Article

## Don't Risk It. Older **Adults Perceive Fewer Future Opportunities** and Avoid Social Risk Taking

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Rebecca K. Delaney<sup>1,2</sup>, JoNell Strough<sup>2</sup>, Natalie J. Shook<sup>2</sup>, Cameron G. Ford<sup>2,3</sup>, and Philip Lemaster<sup>4</sup>

#### **Abstract**

Drawing from life-span psychology, we conducted two studies to test perceptions of time left in the future as an underlying mechanism for age differences in self-reported social risk taking. Study I included 120 younger (25-35 years) and 119 older (60-91 years) community-dwelling adults. Study 2 included 439 participants (18-85 years) mostly recruited from Amazon Mechanical Turk. In both studies, older age was associated with rating a lower likelihood of social risk taking (e.g., speaking about an unpopular issue) and perceiving the future as holding fewer future opportunities and being more limited. Perceptions of fewer future opportunities with aging statistically mediated age-related declines in social risk taking. Findings highlight motivational factors as key for understanding age differences in social risk taking. Implications of age differences in social risk taking on factors related to well-being, such as social support and strain, are discussed.

## **Keywords**

aging, social support, friendship, social risk taking, future time perspective

## **Corresponding Author:**

Rebecca K. Delaney, Department of Population Health Sciences, University of Utah, Salt Lake City, UT 84108, USA.

Email: rebecca.delaney@hsc.utah.edu

<sup>&</sup>lt;sup>1</sup>Department of Population Health Sciences, University of Utah, Salt Lake City, USA

<sup>&</sup>lt;sup>2</sup>Department of Psychology, West Virginia University, Morgantown, USA

<sup>&</sup>lt;sup>3</sup>Department of General Surgery, Wake Forest Baptist Medical Center, Winston-Salem, NC, USA

<sup>&</sup>lt;sup>4</sup>Department of Psychology, Concordia College, New York, USA

Have you ever disagreed with an authority figure on a major issue? Or, admitted that your tastes were different from those of a friend? These types of behaviors are referred to as social risk taking due to the uncertainty of positive or negative consequences surrounding how these actions are received by others (Blais & Weber, 2006; Figner & Weber, 2011; Weber et al., 2002). Social risk taking may be advantageous in contexts where voicing opinions are key for advancement (e.g., setting up a company, being a consultant) or when associated with personality types that positively impact health (Hampson & Friedman, 2008; Nicholson et al., 2005). However, social risk taking may negatively affect health if it compromises the quantity and quality of social support networks, which are known to enhance life satisfaction and support (e.g., Barger et al., 2009; Berkman et al., 2000; Bolger et al., 2000; Delaney et al., 2018; Shor et al., 2013; Uchino, 2009). This is particularly relevant to older adults because maintaining social networks are important for successful aging (Gow et al., 2007; Rowe & Kahn, 1997).

Few studies of age differences in self-reported social risk taking exist, with some yielding inconsistent results (Bonem et al., 2015; Josef et al., 2016; Nicholson et al., 2005; Rolison et al., 2013). Thus, the first aim of the current research was to determine the degree to which age is associated with social risk taking. The second aim was to consider an age-related motivational mechanism that could contribute to age differences in social risk taking, namely, future time perspective. Perceptions of future time left in life are reduced with age, which is posited to shift motivation for social interaction from acquiring knowledge to prioritizing emotionally-meaningful relationships (Carstensen, 2006; Fredrickson & Carstensen, 1990). Accordingly, future time perspective is thought to be a main driver of age-related changes in social relationships (Carstensen, 1992; Carstensen et al., 1999). Researchers have speculated that future time perspective may be important for understanding age differences in social risk taking (e.g., Bonem et al., 2015; Josef et al., 2016), but this idea has not yet been tested.

## Age Differences in Social Risk Taking

Most developmental research has focused on examining risk taking among adolescents (Galvan et al., 2007; Romer, 2010; Steinberg, 2008) or the financial domain of risk taking (Hershey et al., 2015; Kuhnen & Knutson, 2005; Markiewicz & Weber, 2013; Wong & Carducci, 1991), thus limiting our understanding of risk taking across the adult life span or among other risk domains. Aging stereotypes generally depict older adults as more risk averse and cautious than younger adults (Heckhausen et al., 1989), but studies that have investigated age differences in self-reported social risk taking have had mixed results (Bonem et al., 2015; Josef et al., 2016; Nicholson et al., 2005; Rolison et al., 2013). Rolison et al. (2013) found that among a cross-sectional sample of adults ranging from 18 to 93 years old, the association between age and social risk taking as measured by the Domain-Specific Risk-Taking (DOSPERT; Blais & Weber, 2006) scale was an inverted U-shape, increasing from early adulthood

through midlife and declining at about 60 years of age. Using a single-item indicator and a cross-sectional German sample of 18-85 year olds, Josef et al. (2016) found that mean-level social risk taking declined linearly with increasing age. Using a risk taking index scale developed for their study, Nicholson et al. (2005) found that among participants between 20 and 60 years old, older age was significantly associated with less reported engagement in social risk taking (e.g., standing for election, publicly challenging a rule or decision). However, when utilizing an adapted version of the DOSPERT social risk subscale (i.e., omitted item about moving away from family and used five items with the strongest age effect in Study 2; Weber et al., 2002), Bonem et al. (2015) found no age differences among younger (18–25 years), young to middleaged (26–59 years), and older (60–83 years) adults in one study. However, in a second study, Bonem et al. (2015) found that older adults reported greater social risk taking than younger adults, but no differences were found between older adults and the young to middle-aged group. Thus, although most papers found declines in self-reported social risk taking with older age thus aligning with the cautious adult stereotype (Josef et al., 2016; Nicholson et al., 2005; Rolison et al., 2013), two studies did not (Bonem et al., 2015).

## Future Time Perspective and Social Risk Taking

In addition to inconsistent findings regarding age differences in social risk taking, mechanisms that may underlie any age differences have not been fully examined. Socioemotional selectivity theory posits that restrictions on future time perspective with aging explains why older adults' social networks are smaller but no less meaningful compared to younger adults (Lang & Carstensen, 2002; Wrzus et al., 2013). Having a restricted future time perspective motivates "pruning" social networks to maintain only the most emotionally-meaningful relationships (Fung et al., 1999; Lang & Carstensen, 2002). Josef et al. (2016) noted that this prioritization of social and emotional goals in later life might be associated with social risk taking, but did not posit a direction of association. Building from socioemotional selectivity theory, it could be argued that older age may be associated with less social risk taking to avoid damaging interpersonal relationships. Indeed, older adults tend to avoid debates or discussions that could result in interpersonal conflict (Birditt & Fingerman, 2005). Alternatively, older age may be associated with more social risk taking. For example, the relationships older adults have chosen to retain may be more durable, leading them to believe that social risk taking is unlikely to have negative consequences (Bonem et al., 2015).

## **Present Research**

The goals of the present studies were twofold. First, we sought to clarify the direction of the association between age and social risk taking and the robustness of the findings by conducting two studies using the DOSPERT scale (Blais & Weber, 2006). Study 1 included community-dwelling younger (25–35 years old) and older adults (60+ years

old), and Study 2 included a larger, online adult life span sample (18–85 years old). Second, we conducted the first studies in the field that tested the extent to which future time perspective was an underlying mechanism in the age and social risk association.

## Study I

## **Participants**

Participants were community-dwelling younger (n = 121; 25-35 years) and older (n = 121; 25-35 years)122; 60–91 years) adults from the South Atlantic division of the United States recruited through advertisements. Participants took part in a larger study of age differences in information processing and decision making that lasted no more than 2 hr (see Shook et al., 2017). For the larger study, exclusion criteria were having significant visual impairments that could not be corrected with glasses or contact lenses. Cognitive screening was conducted for older adults only as part of the larger study and older adults received one of the two following screeners. Older adults with a score of 24 or less on the 30-point Mini-Mental Status Examination (MMSE; Folstein et al., 1975) or 10 or less on an abbreviated 43-point version of the MIDUS Brief Test of Adult Cognition by Telephone (BTACT; Tun & Lachman, 2006) were excluded from the study. Data from three participants were excluded due to multivariate outliers and one participant was excluded due to missing data. Thus, the final sample included 120 younger adults ( $M_{\rm age} = 28.65$  years, 63% female; 83% White) and 119 older adults  $(M_{\rm age} = 68.08 \text{ years}, 62\% \text{ female}; 97\% \text{ White})$ . Demographics split by age group, as well as group comparisons, are presented in Table 1.

## **Procedure**

Participants completed study measures in a location of their choosing (university research lab, participant's residence, or senior center). Participants provided informed consent prior to completing a computer-based task and then completed randomly ordered questionnaires, which included the primary study measures. Demographic information (e.g., age, gender, race/ethnicity, and education) was collected at the end of the study. Participants received a \$50 honorarium (see Footnote 2).<sup>2</sup>

## **Measures**

## Social Risk Taking

Participants completed the DOSPERT scale (Weber et al., 2002), which contains an eight-item social domain subscale.<sup>3</sup> For the purposes of this study, only the social domain subscale was used given that socioemotional selectivity theory (Carstensen, 1992; Carstensen et al., 1999) is most applicable to interpersonal relationships (see supplemental material for analyses with other domains). Participants reported the likelihood ( $1 = very \ unlikely$  to  $5 = very \ likely$ ) that they would engage in risky social activities or behaviors (e.g., "admitting that your tastes are different from those of a

**Table I.** Study I Sample Characteristics and Key Variables for Younger Adults (N = 120) and Older Adults (N = 119).

	y,	Younger Adults			Older Adults		Group
	M or (n)	SD or (%)	α	M or (n)	SD or (%)	α	Comparison
Age	28.65	3.15	1	80.89	7.45	I	t(237) = -53.21 ***
Gender							$\chi^2(1) = .003$
Female	75	62.50%	I	74	62.20%	I	
Male	45	37.50%	I	45	37.80%	I	
Race/Ethnicity							$\chi^2(4) = 16.51 ***$
White	66	82.50%	I	115	96.64%	1	
Latino(a)	01	8.30%	I	0	%0	I	
Black	4	3.30%	I	0	%0	I	
Asian	2	1.70%	I	-	0.84%	I	
Native Am.	0	%0	I	0	%0	I	
Not reported	2	4.2%	I	ĸ	2.52%	I	
Education <sup>a</sup>							$\chi^2(7) = 15.16^a$
Some High School	_	2.44%	I	0	%0	I	
High School Grad	m	7.33%	I	12	17.65%	1	
Some College	7	17.07%	I	12	17.65%	I	
Associate Degree	_	2.43%	I	т	4.41%	I	
Bachelor's Degree	22	23.66%	I	<u>8</u>	26.47%	I	
Master's Degree	7	17.07%	I	13	19.12%	I	
Professional Degree	0	%0	I	4	5.88%	I	
Doctorate	0	%0	I	9	8.82%	I	
Focus on Opportunities	5.65	.97	.84	4.05	1.15	.82	t(237) = 11.60***

(Continued)

Table I. Continued

	)   	Younger Adults			Older Adults		Group
	M or (n)	SD or (%)	α	M or (n)	SD or (%)	α	Comparison
Focus on Limited Time	3.98	1.21	.63	4.67	1.29	77.	t(237) = -4.26 ***
Social Risk Taking	3.51	.55	.57	3.12	.56	.59	t(237) = 5.40 ***

Note. <sup>a</sup>Education level is based on 41 participants for younger adults and 68 for older adults. \*p < .05. \*\*p < .01. \*\*p < .01. \*\*p < .001.

friend" and "defending an unpopular issue that you believe in at a social occasion"). Higher mean scores indicated greater social risk taking ( $\alpha = .62$ , M = 3.33, SD = .59).

## Future Time Perspective

A 12-item version of Carstensen and Lang's (1996) future time perspective scale comprised of two subscales representing two dimensions—"focus on future opportunities" and "focus on limited time"—was used (Cate & John, 2007; Strough et al., 2016). Although these dimensions tend to be negatively correlated, they are not mutually exclusive (Strough et al., 2016). Eight items assessed focus on future opportunities (e.g., "many opportunities await me in the future" and "there are only limited possibilities in my future"). Four items assessed Focus on Limited Time (e.g., "I have the sense that time is running out" and "as I get older, I begin to experience that time is limited"). Participants rated their agreement with each statement from 1 (*very untrue*) to 7 (*very true*). Higher mean scores indicated a greater focus on future opportunities  $(\alpha = .88; M = 4.86, SD = 1.32)$  and limited time  $(\alpha = .72; M = 4.32, SD = 1.31)$ .

## **Results**

# Age Differences in Social Risk Taking and Correlations of Study Variables

Descriptive statistics for demographic characteristics and key study measures by age group are included in Table 1. Corresponding to the two age categories of the between-subjects design, age was coded as a dichotomous variable where 0 = younger adults and 1 = older adults. Three independent sample t-tests indicated that older adults reported a lesser focus on future opportunities (d = 1.50), greater focus on limited time (d = 0.55), and less social risk taking compared to younger adults (d = 0.70; see Table 1). Bivariate correlations were computed to assess the simple associations among focus on future opportunities, focus on limited time, social risk taking, and demographic variables (Table 2). Greater focus on opportunities was significantly associated with greater social risk taking and a lesser focus on limited time. Focus on limited time was not significantly associated with social risk taking.

## Focus on Future Opportunities as Mediator of Age Differences in Social Risk Taking

To determine whether future time perspective accounted for the age-related reductions in social risk taking, Hayes' (2013) PROCESS macro was used with 5,000 bootstrapped resamples. Again, age was entered as a predictor and coded as a dichotomous variable where 0 = younger adults and 1 = older adults. Focus on future opportunities was entered as a mediator. Although focus on limited time was not significantly associated with social risk taking, it was included as a covariate because prior research showed that each dimension of future time perspective made unique contributions

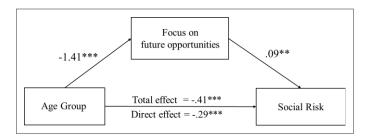
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	I	2	3	4	5	6	7
I.Age	_	00	.25***	.05	60***	.27***	33**
2. Gender (Male)	.11*	_	05	04	.04	2 l ***	.02
3. Race (White)	14**	.03	_	04	20**	.14*	13*
4. Education	.11*	05	.05	_	05	.07	.08
5. Future Opportunities	32***	03	.03	.05	_	4 ***	.27***
6. Limited Time	. <b>18</b> ***	.01	05	03	6 l ***	_	.01
7. Social Risk Taking	12**	02	03	03	.23***	05	_

**Table 2.** Bivariate Correlations Among Demographic Characteristics and Main Study Variables for Study I and Study 2.

Note. \* $p \le .05$ . \*\* $p \le .01$ . \*\* $p \le .001$ . Study I results (N = 244) are presented above the diagonal and Study 2 results (N = 439) are presented below the diagonal. For Study I, age was coded such that 0 = younger adults and I = older adults and correlations with education level are based on II0 participants. For Study 2, age was entered as a continuous variable. For both studies, gender was coded such that 0 = males and I = females and race was coded such that 0 = White and I = minority.

after accounting for the other dimension (see Strough et al., 2016). Social risk taking was the outcome variable.

Figure 1 summarizes the analysis using unstandardized coefficients, as recommended by Hayes (2013). As reported above, older adults reported fewer future opportunities compared to younger adults. After controlling for age and focus on limited time, greater focus on future opportunities was associated with greater social risk taking. The direct effect of age group on social risk taking (B = -.41, p < .001) was reduced, but still significant (B = -.29, p = .001) after taking the indirect path for focus on future opportunities into account. There was a significant indirect path through future opportunities, which indicated that older adults' lesser focus on future



**Figure 1.** Model for Study I examining the extent to which focus on future opportunities accounted for the association between age group and social risk taking, while controlling for focus on limited time. Age was coded such that  $0 = \text{younger adults and I} = \text{older adults.*} p < .05. **p \le .01. ***p \le .001.$ 

opportunities statistically accounted for their *lesser* social risk taking (B = -.12; 95% CI [-.23, -.00], p = .02), corresponding to partial mediation.<sup>5</sup>

## Summary

Study 1 findings expand the limited and mixed findings regarding age differences in social risk taking. Similar to Josef et al. (2016), Nicholson et al. (2005), and Rolison et al. (2013), we found that older adults reported less social risk taking compared to younger adults. Moreover, Study 1 adds to the literature by being the first to show that older adults' perceptions of fewer future opportunities are important for understanding why they are less likely than younger adults to endorse risky social behaviors, such as defending an unpopular issue at a social event. Older adults may avoid such interactions to prevent interpersonal conflict and maintain emotional well-being (Birditt & Fingerman, 2005; see Charles, 2010 for a review). In accord with socioemotional selectivity theory, older adults' aversion to social risks could derive from the motivation to sustain emotionally-satisfying and meaningful relationships (Carstensen et al., 1999; Carstensen, 2006).

## Study 2

Study 2 addressed two limitations of Study 1. First, Study 1 did not include a middle-aged adult sample. Thus, in Study 2, we used a larger, life-span adult sample to investigate age differences across the full adult age spectrum and to replicate differences between younger and older adults found in Study 1. Second, the DOSPERT scale used in Study 1 had relatively low reliability. In Study 2, we used a revised version designed by Blais and Weber (2006) to include items applicable to a broader age range.

## **Participants**

A total of 521 participants ( $M_{\rm age} = 43.78$  years, SD = 14.16; 54.3% male; 84% White) were recruited through Amazon's Mechanical Turk (MTurk) program (n = 498) and from a local community in the West North Central region of the United States (n = 22). MTurk started as a crowdsourcing tool for small tasks, but is now widely used because larger and more diverse research participant pools can be rapidly recruited inexpensively, compared to traditional data collection methods (Buhrmester et al., 2011; Goodman et al., 2013; Mason & Suri, 2012). Compared to community samples, data collected from MTurk are at least as valid and reliable as other methods (Buhrmester et al., 2011; Goodman et al., 2013; Mason & Suri, 2012; Paolacci et al., 2010).

Data from 82 participants were excluded due to missing data for key study variables (n = 78) and multivariate outliers (n = 4). Thus, the final sample included 439 participants (18–85 years;  $M_{\rm age} = 43.69$  years, SD = 14.11) who were mostly non-Hispanic White (89.3%) and had slightly more males than females (54.5 % male).

Mean education was equivalent to having completed some college without receiving a degree.

## **Procedure**

After consent was obtained, participants completed a 30-min survey. MTurk participants received \$2.50 (commensurate with other studies of similar length available on MTurk), and community members received a \$5.00 Amazon gift card.

#### **Measures**

## Social Risk Taking

To assess social risk taking, participants completed the revised version of the DOSPERT scale developed by Blais and Weber (2006). The social risk subscale consisted of six items<sup>8</sup> (see supplemental material for analyses with other domain subscales). Participants reported their likelihood ( $1 = very \ unlikely$  to  $7 = very \ likely$ ) of engaging in risky activities or behaviors (e.g., "speaking your mind about an unpopular issue in a meeting at work," "disagreeing with an authority figure on a major issue"). Higher mean scores indicated greater social risk taking ( $\alpha = .70$ ; M = 4.94, SD = 1.04).

## Future Time Perspective

The same 12-item measure of future time perspective from Study 1 was used to assess focus on future opportunities and focus on limited time (Strough et al., 2016). Mean scores for focus on future opportunities ( $\alpha = .92$ ; M = 4.69, SD = 1.27) and limited time ( $\alpha = .85$ ; M = 4.44, SD = 1.40) were computed such that higher scores indicated a greater focus on future opportunities and limited time, respectively.

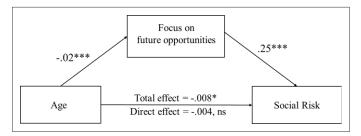
## **Demographics**

Participants reported their age, gender, race/ethnicity, and education.

#### Results

# Age Differences in Social Risk Taking and Correlations of Study Variables

Bivariate correlations were computed to assess simple associations between age, social risk taking, and other key study variables (Table 1). Correlations replicated Study 1. Older age was significantly associated with reporting less social risk taking, fewer future opportunities, and more limited time. Reporting greater future opportunities was significantly associated with greater social risk taking and a lesser focus on limited time. There was no significant association between focus on limited time and social risk taking.



**Figure 2.** Model for Study 2 examining the extent to which focus on future opportunities accounted for the association between age (continuous variable) and social risk taking, while controlling for focus on limited time. \*p < .05. \*\* $p \leq .01$ . \*\*\*p < .001.

# Focus on Future Opportunities as Mediator of Age Differences in Social Risk Taking

To test whether the findings from Study 1 generalized to an adult life-span sample when using Blais and Weber's (2006) version of the DOSPERT social risk subscale, we used Hayes' (2013) PROCESS macro to test a simple mediation model based on 5,000 bootstrapped resamples. Age (entered as a continuous variable) was the predictor, focus on future opportunities was the mediator, and focus on limited time was a covariate. Social risk taking was the outcome variable.

Figure 2 summarizes the analysis. The results were the same as for Study 1. As reported above, older age was significantly associated with reporting fewer future opportunities. After controlling for age and focus on limited time, greater focus on future opportunities was associated with greater social risk taking. The direct effect of age on social risk taking (B = -.008, p = .02) was no longer significant (B = -.004, p = .31) after controlling focus on future opportunities. The significant indirect path indicated that the association between older age and a lesser focus on future opportunities statistically accounted for the association between older age and lesser social risk taking (B = -.004, 95% CI [-.008, -.003], p < .001), consistent with full mediation.

## Summary

We replicated the Study 1 results in an adult life span sample that included middle-aged adults and using a more reliable revised version of the DOSPERT scale (Blais & Weber, 2006). First, older age was again significantly associated with less social risk taking. Second, the association between older age and focusing less on future opportunities fully accounted for the statistical association between older age and lesser social risk taking.

## **General Discussion**

Given limited studies and mixed findings regarding age differences in social risk taking, the current study first aimed to clarify the direction of any association between age and social risk taking. Across both the community sample in Study 1 and the online sample in Study 2, findings were consistent. Older adults reported less social risk taking than younger adults did. The second aim was to examine future time perspective as a mediator of the age and social risk association. Building from life-span theory (Carstensen & Lang, 1996), we expected that future time perspective might account for age differences in social risk taking. This idea was supported in both studies. Our research is the first to establish future time perspective, specifically older adults' reduced focus on future opportunities, as a mechanism for understanding age-related decreases in social risk taking. Furthermore, our findings highlight the importance of understanding perceptions of time in relation to risk-taking behaviors.

Our findings indicating that greater age is associated with less social risk taking are consistent with findings from three studies (Josef et al., 2016; Nicholson et al., 2005; Rolison et al., 2013), but not by Bonem et al. (2015). In addition, our results were robust across two measures—the original 40-item version of the DOSPERT (Weber et al., 2002) and the revised 30-item version (Blais & Weber, 2006). Thus, our results, when taken together with findings from prior research, yield five studies that consistently indicate older age is associated with decreased social risk taking.

In prior studies, researchers had speculated, but not tested, age-related motivational shifts as a mechanism that may contribute to age differences in social risk behaviors (e.g., Bonem et al., 2015; Josef et al., 2016). For example, Josef et al. (2016) noted that the prioritization of social and emotional goals in later life may be related to social risk taking, but did not discuss the direction of the association. Bonem et al. (2015) argued that older adults might engage in *greater* social risk taking due to having more durable social networks than younger adults have. In the current study, older adults lesser focus on future opportunities helped to explain their *lesser* social risk taking. This contrasts with Bonem et al.'s (2015) idea. Socioemotional selectivity theory argues that realizing there are constraints on life's opportunities leads to prioritizing emotionally-meaningful relationships (Carstensen & Lang, 1996). Older adults have also been found to avoid potential conflict and preserve harmony in relationships (Charles, 2010). This is consistent with our findings showing that aging was associated with perceiving fewer future opportunities and reporting fewer social risk behaviors.

## **Limitations and Future Directions**

Some limitations of the current research can be used to guide future research. First, cross-sectional, correlational data were used; thus, the age differences we reported do not definitively indicate developmental change (Baltes et al., 1988). Causal relations between future time perspective and social risk taking cannot be inferred (Maxwell & Cole, 2007). Future research could experimentally manipulate future time perspective

to examine consequences on social risk taking (e.g., Fung et al., 1999; Fung & Carstensen, 2004; Strough et al., 2014). Second, methodological limitations of the DOSPERT social risk subscale include the potential variation that can occur between self-reported and behavioral risk responses across the life span (e.g., Mamerow et al., 2016). Yet, research that indicates consistent findings across self-reported and behavioral measures of social risk taking temper this concern (e.g., Josef et al., 2016). In addition, the DOSPERT social risk subscale does not comprehensively address all dimensions of interpersonal relationships because the emotional closeness and meaningfulness of the relationship is not always specified. In future research, specifying whether relationships are egalitarian or hierarchical (Strough & Keener, 2014) may be important. A person may be more hesitant about challenging an opinion expressed by an authority figure compared to a friend. Such research would address whether age differences in social risk taking are consistent across all network members, regardless of the nature of the relationship. Developing a domain-specific measure of future time perspective could yield additional insights. For example, do older adults avoid social risk taking because they perceive fewer opportunities to form new friendships? Our findings suggest that this may be the case, but because our measure of future time perspective was domain general, our results cannot speak directly to this issue. Lastly, although our study did not assess short and long-term implications of social risk taking, future research could address whether social risk taking directly influences social support and strain as well as psychological and physical health.

## **Conclusion**

The current study adds to the small but growing literature on age differences in social risk taking. In two different samples of adults, older adults' lesser focus on future opportunities explained their aversion to social risk. The findings expand the literature by addressing how age differences in future time perspective relate to risk taking within social contexts. Future research that uses experimental manipulations of future time horizons is necessary to establish whether future time perspective influences social risk behaviors, regardless of age. Such research could inform the development of interventions to promote healthy aging by enhancing social relationships and reducing strain among social network members.

## **Declaration of Conflicting Interests**

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## **ORCID iD**

Rebecca K. Delaney https://orcid.org/0000-0002-1589-1374

#### **Notes**

- 1. Cognitive screening for 47 older adult participants was completed using the BTACT via telephone instead of using the MMSE, which must be administered in person. Participants who received the MMSE were compared to those who received the BTACT on all primary variables (i.e., future time perspective, social risk taking). The groups did not significantly differ on any primary variables (*ps* > .10). Less than 4% of older adults were excluded due to failing the cognitive screener.
- 2. Due to a technical error, education was only recorded for 110 participants (42 younger adults and 68 older adults). Future time perspective and social risk taking scores did not significantly differ between participants with and without education data or by study location (*ps* > .08).
- 3. Please visit https://www8.gsb.columbia.edu/decisionsciences/research/tools/dospert for the full DOSPERT scale and subscale items.
- 4. In all analyses, when age was entered as a continuous variable, results were similar.
- 5. The pattern of results did not change when demographic characteristics (i.e., gender, race) were entered as covariates in the mediation analyses.
- 6. The MTurk and community sample were assessed for significant differences among demographic and key study variables. Compared to the MTurk sample, the community sample was significantly older in age, t(491) = -10.81, p < .001. No significant differences between the samples were found for gender, social risk taking, focus on future opportunities, or focus on limited time.
- 7. There were no significant differences for gender, education, social risk taking, focus on future opportunities, or focus on limited time between participants excluded from the study and those included.
- 8. Please visit https://www8.gsb.columbia.edu/decisionsciences/research/tools/dospert for the full DOSPERT scale and subscale items.
- 9. The pattern of results did not change when demographic characteristics (i.e., gender, race, education) or study source (*Amazon's MTurk v. community sample*) were entered as covariates in the mediation analysis.
- 10. Age was entered as a continuous variable, thus the parameter estimates are small as they indicate the difference in social risk taking that is associated with a difference of only 1 year of age.

## Supplemental Material

Supplemental material for this article is available online.

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## **Author Biographies**

**Rebecca K. Delaney** received her PhD in Life-Span Developmental Psychology from West Virginia University in 2017. She is currently a Postdoctoral Fellow within the Department of Population Health Sciences at the University of Utah. Her research as a life-span developmental psychologist has focused on testing psychosocial factors that impact decision-making processes, health behaviors, and enhance well-being.

**JoNell Strough** is a professor of psychology and coordinator of the life-span developmental doctoral program at West Virginia University. Her research aims to facilitate healthy aging by identifying cognitive, emotional, and motivational mechanisms that underlie age differences in decision making.

**Natalie J. Shook** received her PhD from Ohio State University in 2007. She is currently an Associate Professor in the School of Nursing at the University of Connecticut. Her research focuses on the fundamental processes underlying attitude formation and change, and how attitudes guide behavior.

**Cameron G. Ford** received his PhD in Clinical Psychology from West Virginia University in 2019. He is currently a Postdoctoral Fellow at Wake Forest Baptist Health, with concentrations in Weight Management and Endocrinology. His research focuses on how biased cognitive patterns influence mental health and social worldviews.

**Philip Lemaster** is an assistant professor of Psychology at Concordia College. As a life-span developmental psychologist, his research focuses on how the way men and women make financial decisions shifts across the life span.