



# Commentary: Risky decision-making is associated with residential choice in healthy older adults

Dafina Petrova<sup>1\*</sup> and Rocio Garcia-Retamero<sup>1,2</sup>

<sup>1</sup> Department of Experimental Psychology, Mind, Brain, and Behavior Research Center, University of Granada, Granada, Spain, <sup>2</sup> Max Planck Institute for Human Development, Berlin, Germany

Keywords: risk taking, ageing, older adults, balloon analog risk task (BART), motivation

### A commentary on

## Risky decision-making is associated with residential choice in healthy older adults

*by Seaman, K. L., Stillman, C. M., Howard, D. V., and Howard J. H. Jr. (2015). Front. Psychol. 6:1192. doi: 10.3389/fpsyg.2015.01192* 

Seaman et al. (2015) compared 23 older adults living independently to 23 older adults living in a retirement community on their risky decision making. Results from the Balloon Analog Risk Task (BART; Lejuez et al., 2002) showed that older adults living in the retirement community were more risk-averse, at least partially due to higher initial perceptions of risk (Seaman et al., 2015). Drawing on findings from the literature on older adults' experiences with age-related relocation and theories on aging and decision making, we suggest that a focus on cognitive factors alone may be insufficient to understand the aging decision maker. Rather, risky decision making in aging could be best understood from an integrated perspective, considering cognitive, social, and motivational factors alike.

Seaman et al. (2015) mostly conceptualize the resulting living arrangements of participants as a choice, suggesting that one possible explanation of the results is that more risk-averse older adults choose the security of a retirement community. However, research shows that older adults can be pressured into assisted living by their relatives or by life circumstances (Sergeant and Ekerdt, 2008). For instance, the majority of older adults strongly prefer to continue living in their own homes as long as possible (e.g., more than 80% of United States individuals older than 65, Wylde, 2008). If they need help caring for themselves, most respondents prefer not to move from home, and only a minority (9%) prefers to move to a facility where care is provided (Bayer and Harper, 2000). While some older adults may have a desire to move to a better home environment (Hillcoat-Nalletamby and Ogg, 2014), research shows that relocation to a retirement community or institution often occurs as a consequence of impactful life events like the death of a spouse or critical health-related events like hospitalizations or acute illness (Hays, 2002; Lee et al., 2002; Pope and Kang, 2010).

Moving to a residential care facility is mostly perceived as a stressful, negative experience by older adults, associated to feelings of loss, and suffering (Lee et al., 2002). Stress, in its acute or chronic form, can have profound and complex effects on decision making under risk, especially among older adults (Mather et al., 2009; Starcke and Brand, 2012; Weller et al., 2014). Whether, stress is disadvantageous can depend on the context and its effects can be different for men and women (Weller et al., 2014). For instance, acute stress increased risk aversion and decreased performance among older but not younger adults in a task very similar to the BART (Mather et al., 2009). Hence, as discussed by the authors, it is also possible that the challenges of adjusting to life in a retirement community may have made people more risk averse.

## **OPEN ACCESS**

## Edited by:

Emma V. Ward, Middlesex University, UK

## Reviewed by:

Joshua Weller, Oregon State University, USA Thomas Edward Gladwin, Ministry of Defense, Netherlands

> \*Correspondence: Dafina Petrova dafinapetrova@ugr.es

#### Specialty section:

This article was submitted to Cognition, a section of the journal Frontiers in Psychology

**Received:** 01 July 2016 **Accepted:** 16 August 2016 **Published:** 31 August 2016

#### Citation:

Petrova D and Garcia-Retamero R (2016) Commentary: Risky decision-making is associated with residential choice in healthy older adults. Front. Psychol. 7:1304. doi: 10.3389/fpsyg.2016.01304

1

What are then the mechanisms that can explain this increased risk aversion? Theory and research suggest that risk aversion may reflect older people's motivation-based strategy to cope with the demanding circumstances, be it of life decisions or laboratory tasks. To explain this argument further, we turn to several studies that used the BART to investigate age differences in risk taking. Koscielniak et al. (2016) found that, compared to younger adults, older adults were more risk averse and performed worse on the BART. Rolison et al. (2012) found that compared to younger adults, older adults had higher risk perceptions, and were less certain about their risk taking. These latter results were replicated by Seaman et al. (2015) in their sample of older adults covering a much narrower age range. Taken together, increased risk aversion with age is observed in the BART. Interestingly, controlling for age and cognitive function, older adults living in a retirement community are even more risk-averse than older adults living independently. In other words, despite equal chronological age, retirement community residents display a pattern consistent with that of older age that may have to do with the relocation-related experiences discussed previously.

Research shows that older adults manage with their deteriorating cognitive processing through selective allocation of cognitive resources (Hess, 2014). For instance, if costs are perceived as high, tasks are not personally relevant, and confidence is low, older adults will limit their cognitive effort and may be less motivated to engage with decisions (Ennis et al., 2013; Hess, 2014; Bruine de Bruin et al., 2015; Strough et al., 2015). In particular, prominent theories of aging refer to allocation of resources to more positive experiences (e.g., Labouvie-Vief, 2003; Carstensen, 2006). According to socio emotional selectivity theory, older adults increasingly recognize that they have limited time left to live, so they become more motivated to increase their positive and meaningful emotional experiences and less motivated to expand their horizons (Carstensen, 2006). For example, older adults attend to and remember positive information more often (Carstensen, 2006). In their goals, they

# REFERENCES

- Bayer, A., and Harper, L. (2000). Fixing to Stay: A National Survey of Housing and Home Modification Issues, Washington, DC: AARP.
- Bruine de Bruin, W., McNair, S. J., Taylor, A. L., Summers, B., and Strough, J. (2015). "Thinking about numbers is not my idea of fun": need for cognition mediates age differences in numeracy performance. *Med. Decis. Making* 35, 22–26. doi: 10.1177/0272989X14542485
- Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science* 312, 1913–1915. doi: 10.1126/science.1127488
- Ebner, N. C., Freund, A. M., and Baltes, P. B. (2006). Developmental changes in personal goal orientation from young to late adulthood: from striving for gains to maintenance and prevention of losses. *Psychol. Aging* 21, 664–678. doi: 10.1037/0882-7974.21.4.664
- Ennis, G. E., Hess, T. M., and Smith, B. T. (2013). The impact of age and motivation on cognitive effort: implications for cognitive engagement in older adulthood. *Psychol. Aging* 28, 495–504. doi: 10.1037/a 0031255
- Hays, J. C. (2002). Living arrangements and health status in later life: a review of recent literature. *Public Health Nurs.* 19, 136–151. doi: 10.1046/j.1525-1446.2002.00209.x

may be less oriented toward gain and growth (e.g., earning points in the BART; exploring the limits of the task by engaging in risk taking), and more oriented toward maintenance and loss prevention (e.g., cashing out and avoiding explosions, Ebner et al., 2006). Consistent with this proposition, the effect of age on risk taking in the BART is not only explained by cognitive factors (e.g., lower processing speed) but also by motivational factors (e.g., more desire for predictability and preference for order and structure, Koscielniak et al., 2016).

To translate this back to the context of Seaman et al.'s study (2015), old adults living in a retirement community display a pattern of behavior consistent with increased chronological age, potentially stronger perceptions of depleted resources, and motivation to avoid negative experiences. Longitudinal research can disentangle how these potential mediators relate to residential circumstances and increased risk aversion. We would like to encourage researchers to build on this work by considering the complexity of multi-domain decisions like residential choice. Such decisions may be better predicted by adopting an integrated multilevel approach, such that relevant cultural, emotional or social circumstances are taken into account in combination with traditional cognitive factors studied in aging.

# **AUTHOR CONTRIBUTIONS**

All authors listed, have made substantial, direct and intellectual contribution to the work, and approved it for publication.

# ACKNOWLEDGMENTS

The current research was funded by the Ministerio de Economía y Competitividad (Spain) (PSI2011-22954 and PSI2014-51842-R). The authors declare independence from these funding agencies and do not have conflicts of interest including financial interests, activities, relationships, and affiliations.

- Hess, T. M. (2014). Selective engagement of cognitive resources: motivational influences on older adults' cognitive functioning. *Perspect. Psychol. Sci.* 9, 388–407. doi: 10.1177/1745691614527465
- Hillcoat-Nalletamby, S., and Ogg, J. (2014). Moving beyond 'ageing in place': older people's dislikes about their home and neighbourhood environments as a motive for wishing to move. *Ageing Soc.* 34, 1771–1796. doi: 10.1017/S0144686X13000482
- Koscielniak, M., Rydzewska, K., and Sedek, G. (2016). Effects of age and initial risk perception on balloon analog risk task: the mediating role of processing speed and need for cognitive closure. *Front. Psychol.* 7:659. doi: 10.3389/fpsyg.2016.00659
- Labouvie-Vief, G. (2003). Dynamic integration: affect, cognition, and the self in adulthood. *Curr. Dir. Psychol. Sci.* 12, 201–206. doi: 10.1046/j.0963-7214.2003.01262.x
- Lee, D. T., Woo, J., and Mackenzie, A. E. (2002). A review of older people's experiences with residential care placement. J. Adv. Nurs. 37, 19–27. doi: 10.1046/j.1365-2648.2002.02060.x
- Lejuez, C. W., Read, J. P., Kahler, C. W., Richards, J. B., Ramsey, S. E., Stuart, G. L., et al. (2002). Evaluation of a behavioral measure of risk taking: the balloon analogue risk task (BART). *J. Exp. Psychol. Appl.* 8:75. doi: 10.1037/1076-898x.8.2.75

- Mather, M., Gorlick, M. A., and Lighthall, N. R. (2009). To brake or accelerate when the light turns yellow? Stress reduces older adults' risk taking in a driving game. *Psychol. Sci.* 20, 174–176. doi: 10.1111/j.1467-9280.2009. 02275.x
- Pope, N. D., and Kang, B. (2010). Residential relocation in later life: a comparison of proactive and reactive moves. J. Houseing Elder. 24, 193–207. doi: 10.1080/02763891003757122
- Rolison, J. J., Hanoch, Y., and Wood, S. (2012). Risky decision making in younger and older adults: the role of learning. *Psychol. Aging* 27, 129–140. doi: 10.1037/a0024689
- Seaman, K. L., Stillman, C. M., Howard, D. V., and Howard J. H. Jr. (2015). Risky decision-making is associated with residential choice in healthy older adults. *Front. Psychol.* 6:1192. doi: 10.3389/fpsyg.2015. 01192
- Sergeant, J. F., and Ekerdt, D. J. (2008). Motives for residential mobility in later life: post-move perspectives of elders and family members. *Int. J. Aging Hum. Dev.* 66, 131–154. doi: 10.2190/AG.66.2.c
- Starcke, K., and Brand, M. (2012). Decision making under stress: a selective review. Neurosci. Biobehav. Rev. 36, 1228–1248. doi: 10.1016/j.neubiorev.2012. 02.003

- Strough, J., de Bruin, W. B., and Peters, E. (2015). New perspectives for motivating better decisions in older adults. *Front. Psychol.* 6:783. doi: 10.3389/fpsyg.2015.00783
- Weller, J. A., Buchanan, T. W., Shackleford, C., Morganstern, A., Hartman, J. J., Yuska, J., et al. (2014). Diurnal cortisol rhythm is associated with increased risky decision-making in older adults. *Psychol. Aging* 29, 271. doi: 10.1037/a0036623
- Wylde, M. A. (2008). "The future of assisted living. Residents' perspectives, 2006–2026" in *The assisted living residence. A vision for the future*, eds S. M. Golant and J. Hyde (Baltimore: The Johns Hopkins University Press), 169–197.

**Conflict of Interest Statement:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2016 Petrova and Garcia-Retamero. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.