

Page Proof Instructions and Queries

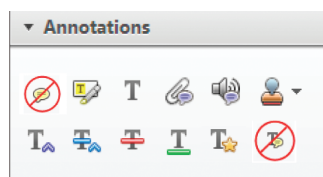
Journal Title: JBD

Article Number: 603826

Greetings, and thank you for publishing with SAGE. We have prepared this page proof for your review. Please respond to each of the below queries by digitally marking this PDF using Adobe Reader.

Click “Comment” in the upper right corner of Adobe Reader to access the mark-up tools as follows:

For textual edits, please use the “Annotations” tools. Please refrain from using the two tools crossed out below, as data loss can occur when using these tools.



For formatting requests, questions, or other complicated changes, please insert a comment using “Drawing Markups.”



Detailed annotation guidelines can be viewed at: <http://www.sagepub.com/repository/binaries/pdfs/AnnotationGuidelines.pdf>
 Adobe Reader can be downloaded (free) at: <http://www.adobe.com/products/reader.html>.

No.	Query
	Please confirm that all author information, including names, affiliations, sequence, and contact details, is correct.
	Please review the entire document for typographical errors, mathematical errors, and any other necessary corrections; check headings, tables, and figures.
	Please confirm that the Funding statement is accurate.
	Please note that this proof represents your final opportunity to review your article prior to publication, so please do send all of your changes now.
AQ: 1	Please check the punctuation in the sentence ‘The study’s findings show . . .’.
AQ: 2	If possible, please update the ‘Advance online publication’ articles.
AQ: 3	Has this manuscript moved into production, or been published, yet? If so, please update.

Introduction to the special section on motivational self-regulation across the lifespan

Carsten Wrosch¹ and Jutta Heckhausen²

Abstract

A special section of the *International Journal of Behavioral Development* (IJBD) devoted to the topic 'Motivational Self-Regulation Across the Lifespan.'

Keywords

development, life goals, motivation

Theories of life-span development emphasize the importance of motivational or self-regulatory processes for successful development (e.g., Baltes & Baltes, 1990; Brandstätter & Renner, 1990; Heckhausen, Wrosch, & Schulz, 2010). These approaches set out to explain developmental processes associated with adaptive goal choices, the attainment of personal goals, or effective individual responses to failure and loss. A plethora of research has demonstrated their usefulness for discovering pathways to successful development. Specific motivational processes, such as motivational vs. volitional mindsets, life management strategies and tendencies, goal selection heuristics, or control strategies have been identified that exert significant consequences on individuals' subjective well-being and physical health across the adult lifespan by contributing to adaptive (and maladaptive) goal choices, goal pursuits, and adjustment to failure and loss (e.g., Freund & Baltes, 1998; Heckhausen, Wrosch, & Fleeson, 2001; Wrosch, Scheier, & Miller, 2013). In addition, it has become apparent that the adaptive value of motivational processes may depend on an individual's age and the associated developmental context (e.g., transition to adulthood, menopause, or health declines). That is, motivational processes are most effective if individuals use them to match the affordances and master the challenges of age-related changes in opportunities and constraints for successful development (for a review, see Heckhausen et al., 2010).

With the important contributions of motivational theory and research for understanding patterns of successful development, the refinement of knowledge is a continuous and ongoing process, and new research often contributes to improvement of extant theories. Therefore, this special section on *Motivational Self-Regulation Across the Lifespan* is a timely endeavor. It brings together an international group of renowned scientists from Europe and North America interested in exploring the intersection of motivation and development in longitudinal research. The research topics addressed in this special section cover motivational factors involved in early career choices and attainment (Eccles & Wang, 2015; Shane & Heckhausen, 2015), goal-related processes in young people managing the transition to adulthood (Brandstätter & Herrmann, 2015; Shane & Heckhausen, 2015), and age-related changes in the consequences of self-regulation processes for cognitive,

emotional, and physical health (Jobin & Wrosch, 2015; Robinson, Rickenbach, & Lachman, 2015). Finally, a theoretical article closes this special section by suggesting promising avenues for future research in the area of motivation and life-span development (Heckhausen & Wrosch, 2015).

The first article (Eccles & Wang, 2015) examined in a large sample of college-bound students from the United States (12th grade) how students' personal and motivational beliefs and values predict career decisions for STEM disciplines in their late 20s (i.e., science, technology, engineering, and mathematics). The study's findings show that a lower likelihood to choose STEM disciplines among females, as compared to males, was best explained by gender differences, math ability self-concepts, and in occupational values, such as a preference for people-oriented work. In addition, the study suggests that if women held beliefs that were conducive to selecting STEM disciplines, they were more likely to engage in careers in the areas of health, biological, or medical sciences, as compared to mathematics, physical, engineering, or computer sciences. These findings suggest that more general (and not just goal-specific) values and broader life goals may play a significant role in guiding individuals' specific goal choices, especially if they are important for an individual's association with an identity-relevant group.

The second article (Shane & Heckhausen, 2015) investigated the roles played by control beliefs and control strategies in the transition from university to work among 140 young adults who were close to graduation. The main findings identify the presence of a motivational process, in which control beliefs predict the types of career-related strategies that individuals engage in, which mediated

AQ1

¹ Concordia University, Quebec, Canada

² University of California at Irvine, USA

Corresponding author:

Carsten Wrosch, Department of Psychology and Centre for Research in Human Development, Concordia University, 7141 Sherbrooke Street West, Montreal, QC, H4B 1R6, Canada.

Email: carsten.wrosch@concordia.ca

career-related outcomes. More specifically, the extent to which young adults believed that career attainment is determined by merit-related processes (e.g., effort or ability) predicted higher levels of engagement in career-related goals as well as faster progress with attaining career-related goals. By contrast, beliefs that career attainment is based on factors outside the person (e.g., luck or privilege) were associated with disengagement from career-related goals and resulted in a devaluation of the importance of career goals. These findings suggest that functional associations between specific control beliefs and control strivings can lead to distinct developmental pathways across a challenging life-course transition.

The third article (Brandstätter & Herrmann, 2015) examined in a study of university students whether the experience of an action crisis, preceding the abandonment of a personal goal, would result in a more positive evaluation of a subsequently formed new goal. Results show that the intensity of an action crisis predicted higher levels of decisional certainty regarding the newly selected goal and higher desirability of the new goal. These findings suggest that the experience of an action crisis may not only be associated with negative psychological states, but also can play an adaptive role in the commitment to new goals.

The fourth article (Robinson et al., 2015) examined the use of daily self-regulatory strategies associated with selection, optimization, and compensation (SOC; Freund & Baltes, 1998) in a study of 145 young, middle-aged, and older adults. The function of these strategies was evaluated in the context of cognitive resources, daily stress, and everyday memory problems. Results showed a curvilinear association between age and average SOC use, revealing highest levels of SOC among middle-aged adults (and comparatively lower levels among young and older adults). However, if levels of cognitive resources were considered, older adults with sufficient cognitive resources even outperformed their younger counterparts in the use of SOC. In addition, participants generally used SOC strategies more often on days they experienced relatively high levels of stress, and the use of these strategies buffered the association between daily stress and memory problems. These findings shed light on the importance of using self-regulatory strategies in the context of stress, and may imply that some older adults could be at risk of experiencing adverse developmental outcomes if they do not have sufficient cognitive resources to engage in self-regulatory strategies.

The fifth article (Jobin & Wrosch, 2015) examined the predictive value of individual differences in general goal adjustment capacities across older adulthood (i.e., goal disengagement and goal reengagement capacities, Wrosch et al., 2013). This 6-year longitudinal study of a heterogeneous sample of 131 older adults tested the age-related effects of goal adjustment capacities on depressive symptoms and the severity of cold symptoms. The results identify participants' goal disengagement capacities as an adaptive individual difference variable that becomes increasingly important for protecting emotional well-being and physical health as older adults advance in age. This study documents an important health-relevant process and contributes to our understanding of the motivational processes that may prevent declines across different areas of function towards the end of life.

The final article (Heckhausen & Wrosch, 2015) outlines our ideas for fruitful areas of future research. Based on the motivational theory of life-span development (Heckhausen et al., 2010), several circumstances are identified that make successful developmental regulation particularly challenging and test individuals' control capacity for actively influencing their development. These

circumstances include major changes in opportunities for goal pursuits (e.g., life course transitions and developmental deadlines), uncertain or obfuscated opportunities for goal pursuits (e.g., during times of economic change or globalization), and major unexpected losses (e.g., functional disability). In addition, the article discusses a number of broader individual difference variables (e.g., dispositional optimism, action vs. state orientation, goal adjustment capacities) that are likely to explain inter-individual variability in the adaptive use of control strategies. Examining these ideas in future research could reveal the vast potential (and limits) of individuals' self-regulatory systems. In addition, it may result in an integration of approaches that focus on relatively stable personality dimensions and approaches that address individuals' goal-specific responses to opportunity and failure. Such research could ultimately contribute to a more comprehensive understanding of the processes involved in life-long patterns of successful development.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The completion of this article was supported by grants from Canadian Institutes of Health Research and Social Sciences and Humanities Research Council of Canada (#64198 and #125992) awarded to Carsten Wrosch.

References

- Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1–34). New York, NY: Cambridge University Press.
- Brandstätter, V., & Herrmann, M. (2015). Action crises in emerging adulthood: Exploring the adaptive potential. *International Journal of Behavioral Development*. Advance online publication. doi:10.1177/0165025415597550
- Brandstätter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging*, 5, 58–67.
- Eccles, J. S., & Wang, M. T. (2015). What motivates females and males to pursue careers in mathematics and science? *International Journal of Behavioral Development*. Manuscript accepted for publication.
- Freund, A. M., & Baltes, P. B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging*, 13, 531–543.
- Heckhausen, J., & Wrosch, C. (2015). Challenges to developmental regulation across the life course: What are they and which individual differences matter? *International Journal of Behavioral Development*. Advance online publication. doi:10.1177/0165025415588796
- Heckhausen, J., Wrosch, C., & Fleeson, W. (2001). Developmental regulation before and after a developmental deadline: The sample case of 'biological clock' for childbearing. *Psychology and Aging*, 16, 400–413.
- Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review*, 117, 32–60.
- Jobin, J., & Wrosch, C. (2015). Goal disengagement capacities and severity of disease across older adulthood: The sample case of the

AQ2

AQ3

- common cold. *International Journal of Behavioral Development*. Advance online publication. doi:10.1177/0165025415597549
- Robinson, S. A., Rickenbach, E. H., & Lachman, M. E. (2015). Self-regulatory strategies in daily life: Selection, optimization, and compensation and everyday memory problems. *International Journal of Behavioral Development*. Advance online publication. doi:10.1177/0165025415592187
- Shane, J., & Heckhausen, J. (2015). For better or worse: Young adults' opportunity beliefs and motivational self-regulation during career entry. *International Journal of Behavioral Development*. Advance online publication. doi:10.1177/0165025415589389
- Wrosch, C., Scheier, M. F., & Miller, G. E. (2013). Goal adjustment capacities, subjective well-being, and physical health. *Social and Personality Psychology Compass*, 7, 847–860.