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Ageism, Illegal Drug Use, and Young Adults' Experiences With Illness, Dementia and Death

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The research extended prior research that showed that young adults' relationships with older adults during childhood was related to lower levels of ageist beliefs and lower levels of risk-taking in daily life. The present study investigated whether young adults' ageism and risk-taking would be related to their relationships with older adults in childhood and their prior experiences with illness, dementia, and death. We report a study with 491 participants (255 women and 236 men) whose results replicated the finding that childhood relationships with older adults were related to lower levels of current ageism and lower levels of current illegal drug use. Participants' experiences with illness and death did not predict ageism or illegal drug use. The results suggest that relationships between children and older adults, regardless of the older adults' health status, may lead to long term benefits for the children. Consequently, social programs that provide opportunities for children to interact with older adults should be encouraged by policy makers.

Keywords: Ageism, Risk-taking, Sensation-Seeking, Terror Management Theory, Young Adults, Death Anxiety

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Recent research suggests that relationships between children and older adults may lead to long-term benefits for both children and adults (Flouri, Buchanan, Tan, Griggs, & Attar-Swartz, 2010; Lussier, Deater-Deckard, Dann, & Davies, 2002; Ruiz & Silverstein, 2007). Children who have positive relationships with grandparents during childhood have been found to have higher levels of wellbeing (Lussier et al., 2002), fewer symptoms of depression (Ruiz & Silverstein, 2007) and less psychopathology (Flouri et al., 2010). Recent research has shown that young adults who reported having close relationships with grandparents during childhood also reported lower levels of ageism and lower levels of risk-taking in daily life (Kennison & Ponce-Garcia, 2012). Prior research has not examined whether the health status of the older adults in a child's life is related to ageism and risk-taking later in life. The present research aimed to fill this gap in the literature.

Kennison and Ponce-Garcia (2012) tested the hypothesis that having positive relationships with grandparents during childhood may have long-term benefits because such relationships serve to reduce individuals' death anxiety. The hypothesis was developed within the framework of Terror Management Theory (TMT, Greenberg, Pyszczynski, & Solomon, 1986; Solomon, Greenberg, & Pyszczynski, 1991), which claims that death anxiety plays an important role in human behavior. TMT was inspired by the views of Ernest Becker, the cultural anthropologist, who wrote about death-related customs across human societies and how individuals attempt to distance themselves from death in daily life (Becker, 1973).

Prior research has suggested that ageism may be the result of one's attempt to buffer their death anxiety. Depaola, Griffin, Young and Neimeyer (2003) found that death anxiety was positively correlated with self-reported ageist attitudes. Additional research utilizing laboratory techniques in which the short-term effects of death reminders could be measured have also supported the link between ageism and death anxiety (Greenberg, Schimel, & Martens, 2002; Martens, Goldenberg, & Greenberg, 2005; Martens, Greenberg, Schimel, & Landau, 2004). Martens et al. (2004) hypothesized that viewing images of older adults may remind young adults of death and increase their death anxiety in the short-term. They showed a group of young adults pictures of young or older adults and then asked them to complete a series of word fragments (e.g., COFF_ _). A subset of the word fragments could be completed using either death-related words (e.g., coffin, skull, dead) or words that were unrelated to death (e.g., coffee, skill, desk). The results indicated that those who had viewed pictures of the older adults provided more completions with death related words (e.g., COFFIN) than those who had viewed pictures of young adults. The results also showed that those who saw pictures of older people were more likely to state that they had a less favorable opinion of old adults and that they viewed themselves as being different from older adults than did those who saw pictures of young adults.

In a different line of research, Popham and colleagues (Popham, Bradley, & Kennison, 2011a, 2011b) suggested that ageist attitudes existing in the long-term may be related to adults' behaviors, specifically with regard to risk-taking. They proposed that young adults may seek out activities to make themselves feel physically strong, fearless, and invulnerable (i.e., taking physical risks) as a way of reducing their death anxiety. In an initial study, Popham et al. (2011b) found that in young adults, ageism predicted risk-

taking in daily life (e.g., tobacco use, alcohol use, illicit drug use, and sexual behavior). In a subsequent study, Popham et al. (2011a) showed that ageism explained variance in risk-taking above and beyond that explained by sensation-seeking, which is a variable shown to be a strong predictor of risk-taking (Zuckerman, Eysenck & Eysenck, 1978).

Kennison and Ponce-Garcia (2012) investigated the possibility that spending time with older adults during childhood may lead to lower levels of future ageism and future risk-taking. Prior research had shown that ageism, as well as other prejudices, may decrease after individuals contact with individuals viewed as the out-group (e.g., older people, Allport, 1954). For example, in a study investigating how ageism was related to the frequency and quality of contact with older adults, Schwartz and Simmons (2001) found that it the quality of contact with older adults, but not the frequency of contact was related to more positive attitudes toward older adults (see also Allan & Johnson, 2009; Funderburk, Damron-Rodriguez, Levy Storms, & Solomon, 2006). In 2012, Kennison and Ponce-Garcia found that young adults who had reported close, positive childhood relationships with older adults were had lower levels of ageism (i.e., negative attitudes about older adults) and were less likely to engage in risk-taking behavior than others. Risk-taking included behaviors related to tobacco use, alcohol use, illegal drug use, and sexual behavior.

In the present research, we attempted to replicate the study of Kennison and Ponce-Garcia (2012) and also investigate the extent to which young adults' experiences with illness and death related to their levels of ageism and one of the four previously examined types of risk-taking in daily life – illegal drug use. We hypothesized that higher levels of ageism and higher levels of risk-taking would not be predicted by the extent to which participants have experienced illness and death in their lives.

Method

Participants

Four hundred ninety one undergraduates (255 women and 236 men) at a large state university participated in exchange for course credit. The average age was 19.03 years old ($SD = 2.67$). The sample was predominantly Caucasian/Not Hispanic (i.e., 77.4%). The sample was also 5.6% Native American, 4.8% African-American, 3.8% Asian-Pacific Islander, 3.0% Hispanic, and 6% more than one category. Ethnicity was not provided by 1.8% of the sample. Of women in the sample, 74% reported having experienced a death of a close family member or friend. Of men in the sample, 77% reported having experienced a death of a close family member or friend. The majority of the deaths by participants involved family members (e.g., grandparents, uncles, aunts, and parents).

Materials

We used the CDC (2008) State and Local Youth Risk Behavior Survey (YRBS) to assess risk-taking. We used the illegal drug use category of YRBS questions. Higher scores reflect higher levels of drug use. Prior research has confirmed the reliability of the YRBS (Brener, Kann, McManus, Kinchen, Sunderberg, & Ross, 2002). In the present study, we found that the reliability of the illegal drug use questions was .80.

We assessed ageist attitudes using the Fraboni Scale of Ageism (FSA; Fraboni,

Saltstone, & Hughes, 1990), which is made up of 29 attitudinal statements about older adults (e.g., “Old people deserve the same rights and freedoms as do other members of our societies.”). Each question is paired with a 4-point Likert scale from *strongly disagree* to *strongly agree*. After the reverse scoring of some items, the total score for the FSA is the sum of the 29 responses with higher scores reflecting higher levels of ageism. In the present study, we observed a reliability value of .83.

We assessed ageist behavior using Cherry and Palmore’s (2008) Relating to Older People Evaluation (ROPE). The scale contains 20 questions, pertaining to how often participants engage in negative ageist behaviors (e.g., “Ignore old people because of their age.”) and positive ageist behaviors (e.g., “Compliment old people on how well they look, despite their age.”). Each question is paired with a 3-pt scale (0 = *never*, 1 = *sometimes*, and 2 = *often*). Of the 20 items, 6 address positive ageist behaviors and 14 address negative ageist behaviors. The total score for the ROPE scale is the sum of the 20 responses. In the present study, we observed the following reliability values for negative and positive ageist behaviors: .81 and .63, respectively.

We asked participants how close they were to the grandparent that they were closest to, using a Likert-type scale (1 = *not at all close*, 7 = *extremely close*). We asked participants about their experiences with older adults generally in childhood. They were asked: “When you look back on your childhood, to what extent were adults over the age of 50 part of your life?” followed by four choices: (a) adults over 50 were NOT part of my life; (b) adults over 50 were occasionally part of my life; (c) adults over 50 were routinely part of my life; and (d) adults over 50 were routinely part of my life.

We also asked five questions about participants’ experiences with illness and death. One question assessed the general health of the grandparent to which they were closest with a 5-point Likert-type scale (1 = *very poor health*, 5 = *very good health*). Three other questions allowed participants to select *No* or *Yes*. These questions were: (a) Have you ever spent a great deal of time around a person older than 50 who was very ill and died from their illness (e.g., a person in hospice care); (b) Have you ever spent time around someone over the age of 50 who suffered from Alzheimer’s disease or some other form of dementia, and (c) Have you experienced someone close to you (i.e., family member or close friend) dying.

Procedure

Participants were recruited from a subject pool operated within the department of psychology. Participants completed the questionnaires via an online survey. All questionnaires were presented in the same order (i.e., illegal drug use questions from the YRBS, FSA, ROPE, grandparent closeness, experience with illness, dementia, and death, experience with older adults during childhood, and demographic questions).

Results

Participants’ responses were analyzed initially in terms of descriptive statistics for illegal drug use (YRBS), ageist behavior (ROPE), ageist attitudes (FSA), grandparent relationship (GPR), relationships with older adults who were not grandparents (ROA), grandparent health (GPH), experience with illness, dementia, and death. The descriptive statistics for these variables are displayed in Table 1.

Correlational analyses were conducted to investigate the relationships among

Table 1: Descriptive Statistics for Risk-Taking, Ageism, Closeness with Grandparents, Childhood Experiences with Older adults, and Experiences with Illness and Death.

	N	Mean	SD	Min.	Max.
Illegal Drug Use	484	13.48	5.02	8	48
FSA	437	62.13	8.91	38	82
ROPE	459	34.19	5.07	20	57
GPR	490	3.68	1.13	1	5
ROA	490	2.71	.85	1	4
GPH	492	3.83	1.04	1	5
Illness	491	1.66	.47	1	2
Dementia	491	1.58	.49	1	2
Death	490	1.25	.43	1	2

FSA = Fraboni Scale of Ageism; ROPE = Relating to Older People Evaluation; GPR = Grandparent Relationship; ROA = Relationship with Older Adult (who was not a grandparent); GPH = Grandparent health; Illness = experienced a person over 50 years of age who was ill; Dementia = experienced a family member or friend suffering from dementia; Death = experienced death of a family member or friend.

the variables. These results are displayed in Table 2. As in prior research (Kennison & Ponce-Garcia, 2012; Popham et al., 2011a, 2011b), we found that ageist behavior (ROPE) was positively correlated with ageist attitudes (FSA). Further analyses showed that ageist attitudes (FSA) and ageist behavior were each positively correlated with illegal drug use. We also found that the closeness of the grandparent relationship during childhood and relationships with other older adults during childhood were each negatively correlated with ageist attitudes (FSA). Illegal drug use was negatively correlated with the closeness of the grandparent relationship during childhood.

We conducted a multiple regression using illegal drug taking (YRBS) as the dependent variable. The predictor variables were ageist behavior (ROPE), ageist attitudes (FSA), grandparent relationship (GPR), relationships with older adults who were not grandparents (ROA), grandparent health (GPH), experience with Illness, dementia, and death. Table 3 displays the summary of this analysis. Illegal drug taking was significantly predicted by ageist attitudes (i.e., FSA), grandparent relationship (GPR), and childhood relationships with older adults (ROA), but not by any of the health-related variables (i.e., grandparent health, experiences with illness, dementia or death). Additional analyses were conducted to test whether an interaction between ageist attitudes (FSA) and the grandparent relationship predicted use of illegal drugs.

Table 2: Summary of Results from Correlational Analyses.

	Illegal Drug Use	FSA	ROPE	GPR	ROA	GPH	Illness	Dementia
1. Illegal Drug Use	-							
2. FSA	.15**	-						
3. ROPE	.13**	.29**	-					
4. GPR	.003	-.28**	.12*	-				
5. ROA	-.13**	-.27**	.04	.42**	-			
6. GPH	-.07	-.17	-.07	.30**	.19**			
7. Illness	.08	-.05	.03	.14**	.20**	-.09*		
8. Dementia	-.01	-.08	.09	.07	.08	-.02	-.22**	
9. Death	-.03	-.07	-.01	.12**	.17**	-.08	-.41**	-.07

FSA = Fraboni Scale of Ageism; ROPE = Relating to Older People Evaluation; GPR = Grandparent Relationship with closest grandparent; ROA = Older Adults were Around during Childhood; GPH = Grandparent Health; Illness = experienced a person over 50 years of age who was ill; Dementia = experienced a family member or friend suffering from dementia; Death = experienced death of a family member or friend.

* $p < .05$, ** $p < .001$

Discussion

The present research aimed to determine to what extent do young adults' childhood experiences with illness and death are related to current levels of ageism in risk-taking in the form of illegal drug use. The results of the study are similar to the prior results of Kennison and Ponce-Garcia (2012), which showed that individuals who had close, positive relationships with older adults during childhood reported lower levels of ageism and lower levels of risk-taking. The present results showed that participants' health-related experiences (i.e., grandparent health and experiences with illness, dementia, and death) were not related to current levels of ageism or illegal drug use. Those reporting having adults over age 50 in their lives reported lower levels of illegal drug use. The closeness of the relationship with grandparents was not significantly correlated with use of illegal drugs; however, the results of the regression analysis indicated that those with closer relationships with grandparents may have taken more illegal drugs. Because Kennison and Ponce-Garcia (2012) found that closeness of the relationship with grandparents was positively correlated with disinhibition, a dimension of sensation-seeking predictive of risk-taking, it may be the case that the significant relationship between grandparent relationship and drug use in the regression analysis reflects more than participants' relationships with grandparents.

Table 3: Regression Results with Ageism, Grandparent Relationship, Relationship with Older Adults, and Health-Related Questions Predicting Illegal Drug Use.

Predictors	<i>B</i>	<i>SE</i>	β	<i>p</i> -value
Intercept	9.17	2.77		.001
FSA	.06	.03	.12*	.05
GPR	.47	.24	.12*	.05
ROA	-.66	.31	-.12*	.04
ROPE	.03	.05	.03	.58
GPH	-.20	.25	-.05	.42
Illness	.64	.55	.07	.25
Dementia	-.58	.48	-.06	.23
Death	.09	.58	.01	.87
ΔR^2			.04	
<i>F</i>			2.83	

Dependent variable = Illegal drug use; FSA = Fraboni Scale of Ageism; ROPE = Relating to Older People Evaluation; GPR = Grandparent Relationship with closest grandparent; ROA = Older Adults were Around during Childhood; GPH = Grandparent Health; Illness = experienced a person over 50 years of age who was ill; Dementia = experienced a family member or friend suffering from dementia; Death = experienced death of a family member or friend.

* $p < .05$.

The present results as well as those of Kennison and Ponce-Garcia (2012) are consistent with prior research establishing a link between ageism and risk-taking in young adults. A link between ageism and risk-taking is expected within the framework of terror management theory (TMT, Greenberg, Pyszczynski, & Solomon, 1986; Solomon, Greenberg, & Pyszczynski, 1991), which claims that death anxiety is an important factor in human behavior and that individuals engage in cognitions and behaviors that serve to buffer death anxiety. The fact that individuals' prior experiences with illness and death were unrelated to ageism and illegal drug use indicate that experiences with illness and death do not diminish the beneficial aspects of intergenerational contact for young adults. The results are encouraging for those involved in programs to increase intergenerational contact. The results suggest that when children interact with older adults, there may be long-term benefits regardless of the health status of older adults. Children who have a

relationship with someone who experiences a severe illness and ultimately passes away do not appear to be go on to have higher levels of ageism and illegal drug use as compared to those who did not have experiences with illness and death. The results may be somewhat surprising to parents, educators, and policy makers may tend to believe that young people must be shielded from experiences in which they are allowed to see older individuals in less than perfect health.

Future research is needed to provide a greater understanding of the psychological processes and mechanisms that are involved in shaping young people's views of older adults and their views of themselves an older person in the future. It remains unclear how close, positive relationships with older adults in childhood are related to young people's views of themselves and others as aging beings and how all of these variables are related to death anxiety. Because the exact relationships among these variables are not well understood, future research may reveal that characteristics related to the individual may or may not play a determining role in how one's experiences with healthy and ill older adults as well as one's experiences with illness in individuals of any age contribute to one's view of aging as well as their behaviors in buffering anxiety about aging and death.

Our study's primary limitation is that the sample included only college students in the Midwest of the United States. Further, the majority of the sample was Caucasian. Future research is needed to determine whether the present results will generalize to other populations, such as individuals in different geographic regions of the country who are from more diverse backgrounds both in terms of ethnicity as well as socioeconomic status. Individuals' experiences with illness and death are likely to vary widely. For example, when an ill person has not have access to high quality health care, the experience may be much more negative for family and friends than when an ill person receives high quality care. There may also be different social norms and/or social practices that vary across cultural groups that influence how individuals' experiences with illness and death shape their views of aging and influence how they buffer their death anxiety.

In summary, the present study replicated the prior research finding that positive relationships with older adults, such as grandparents, during childhood is related to young adults having lower levels of ageism and lower levels of risk-taking (specifically, illegal drug use) in daily life. The study showed that neither grandparents' health status nor other experiences with illness, dementia and death were related to levels of ageism or illegal drug use. The results suggest that regardless of young people's experiences with illness, dementia and death, there are likely to be long-term benefits for children who participate in community programs that bring together young people and older adults.

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