



A Competitor Smells Fishy but a Friend Smells Rosy: Social Identity Influences Psychological Well-Being During One-Person Social Exclusion

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Abstract. Ostracism is a painful experience due to exclusion and ignorance by others. Previous research had established that experiencing one-person exclusion had the same detrimental effect on individuals' sense of belongingness as the two-person exclusion (Chernyak & Zayas, 2010). In other words, including one inclusive person in social interactions did not buffer the negative consequence of social rejection by another person. However, this effect might depend on the identity of the inclusive individual. In the current study, the social identity of the inclusive individual (a friend, a stranger, and a competitor) was manipulated, and the threatened needs were measured using a four-item inventory created by Williams et al. (2000). In addition, Chinese and American participants were recruited to examine the effect of cultural identity (as part of social identity) on people's psychological well-being when an inclusive person was present. A total of 118 college students (62 Chinese and 56 Americans; $M_{age} = 20.08$, $SD = .15$) were recruited to complete a cyber ball game online and were randomly assigned to each of the three experimental groups (competitor, stranger, and friend). Results showed a Culture (2) * Identity (3) interaction. Specifically, when the inclusive individual was an ingroup member (a friend), the one-inclusive person buffered the negative consequence of social rejection by another person. However, if the inclusive individual was an outgroup member (a stranger and a competitor), the protecting effect diminished. In addition, compared to an inclusive stranger, an inclusive competitor was even worse for people regarding their feelings of belonging and overall well-being ratings. However, this main effect also depended on the participants' cultural backgrounds. The buffering effect of an inclusive friend was stronger for the Chinese participants than for the American participants. These findings indicated that the social identity of the includer might be crucial in the one-person social exclusion situation.

Keywords: ostracism · psychological well-being · social identity · culture · cyberball

1 Introduction

Maintaining social connection is a fundamental and universal human need. Human beings are indeed social animals eager to belong to a group. Well-being is satisfied by three psychological needs – relatedness, autonomy, and competence [1, 2]. The need for social interaction is as essential as the need for food and shelter. People’s perception of loneliness is generally negative. In terms of emotional experience, people reject loneliness. People would like to have activities with three or five friends. The existence of social attributes makes us feel a sense of belonging and security. Communication and connection with others make us have a richer emotional experience. Wilson et al. [3] conducted an experiment on emotional deprivation. Two hundred and twenty participants were asked to store all items, including mobile phones, and then spend six to fifteen minutes alone in a room. As a result, a quarter of women and two-thirds of men would choose mild electric shock instead of being deprived of external stimulation and unable to do anything alone.

Unfortunately, when people are included in a group, the need for social acceptance (a feeling of wanting to be accepted by others) is not always met, and sometimes people even experience social exclusion due to various factors. Ostracism (exclusion and ignorance) has a detrimental effect on human beings’ fundamental need to belong [4]. It could be caused by opinion deviation, inferior appearance, eccentric personality, a niche hobby, homosexuality, etc., in contemporary society. It refers to the opposition caused by differences. This is a negative evaluation and a severe situation for the “victim.” Studies have confirmed that social exclusion can have short-term or lasting negative effects on an individual’s physical health and prosocial behavior [5]. When social relations are poor, and we feel excluded in society, the response in our brain is similar to that of physical pain. Rejected people have increased activity in a region of the cerebral cortex that also responds to physical trauma [6].

More recently, Chernyak and Zayas [7] found that experiencing one-person exclusion had the same detrimental effect on individuals’ sense of belongingness as the two-person exclusion. Specifically, including one inclusive person in a situation where the other person apparently excluded you did not buffer the negative consequence of social rejection. However, to what extent do people’s psychological well-being suffer from being ostracized when an outgroup member (a competitor or a stranger) is present in an existing exclusive situation, compared to when an ingroup person (a friend) is present? Would people’s well-being benefit from an inclusive friend, whereas an inclusive competitor smells a rat? The current study will manipulate the social identity of the inclusive person in the one-person exclusion and examines its effect on people’s well-being.

Social identity is defined as part of an individual’s self-concept that originated from the awareness and acceptance of their group membership [8]. When social identity is linked to nationality, it is the cultural identity that people endorse. Cultural psychologists generally distinguish people from Individualistic cultures and Collectivistic cultures. Collectivist cultures emphasize the needs and goals of the group as a whole over those of each individual. In such cultures, relationships with the other group members are crucial in individuals’ identity. In contrast, Individualistic cultures pay attention to the needs of the individual over the needs of the group. In such cultures, independence and uniqueness are crucial in defining a person.

Therefore, in the current study, it is *hypothesized* that people's psychological well-being will benefit from an inclusive friend, and this effect will be stronger among the Chinese people. In contrast, people's psychological well-being will suffer from an inclusive stranger and an inclusive competitor, and this effect will be stronger among Americans.

2 Method

2.1 Participants

Our primary hypothesis involved assessing the effect of social identity on individuals' psychological well-being. A power analysis using the software package G*Power [9] indicated that with $N = 111$, our experiment could detect an effect size of Cohen's d of .3 (a medium effect size) using a 2(culture)*3(identity) ANOVA at a 5% alpha level threshold with 80% statistical power.

To avoid potential participants' drop-off and to balance the number of participants in each group, in the current study, 118 college students (62 Chinese and 56 Americans) were recruited to complete online research entitled "mental visualization test"). The mean age of the participants was $M = 20.08$ ($SD = .15$) years old, and the sample included 89 female students (75%) and 29 male students.

2.2 Experimental Design

The current study used a 2 (culture: Chinese vs. American) *3 (identity: an inclusive friend, an inclusive stranger, and an inclusive competitor) between-group design. Approximately 20 participants were randomly assigned to each group (see Table 1 for details).

2.3 Cyberball

Cyberball tossing game is a widely-used paradigm to explore how social exclusion occurs and what impact it will have. Recent researchers designed an online passing game, which subsequently became the virtual ball-tossing game [10].

2.4 Procedure

The research procedure followed the previous study by Chernyak and Zayas (2010). Participants were told to do a mental visualization test. They played through the Internet with two other players (experiment confederates named Player A and Player C). The participant was always assigned and labeled the role of player B. The game consisted of 60 throws. Because the current study was only interested in testing the effect of social identity on subjects' well-being in the one-person exclusion situation, therefore, only the one-person exclusion circumstance was utilized where Player A (excluder) never threw the ball to the participant, while Player C (includer) throws 50%–50% to the participant and the other player. To manipulate the social identity of the includer, Player C was labeled with a short description being either "a student from your class", "a student you have never met before", or "a student from a competing university").

After a Cyberball game, all participants were asked to complete a manipulation check which included the question about the level of the likeness of Player C.

Afterward, participants were required to complete a questionnaire assessing threatened needs [11]. It includes four items measuring sense of belonging, meaningful existence, person control, and self-esteem (5-point Likert scale with 1 = not at all and 5 = extremely). They were also asked to indicate their overall subjective well-being on a 5-point scale, with a higher score indicating better psychological well-being. Meanwhile, all participants provided their demographic information including age, gender, country, and place of residence.

Due to the issue of research ethics, participants were debriefed after the experiment so that they did not leave with negative feelings.

2.5 Data Analysis

Data were analyzed using SPSS25.0. Independent sample t-tests and ANOVA were utilized for data analysis.

3 Results

3.1 Manipulation Check

One-way ANOVA was used for the manipulation check. The level of the likeness of Player C was compared among the three experimental groups (competitor, stranger, and friend). Results indicated a significant effect of social identity on the likeness of Player C ($F = 171.66, p < .001$). LSD test showed that Player C was significantly more liked by the participants in the Friend group than in the Stranger group, and Player C was also significantly more liked by the participants in the Stranger group than in the Competitor group. These findings indicated that the manipulation of the social identity of Player C was effective.

3.2 The Effects of Social Identity on Psychological Well-Being

No age or gender effects were found in the current study.

The results of the ANOVA tests yielded a significant CULTURE by IDENTITY interaction on participants' overall subjective well-being $F_{(2,112)} = 3.14, p < .05, \eta^2 = .053$.

A simple effect test indicated that partially supported the hypothesis, Chinese participants benefited more from an inclusive friend than Americans, $F_{(1,112)} = 13.22, p < .001$. The American participants, however, did not suffer more from an inclusive competitor than the Chinese $F_{(1,112)} = .05, ns$. (see Fig. 1). In addition, the CULTURE by IDENTITY interaction was also significant in participants' sense of belonging $F_{(2,112)} = 5.53, p < .01, \eta^2 = .09$. Further simple effect test indicated that partially supported the hypothesis, Chinese participants benefited more from an inclusive friend than Americans, $F_{(1,112)} = 19.82, p < .001$. The American participants, however, did not suffer more from an inclusive competitor than the Chinese $F_{(1,112)} = .05, ns$. (see Fig. 2). Inconsistent with the hypothesis, however, the CULTURE by IDENTITY interaction was not

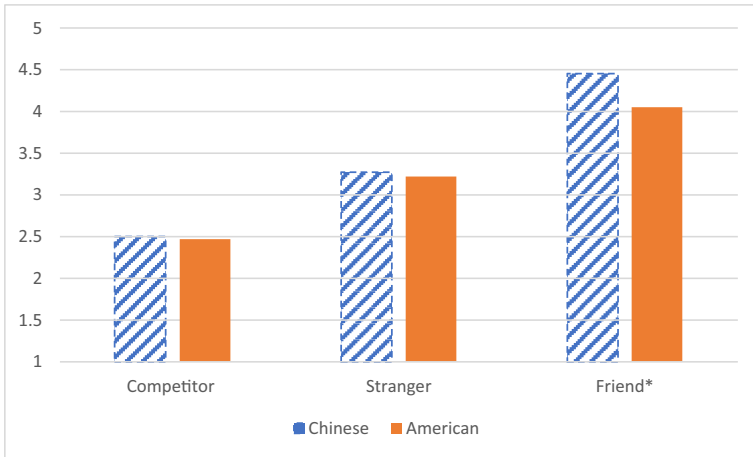


Fig. 1. The Effect of Social Identity of the Includer on Participants’ Subjective Well-being. Note: * indicates significant differences.

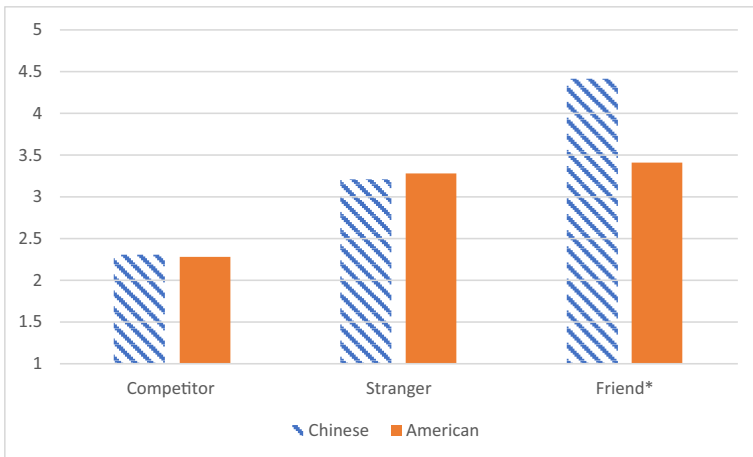


Fig. 2. The Effect of Social Identity of the Includer on Participants’ Sense of Belonging. Note: * indicates significant differences.

significant for the other three items of the threatened need measure (i.e., meaningful existence, person control, and self-esteem).

Additionally, the main effect of IDENTITY was significant for both subjective well-being and the sense of belonging ($F_{well-being} = 33.15, p < .001$; $F_{belong} = 44.39, p < .001$). LSD tests indicated that the overall subjective well-being and participants’ sense of belonging were significantly lower in the Competitor group compared to the Stranger group, and those two scores were significantly lower in the Stranger group compared to the Friend group. The means and standard deviations of each group were presented in Table 1.

Table 1. Descriptive Statistics

N = 118	Competitor (N = 41)		Stranger (N = 40)		Friend (N = 37)		
	M	SD	M	SD	M	SD	F
<i>Subjective Well-being</i>							
Chinese(N = 62)	2.50	1.05	3.27	.88	4.45	.51	33.15***
American(N = 56)	2.48	.98	3.22	.73	3.59	.62	
<i>Sense of Belonging</i>							
Chinese(N = 62)	2.30	.73	3.23	.68	4.40	.50	44.39***
American(N = 56)	2.29	1.06	3.28	.75	3.41	.71	

* $p < .05$; ** $p < .01$; *** $p < .001$

4 Conclusion

Previous investigations have focused on ostracism by strangers (Rudert & Greifeneder, 2016) and how experiencing one-person exclusion had the same detrimental effect on individuals' sense of belongingness as the two-person exclusion (Chernyak & Zayas, 2010). Nonetheless, in real life, the social identity of the includer and the excluder is without set limits, they could be our friends, family members, or coworkers. This research aimed to examine the effect of social identity on the psychological well-being of people under the situation of one-person exclusion.

The findings of the current study showed that the social identity of the includer had a significant effect on participants' psychological well-being (sense of belonging and the overall rating of subjective well-being). Specifically, compared to the ingroup condition, the level of belongingness and the overall subjective well-being were significantly higher in the ingroup condition than in the outgroup conditions (stranger and competitor). But this effect of social identity on participants' psychological well-being also depended on participants' cultural backgrounds in that Chinese people benefited more from an inclusive friend than Americans. In contrast, although people's psychological well-being suffered from an inclusive stranger and an inclusive competitor, this effect was not stronger among the Americans as we hypothesized. It is likely that the cyberball game was not effective enough in creating a threatening situation, leading to a floor effect on participants' psychological well-being scores. Future research should consider lab experiments with face-to-face interactions. Finally, the impact of social identity on the other three items of the threatened need measure (meaningful existence, person control, and self-esteem) was not significant; these findings were not expected but consistent with Williams et al.'s (2000) research on ostracism.

There are two major limitations of the current study. First, participants recruited for the experiment are all college students and thus are underrepresented in the general population. Second, although cultural identity does play an important role in reaction to inclusion and ostracism, it is likely that other culture-related concepts may also play an important role in understanding the consequences of including a third person in ostracism. For example, self-construal (i.e., the extent to which the self is defined independently of others or interdependently with others; Markus & Kitayama) [12] was

repeated found to determine the very nature of individual experience (including cognition, emotion, and motivation). Finally, the current study failed to consider the potential psychological mechanism that could account for the relationship between social identity and ostracism. Construal level theory [13] and social distance might play an important part in the findings of the current study. Future research should consider potential mediators as well as moderators.

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