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The Role of Age in Combination with Cultural Values in In-Group Bias

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In this paper, we examined the role of age in combination with cultural values in in-group biases in an experimental study. By manipulating uncertainty avoidance from Hofstede's cultural dimensions (1983, 2010), we compared in-group biases between two age groups (7-9 and 13-14). The results revealed that age has a significant main effect for only explicit in-group bias measure whereas there was no causal effect of cultural values along with age in any of the in-group bias measurements. Limitations and implications for future research are discussed further.

Keywords: in-group bias, cultural values, age, uncertainty avoidance, resource allocation

It is well documented that people are motivated to have a positive social identity and to create a positive distinctiveness between their in- and out-groups. In particular, we have a general preference for seeing our in-groups more positively in relation to any out-group, especially when our social identity is threatened (Tajfel & Turner, 1979, 1986, 1999). This tendency, which is known as in-group bias, can be expressed in evaluation of others, allocation of resources (e.g., Turner, 1978), and in many other ways. In social psychology literature, many different predictors of in-group bias such as group status, perception of threat, and social in-equality (e.g., Tajfel, Billig, Bundy, & Flament, 1971) have been suggested. The present study focuses on two such potential predictors, namely cultural values and age. Both factors have been previously documented as important determinants of in-group bias. However, to our best knowledge, they have never been investigated at the same time in a previous study. We believe that understanding the combined effects of age and culture will provide new and useful insights about when children start to acquire values of their culture and how these cultural values affect their attitudes toward in-group and out-group members.

Culture and In-group Bias

Cultural values are expected to play a role in in-group bias because people develop different construals of the self and of others in different cultures. Moreover, these construals can influence the very nature of individual experience, including cognition, emotion, and motivation (Markus & Kitayama, 1991). Since our attitudes and behaviors are part of our self-construct, the observed differences in attitude towards an out-group can, at least partly, be attributed to these cultural differences. These differences in self-serving biases can be paralleled by differences in group-serving biases, and better described and understood as a reflection of cultural values and beliefs.

In previous studies investigating in-group biases in cross-cultural context, researchers have mainly focused on comparisons of individualistic and collectivistic cultures. Although these studies documented some evidence on the role of culture, the findings indicate rather mixed evidences. For example, Heine and Lehman (1997) found that student subjects in Japan, which is a country with a well-known collectivistic culture, exhibit less group-serving bias than students in Canada, which is known to have a more individualistic culture. On the contrary, conducting a scenario-based study Gomez, Kirkman, and Shapiro (2000) found that when a team member was perceived to be an in-group (rather than an out-group) member, Mexican participants provided higher evaluations than U.S. participants did, suggesting that people with a collectivistic orientation evaluate in-group members significantly more generously than those with an individualistic orientation. The evidence in the literature is mixed even when mediating factors, such as relative status position of the groups, perceived impermeability of group boundaries, and the nature of the perceived status differences on the relevant dimension, are controlled (e.g., Heine & Lehman, 1997; Kitayama et al., 2003).

To be able to define cultural differences, we used the cultural values from culture model by Hofstede (1980).

Hofstede's cultural dimensions. Hofstede (1994a) delineated four important dimensions useful in categorizing countries: power distance; individualism versus collectivism; masculinity versus femininity; uncertainty avoidance. The research by Minkov (2007), using data from the World Values Survey, allowed a new calculation of a fifth,

long-term versus short term orientation and an additional sixth dimension, indulgence versus restraint (Hofstede, Hofstede, & Minkov, 2010). These six cultural values defined and labelled by Hofstede (1983) and Hofstede et al. (2010) are as follows:

- (1) Power distance: The extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally (Hofstede et al., 2010).
- (2) Individualism: A preference for a loosely knit social framework in which individuals take care of themselves and their immediate families. Collectivism is the alternative and is a preference for a tightly knit social framework in which individuals expect relatives, clan, or other in-group to look after them, in exchange for loyalty (Hofstede, 1983)
- (3) Masculinity: A preference for achievement, heroism, assertiveness, and material success rather than femininity, which is a preference for relationships, modesty, caring for the weak, and quality of life (1983).
- (4) Uncertainty avoidance: The extent to which people feel uncomfortable with uncertainty and ambiguity (Hofstede et al., 2010).
- (5) Long-term orientation: Belief that most important events in life will occur in the future. They are perseverance, thrift, and order relationships based on status. In the short-term orientated cultures, individuals believe that most important events in life occurred in the past or take place now. They respect traditions and value protecting one's "face," personal steadiness, and stability (2010).
- (6) Indulgence: Free gratification of basic and natural human desires related to enjoying life and having fun (2010).

Age and In-group Bias

In the cross-cultural psychology literature, there is also some evidence suggesting that age is another factor in people's tendency to favor their own group. Researchers investigating neurological change during adolescence have suggested that maturation is one of the critical changes in person-culture interaction that provide new tools for the individual to deploy learning the culture and societies as a function of the individual's age (Bruner, 1996). Supporting this view, the meta-analysis conducted by Doosje et al. (2013) indicated that, especially among children and adolescents, developmental change is an important factor in in-group bias. Specifically, children in the age range of 7.50 to 9.49 and adolescents in the age range of 13.50 to 15.49 display the highest level of intergroup bias. Overall, based on these results, it can be suggested that age is an important factor in attitudes toward in-group and out-group members in a nonlinear fashion.

Age and Culture

Culture plays crucial role in how children make sense of the world. Children do not make sense of the world consciously and analytically at early age. Meanings are grounded in bodily connections with things and are constantly bound up with the process of acting (Johnson, 2007). Children start to create their own "cultures" by about nine months and before the age of five the need for, and organization of, adult and peer cooperation radically change (Cole, Hakkarainen, & Bredikyte, 2010).

Early in development, children are incapable of regulating the social organization

of their interaction, as middle childhood approaches, greater autonomy of child groups become possible (2010) and the relation between culture and learning become more pronounced. For example, different forms of play (object play, symbolic play, and pretend role play) create different kinds of cultural environments for learning. Children learn to practice culture during early childhood and as they get older, they continue to carry out social experimentation of culture with other persons in everyday life (Poddiakov, 1996). Therefore, it can be suggested that culture is a better predictor for older age groups.

Present Study

In this study, we experimentally manipulated one cultural value from Hofstede's cultural dimensions, namely uncertainty avoidance to examine the potential causal effect of age along with cultural values on in-group bias more closely. To be able to examine potential causal effect of age in combination with cultural values on in-group bias, we conducted an experimental study and compared Turkish children aged 7-9 and adolescents aged 13-14 by using Hofstede's (2010) six cultural values. We particularly chose these two age groups based on the results from the meta-analysis by Doosje et al. (2013).

We compared the in-group bias data, after we manipulated one particular cultural value, namely uncertainty avoidance from Hofstede's (2010) cultural dimensions. According uncertainty reduction theory (Hogg, 2000) uncertainty reduction has a motivational role in group identification. The original and most basic prediction from uncertainty reduction theory was that people identify more strongly with groups when they are feeling-uncertain about themselves, their behavior, what is expected of them and so forth (2000). A number of experiments where the key dependent measures were self-reported group identification and behavioral measures of resource allocations have shown that group identification and inter-group discrimination only occur and occur significantly more when people are categorized under uncertainty than not categorized or categorized under reduced uncertainty (e.g., Grieve & Hogg, 1999).

In addition, according to his culture data set by Hofstede et al. (2010) Turkey's score of 85 on this dimension indicates high uncertainty avoidance (e.g., a huge need for laws and rules to minimize their anxiety). Therefore, in this study, we particularly selected Turkish children and adolescents as our target groups to measure the effect of uncertainty avoidance on in-group bias.

In our study, we take another approach by experimentally manipulating cultural values in the same cultural context rather than doing cross-cultural comparisons. By doing so, we focused on investigating the question of when children start to acquire values of their culture and how these cultural values affect their attitudes toward in-group and out-group members.

Our hypothesis is that the effect of cultural values on in-group bias is stronger among participants in the older age group (aged 13-14) than the participants in the younger age group (aged 7-9). We predict that culture is a better predictor for in-group bias among older age groups and when the cultural value of uncertainty avoidance endorsed by our target group is manipulated, the increase in the in-group bias score will be significantly higher in the older age group compared to the younger age group.

Method

Participants

A total of 51 Turkish children aged 7-9 (26 female, 25 male) and 66 Turkish adolescents (32 female, 34 male) aged 13-14 participated in the study.

Procedure

Consent forms were sent to parents before school sessions. In each consent form, necessary information was provided to each parent indicating that the research was concerned with children's knowledge of, and attitudes toward, their participation in groups, as well as intergroup relationships. Also, the children's own verbal consent was taken before they started to do the experiment. The children participated in the experiment only after parental approval had been obtained.

After completing parental consent procedures, participants were divided into two groups based on their ages. Children aged 7-9 were tested in the young age group, and adolescents aged 13-14 were tested in the old age group. Participants were randomly assigned to either control or experimental conditions and individually tested in a room away from their classrooms. Participants were told, on the basis of their performance on a perception test, that they were either "overestimators" or "underestimators." Participants were shown a picture containing a random number of dots for 2 seconds and told to estimate the number of dots. Participants believed that overestimators were assigned to the red and underestimators to the blue group. Subsequently, they were assigned to either the blue or red group based on their answers; participants were told that they would now view other children in the red and blue groups and asked to indicate their liking for each target. For the measurement of in-group bias, they were also asked to play a resource distribution game and distribute up to five coins amongst the two children any way they liked.

After they completed the task, participants' self-uncertainty avoidance was manipulated by using a priming technique (Hogg, Sherman, Dierselhuis, Maitner, & Moytt, 2006). After the manipulation, they filled the explicit attitude measure and played the resource allocation game one more time to measure how their in-group bias tendency had been affected by the manipulation of the uncertainty avoidance cultural value. To deal with potential lingering effects, participants were also asked to write about the happiest moment of their lives.

After the experimental procedure was completed, participants were debriefed about the experimental procedure and the purpose of the experiment.

Materials

Stimuli. For the measurement of participants' attitudes toward their in-group and out-group members, they were presented 32 target photographs and they indicated their liking for each target. A total of 16 full-color head and shoulders photographs of boys and girls (eight each) between the ages of 7-9 and 13-14 were used as stimuli. Photographs were downloaded from the Dartmouth Database of Children's Faces (Dalrymple, Gomez, & Duchaine, 2013) and the Humaine Database (Douglas-Cowie et al., 2007) and edited using

image editing software such that half the children are wearing blue and half wearing red t-shirts (for a total of four boys and four girls per color group).

Manipulation

Participants' self-uncertainty was manipulated by using a priming technique that was utilized by Hogg, Sherman, Dierselhuis, Maitner, and Moytt (2006). They were asked to spend a few moments thinking about those aspects of their life that made them feel uncertain (certain) about themselves, their lives, and their future, and then to write in the spaces provided. For manipulation check, participants were also asked to rate how certain/uncertain they felt on a 5-point scale, after they wrote about that moment.

Measurement of In-Group Bias

Resource allocation task. On each trial, a pair of targets in contrasting groups (red vs. blue, gender held constant; four trials) was presented. Participants were told that they could distribute up to five coins amongst the two children in any way they liked but that undistributed coins could not be kept.

Explicit attitude toward in-group/outgroup members. 32 target photographs were presented, one at a time, in random order, and participants indicated their liking for each target on a 6-point scale ranging from "really like" to "really don't like."

For the measurement of participants' general attitudes toward their in-group and out-group members, participants were also asked how much they liked boys and girls and how much they liked their classmates and other children at the school, on a 6-point scale ranging from "really like" to "really do not like."

For the analyses, the items for measuring explicit attitudes and their general attitudes toward in-group and out-group members are reverse coded and mean ratings for out-group members were subtracted from mean ratings for in-group members, producing an index of group preference.

The reliability analysis indicated that Cronbach's alpha level for the explicit attitude measure was .792, indicating that our explicit measure was highly reliable.

Results

Manipulation Check

To examine the effectiveness of our manipulation, we used GLM analysis to see how uncertain participants felt, on a 5-point scale. Our manipulation check confirmed that there was a significant effect of priming on participants' uncertainty ratings by indicating that participants in the experimental condition rated their feelings as being more uncertain ($M = 4.15$, $SD = .83$) than the participants in the control condition ($M = 2.62$, $SD = .55$), $F(1,115) = 13.052$, $p < .001$, $\eta^2 = .102$.

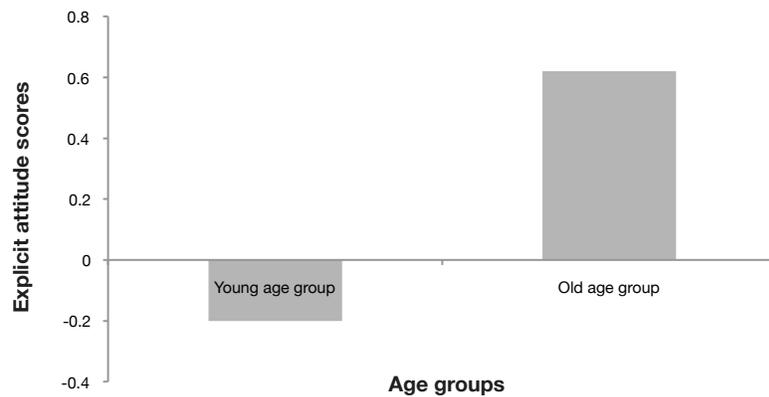


Figure 1. *Explicit attitudes after manipulation across two age groups*

Measurement of In-Group Bias

We used a 2 (age: young, old) \times 2 (priming: certain, uncertain) ANOVA design to examine the role of age in combination with the cultural value on in-group bias.

Allocation task. The results did not indicate a significant main effect for the age factor, $F(1,115) = .236$, $p = .625$, $\eta^2 = .002$. The difference between the number of coins given to in-group and out-group members did not significantly differ in both young ($M = .49$, $SD = 1.09$) and old age groups ($M = .60$, $SD = 1.39$).

The results also did not show a significant main effect for condition, $F(1, 115) = .887$, $p = .348$, $\eta^2 = .008$. There was no significant difference between the number of coins allocated to in-group members in the experimental condition ($M = .66$, $SD = 1.38$) and the control condition ($M = .44$, $SD = 1.13$). In addition, the results did not show a significant interaction between the age factor and condition, $F(1, 113) = 1.33$, $p = .250$, $\eta^2 = .12$, indicating that our hypothesis was not supported.

Explicit attitude toward in-group/out-group members. The manipulation of uncertainty avoidance did not have a significant main effect on participant explicit in-group preference, $F(1, 115) = .172$, $p = .679$, $\eta^2 = .001$. In other words, there was not a significant difference between participants' explicit attitudes toward their in-group members in both the experimental ($M = 4.25$, $SD = .78$) and the control condition ($M = 4.27$, $SD = .78$).

On the other hand, our results revealed a significant main effect for age on participants' explicit attitudes, $F(1, 115) = 23.95$, $p < .001$, $\eta^2 = .172$. In the young age group, participants showed significantly less in-group preference ($M = -.20$, $SD = .75$) compared to participants in the old age group ($M = .62$, $SD = 1.01$) (See Figure 1). However, the results did not indicate a significant interaction between the age and the culture, $F(1, 113) = .158$, $p = .692$, $\eta^2 = .001$, suggesting that contrary to our hypothesis, culture did not have significantly more effect on participants' in-group bias in old age groups compared to younger age groups.

Discussion

In this study, we examined the role of age in combination with all values in in-group bias. We analyzed cultural value and in-group bias data that we collected from Turkish participants aged 7-9 and 13-14. We tested the effect of the culture in two conditions by manipulating the uncertainty avoidance cultural value from Hofstede's (2010) cultural dimensions.

When we compared our participants' responses on allocation task and their explicit attitudes toward in-group and out-group members, we found that our manipulation did not have a significant main effect on participants' in-group bias tendencies in both age groups, suggesting that our hypothesis was not supported. In addition, to examine the role of age, we compared two different age groups in terms of their in-group bias tendency after the manipulation. We could not find any significant difference between the number of coins given to in-group and out-group members in both age groups, possibly a result of range restriction which might simply restricted the possible range of allocation difference. There was also no significant interaction between age and culture, suggesting that age and culture did not have a combined significant effect on participants' in-group bias.

However, we found a significant main effect for age on participants' explicit attitudes, although there was again no significant interaction between the age and culture factors. We believe that our participants' cooperative orientation might explain why we found age has a main effect for only explicit attitude measure. We also found that distributing the coins equally to both in-group and out-group members was the most preferred option by our participants although they explicitly preferred their in-group members over out-group members. This result partially confirmed a previous finding that people from collectivistic cultural traditions display more cooperative behavior than groups composed of people from individualistic cultural traditions (Cox, Lobel, & McLeod, 1991). Therefore, for future research using participants from different cultural backgrounds (e.g., Turkish vs. Dutch) and testing them in a between subject design might be a better idea to observe individual differences in both cultures.

Overall, it can be suggested that because we learn our culture through constantly interacting with our social environment and, further endorse our cultural values as we get older, cultural values are better predictors of in-group bias for older age groups. Understanding the role of age in combination with cultural values in in-group bias is not only important from a theoretical perspective, but also important from a practical point of view. This knowledge may help us to improve the viable programs aimed at tackling negative in-group bias for children from different age groups and living in different cultures.

Conclusion

In the present study, we aim to investigate whether age along with cultural values plays a role in predicting in-group bias. Our results indicate that cultural values such as uncertainty avoidance are related to in-group bias, but we were unable to find a causal effect of this value. However, our data suggest that future research is warranted to draw stronger conclusions on the relations between age and cultural values with in-group bias.

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