD = 0.55$). Subjects generally described having good memory abilities ($M = 1.80$, $SD = 0.67$) that were similar to those of their peers ($M = 2.18$, $SD = 0.44$) and just slightly worse than 5 years ago ($M = 1.69$, $SD = 0.49$).

Contrary to expectations based on Suls' model (Suls, 1986; Suls & Mullen, 1982), temporal comparison appraisals were not significantly correlated with self-rated health ($r = .17$) or income adequacy ($r = .17$); temporal appraisals were significantly related to self-assessed memory only ($r = .39$). Social comparison appraisals, on the other hand, were significantly correlated with global self-ratings in all three domains ($r_s = .53$, $.38$, and $.42$, with health,

income, and memory, respectively). In fact, social comparison appraisals significantly predicted self-rated health and income adequacy even after the variance accounted for by our more objective measures (i.e., number of medical conditions and actual annual income) was partialled out using hierarchical multiple regression analyses: social comparison of health, incremental $R^2 = .20$, $F(1, 88) = 25.56$, $p < .001$; social comparison of income, incremental $R^2 = .07$, $F(1, 88) = 8.50$, $p < .01$.

Hierarchical multiple regression was also used to examine age differences in the influence of social and temporal comparisons on self-evaluations in the three domains. After accounting for the direct effects of age and social comparison appraisal on self-evaluation in each domain, the significance of the interaction between age and social comparison appraisal was assessed. These analyses were repeated for temporal comparison appraisals as well. Across all three domains, the interaction term was nonsignificant, suggesting that the influence of social and temporal comparisons on global self-evaluations does not differ by age (incremental R^2 s ranged from .002 to .004 for age by social comparison interactions and from .000 to .006 for age by temporal comparison interactions).

Finally, we examined the extent to which self-reported health, income adequacy, and memory were correlated with overall life satisfaction in order to determine which of the three domains were most esteem-relevant. Self-rated health and income adequacy both demonstrated significant zero-order correlations with overall life satisfaction ($r = .30$ and $.36$, respectively); in contrast, self-reported memory was nonsignificantly related to life satisfaction ($r = .12$). When all three self-evaluations were entered simultaneously in a multiple regression analysis, self-rated health and income adequacy both accounted for significant independent variance in overall life satisfaction: self-rated health, semipartial $r^2 = .04$, $F(1, 89) = 4.81$, $p < .05$; self-rated income adequacy, semipartial $r^2 = .08$, $F(1, 89) = 8.61$, $p < .01$.

Discussion

Social comparison appraisals were related to self-evaluations across all three domains examined (health, income, and memory); in contrast, temporal comparison appraisals were related to self-rated memory only. Even after accounting for the influence of more objective measures, social comparison processes played a significant role in self-evaluations among middle-aged and older adults. Contrary to Suls' theory (Suls, 1986; Suls & Mullen, 1982), temporal comparisons did not have a stronger influence on self-evaluations than did social comparisons.

The lone correlation between temporal comparison appraisals and self-rated memory may have occurred because self-rated memory was less relevant to

older adults than health or income, as evidenced by the lack of correlation between self-rated memory and overall life satisfaction. The older adults in this study may have been more willing to acknowledge declines in memory and to incorporate these declines into their self-evaluations than they were to incorporate decreases in more threatening domains such as health or income.

The lack of a consistent relationship between temporal comparison appraisals and self-evaluations, and the strong relationship between social comparison appraisals and self-evaluations runs counter to Suls and colleagues' developmental theory (Suls & Mullen, 1982; Suls & Sanders, 1982). In addition, there was no evidence of age differences in the relation between social or temporal comparison appraisals and global self-evaluations. Thus, temporal comparison processes do not appear to increase in importance with age, nor do social comparison processes appear to decrease in importance with age among relatively healthy community-residing adults. Suls et al. (1991) may be correct in suggesting that older adults generate comparison others; regardless of whether they are real or imagined, the consequences of those social comparisons continue to relate significantly to individuals' global self-evaluations in the later years of life.

In this study, we presume that comparison appraisals derive from the consideration of comparison information. Although we presume that these comparison appraisals then influence global self-perceptions, it is quite possible that global self-evaluations determine the comparison appraisal process. It is also possible that comparison appraisals are simply another measure of self-evaluation, in which case all that we have observed is consistency in self-perceptions. Nonetheless, perceiving a discrepancy between oneself and one's peers does relate to self-ratings; perceiving a change in oneself over time does not. This seems contrary to Suls' theory (Suls, 1986; Suls & Mullen, 1982) and seems to call into question the relevance of temporal comparisons to self-evaluations in older adults.

Although comparison processes have received a great deal of examination among young adults, relatively little research has examined comparison processes among older adults. Our lack of support for Suls' theory (Suls, 1986; Suls & Mullen, 1982) suggests that a new model of how comparison processes may change with age is needed. Heckhausen and Krueger (1993) have recently contributed to such a model by proposing that the self-enhancement function of social comparisons becomes more salient in old age. Consistent with this observation, Heidrich and Ryff (1993a, 1993b) have suggested that social comparisons are an important mechanism by which psychological well-being is maintained in old age, despite age-related losses or impairments. Our study adds to this literature by including temporal comparisons and by demonstrating that social comparison processes, not temporal comparison processes, seem to be most relevant to older adults' self-evaluations.

References

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, **49**, 71-75.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, **7**, 117-140.
- Gatz, M., Bengtson, V. L., & Blum, M. J. (1990). Caregiving families. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (3rd ed., pp. 404-426). New York, NY: Van Nostrand Reinhold.
- Heckhausen, J., & Krueger, J. (1993). Developmental expectations for the self and most other people: Age grading in three functions of social comparison. *Developmental Psychology*, **29**, 539-548.
- Heidrich, S. M., & Ryff, C. D. (1993a). Physical and mental health in later life: The self-system as mediator. *Psychology and Aging*, **8**, 327-338.
- Heidrich, S. M., & Ryff, C. D. (1993b). The role of social comparisons processes in the psychological adaptation of elderly adults. *Journal of Gerontology: Psychological Sciences*, **48**, P127-P136.
- Helgeson, V. S., & Taylor, S. E. (1993). Social comparisons and adjustment among cardiac patients. *Journal of Applied Social Psychology*, **23**, 1171-1195.
- Multidimensional functional assessment: The OARS methodology, a manual* (2nd ed.). (1978). Durham, NC: Center for the Study of Aging and Human Development, Duke University.
- Ryff, C. D., & Essex, M. J. (1992). The interpretation of life experience and well-being: The sample case of relocation. *Psychology and Aging*, **7**, 507-517.
- Suls, J. (1986). Comparison processes in relative deprivation: A life-span analysis. In J. M. Olson, C. P. Herman, & M. P. Zanna (Eds.), *Relative deprivation and social comparison: The Ontario Symposium* (Vol. 4, pp. 95-116). Hillsdale, NJ: Lawrence Erlbaum.
- Suls, J., Marco, C. A., & Tobin, S. (1991). The role of temporal comparison, social comparison, and direct appraisal in the elderly's self-evaluations of health. *Journal of Applied Social Psychology*, **21**, 1125-1144.
- Suls, J., & Mullen, B. (1982). From the cradle to the grave: Comparison and self-evaluation across the life-span. In J. Sulz (Ed.), *Psychological perspectives on the self* (Vol. 1, pp. 97-125). Hillsdale, NJ: Lawrence Erlbaum.
- Suls, J., & Sanders, G. S. (1982). Self-evaluation through social comparison: A developmental analysis. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 3, pp. 171-198). Beverly Hills, CA: Sage.
- Tesser, A. (1991). Emotion in social comparison and reflection processes. In J. Sulz & T. A. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 115-145). Hillsdale, NJ: Lawrence Erlbaum.