

Control Strategies and Mental Health in Impaired Elders

Overview

The primary aim of this longitudinal study was to examine the strategies used by older persons with visual impairment to balance and rebalance control in daily life, and to understand the course and consequences of such strategies over time.

Control-related behavior is classified as primary or secondary as well as selective or compensatory (Heckhausen & Schulz, 1995). The aim of primary control strategies is to actively change the external environment, whereas the aim of secondary control strategies is adaptation of internal processes (e.g., goals or interpretations). Selective control strategies target the focused investment of internal resources in a chosen goal either in terms of behavioral resources such as effort or time (Selective Primary Control), or motivational resources such as goal commitment (Selective Secondary Control). Compensatory strategies serve to respond to a dearth of resources to attain a given goal; either in terms of bolstering behavioral resources by external means (Compensatory Primary Control), or by disengaging from the unattainable goal through self-protective strategies (Compensatory Secondary Control).

Because late-life vision loss constitutes a major threat to one's sense of competence and control, this study provided a unique opportunity to apply the life-span theory of control (Heckhausen & Schulz, 1995) to a prototypical age-related loss characterized by gradual onset and progressive deterioration. In addition, differences in assimilative and accommodative coping dispositions (Brandtstädter & Renner, 1990) that may underlie patterns of control-related coping behavior were examined.

The specific aims of the study were:

1. To identify the control strategies used in adapting to chronic age-related vision impairment and to assess the extent of change or stability in these strategies over time.
2. To identify the extent of change or stability in dispositional assimilative and accommodative coping styles over time.
3. To examine the relationship between control strategies and dispositional coping styles among older adults with vision loss and the stability or change in this relationship over time.
4. To identify the control strategies and dispositional coping styles, as well as patterns of change in each, that are predictive of more positive outcomes (i.e., functional competence and psychological well-being) at different points over time.

Method

The study sample consists of 364 older persons with a recent onset of age-related vision loss due to macular degeneration, a common cause of vision loss in late life. Data were collected through in-person interviews at baseline, 1- and 2 year follow ups, with one interim telephone interviews each year at 6 and 18

months to capture both short and long-term stability and change in the use of control strategies over time, and the latter's relationship to functional and psychological well-being. Interviews included both structured and open-ended assessments of participants' efforts to cope with the daily life challenges resulting from their vision-related disability. Thus methodologically, we combined a theory-guided effort (top-down approach) with thorough grounding in narrative data (bottom-up approach). This allows for an anchoring of information on adaptation processes in concrete daily life situations that are uniquely relevant to each individual, paired with a theory-driven examination and conceptualization of this information. Analyses addressed cross-sectional and longitudinal relationships using regression, individual growth modeling, and structural equation modeling (SEM) techniques.

Status

The final report to NIMH has been completed. Several articles have been published (see below). Additional manuscripts are being prepared for submission to peer-reviewed journals.

Findings – Highlights

- Our narrative-based findings demonstrated how inventive and resourceful older adults can be when it comes to the strategies that they use to try to deal with vision-related challenges.
- Participants' narratives reflected both the four general control categories and the subcategories formulated by the authors of the theory (e.g., for Selective Primary Control, invest time/effort, learn new skills, and fight difficulties). Moreover, we found that exhaustive representation of the data required us to define some new subcategories (e.g., different types of help seeking).
- Our study is the first to show with such level of detail that control-related behavior as conceptualized by the life-span theory of control can be found in open-ended accounts of people with visual disability.
- Although compensatory primary control strategies seem to be the heart of coping with disability, all other strategy types are also needed, regardless of disability level. Our findings clearly showed that coping with disability at any point requires both strong goal-engagement efforts and psychological self-protection.
- An important insight gained from this research is that the coping challenge of visual disability is very different from the type of challenges that previous research using the Life-span theory of control and related theories as framework has focused on (e.g., developmental deadlines such as childbearing).
- Although age-related vision loss involves irreversible loss, there is really no point at which a general shift from goal-engagement to disengagement makes sense, given that disengaging from functioning would not be an adaptive solution, and it is not a singular goal.

- Overall control strategies showed less change over time than was expected; the same was true for dispositional coping. However, increases or decreases in specific strategy use were found for particular strategies among subgroups of participants (e.g., more help seeking with higher levels of impairment), indicating that the importance of certain strategies may change depending on the course of progressive vision loss.
- For the most part, dispositional coping styles (i.e., accommodative and assimilative coping) were positively related to control strategies in that those who reported higher levels of assimilative and accommodative coping were also likely to report higher levels in control strategy use. Only the compensatory control strategy of using other people's help was unrelated to dispositional coping styles. This perhaps reflects the almost universal need for at least some assistance from others among older adults experiencing disability. Furthermore, dispositional coping was not related to patterns of change over time in control strategy use.
- In concurrent analyses, we found protective effects of control strategies as well as dispositional coping for our well-being outcomes; however, we found little evidence for such predictive effects for change in well-being outcomes over time. Thus, our evidence suggests that control strategy use and in particular accommodative coping dispositions had a positive influence on participants' well-being in terms of status rather than change over time.
- Finally, we found more evidence of change over time in the type and nature of challenges reported by participants than we found for strategy use. This shows that we did capture a span of time in the participants' lives during which the challenges they faced due to their vision impairment changed. But evidently, participants responded to these changing challenges with a somewhat stable or consistent repertoire of strategies involving both goal-engagement and disengagement/self-protective efforts.

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Publications

Boerner, K., Boerner, K., Brennan, M., Horowitz, A., & Reinhardt, J. P. (2010).
Tackling vision-related disability in old age: An application of the life-span

- theory of control to narrative data. *Journal of Gerontology: Psychological Sciences*, 65B(1), 22-31.
- Boerner, K., Horowitz, A., Reinhardt, J. P., & Brennan, M. (2004). Coping behavior and mental health in elders with vision loss: Preliminary findings from a longitudinal study. *Maximizing Human Potential*, 12(2), pp. 3, 7.
- Boerner, K. & Wang, S. (2010). How it matters when it happens: Life changes related to functional loss in younger and older adults. *International Journal of Aging and Human Development*, 70(2), 227-243.
- Wang, S. & Boerner, K. (2008). Staying connected: Re-establishing social relationships following vision loss. *Clinical Rehabilitation*, 22, 816-824.

Presentations

- Boerner, K., Brennan, M., Horowitz, A., & Reinhardt, J. P. (November, 2009). Self-reported strategy use by disability level: An application of the life-span theory of control using narrative data. In H.W. Wahl & A. Horowitz (Chairs), *Adaptation to vision loss: A synthesis of recent empirical work*. Symposium presented at the Annual Convention of The Gerontological Society of America in Atlanta, GA.
- Reinhardt, J. P., Horowitz, A., Brennan, M., & Boerner, K. (March, 2009). *Effects of initiating vs. accepting help on well-being: Research findings and practice implications*. Paper presented at the Annual NCOA-ASA Conference, Chicago, IL.
- Reinhardt, J. P., Horowitz, A., Boerner, K., & Brennan, M. (March, 2008). Satisfaction with daily living task performance in disabled elders: Research & practice perspectives. Paper presented at the Annual NCOA-ASA Conference, Washington, DC.
- Reinhardt, J. P., Boerner, K., Horowitz, A., & Brennan, M. (November, 2008). Control Strategy Use and Satisfaction with the Completion of Daily Living Tasks. In H. W. Wahl (Chair), Symposium presented at the annual scientific meeting of The Gerontological Society of America, National Harbor, MD.
- Brennan, M., Boerner, K., Horowitz, A, & Reinhardt, J. P. (November 2007). *Further development of the vision-specific OPS scale: Differentiating three dimensions of compensatory primary control*. Poster presented at the annual scientific meeting of The Gerontological Society of America, San Francisco, A.
- Horowitz, A., Boerner, K., Brennan, M., & Reinhardt, J. P. (November 2007). Tackling late life challenges: Control strategy use as a function of disability. In H. W. Wahl (Chair), *Crossroads of psychological, social and physical function: Implications for disability research*. Symposium

- presented at the annual scientific meeting of The Gerontological Society of America, San Francisco, CA.
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- Boerner, K., Brennan, M., Horowitz, A., & Reinhardt, J. P. (November, 2006). Coping with functional loss in later life: Compensatory strategy use and well-being. In H. W. Wahl & K. Boerner (Chairs), *Adaptation under constraints: Chronic conditions and very old age*. Symposium presented at the annual scientific meeting of The Gerontological Society of America, Dallas TX.
- Brennan, M., & Boerner, K. (November, 2005) *Psychometric Analysis of the TEN-FLEX Coping Scales: Evidence for 2nd-order Factors and Further Psychometric Development*. Poster presented at the annual scientific meeting of The Gerontological Society of America, New Orleans, LA.
- Brennan, M., Boerner, K., Horowitz, A., & Reinhardt, J. P. (August, 2005). *Problem solving and adaptation to age-related vision loss*. Poster presented at the annual convention of The American Psychological Association. Washington, DC.
- Horowitz, A., Boerner, K., Brennan, M., & Reinhardt, J. P. (November, 2005). Coping with Age-Related Vision Loss: The Role of Domain-Specific Control Strategies as well as Assimilative and Accommodative Coping for Well-Being. In K. Boerner (Chair), *Coping with disability in later adulthood*. Symposium presented at the annual scientific meeting of The Gerontological Society of America, New Orleans, LA.
- Brennan, M., Boerner, K., Reinhardt, J. P., & Horowitz, A. (November, 2004). *Applying the Life-span Theory of Control in Adjustment to Chronic Illness: The Development of the Vision-Specific OPS Scale*. Poster presented at the annual meeting of The Gerontological Society of America, Washington, DC.
- Horowitz, A., Boerner, K., Brennan, M., & Reinhardt, J. P. (November, 2004). *Successful aging within the context of disability: Use of control strategies by visually impaired elders*. In D. Jopp (Chair). *Successful development and aging: On the impact of resources, strategies, and beliefs*. Paper presented at the annual meeting of The Gerontological Society of America, Washington, DC.
- Horowitz, A., Boerner, K., Reinhardt, J. P., & Brennan, M. (November, 2002). *Applying the Life-Span Theory of Control to research on adaptation to*

age-related vision loss. Paper presented at the annual meeting of The Gerontological Society of America, Boston, MA.

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