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Pleasant music and voice behavior in the workplace: The mediating role of psychological safety

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Although the importance of music for individuals has long been recognized, the effect of music on employee behavior in the workplace has not yet been fully realized. We developed a theoretical model emphasizing the mediating role of psychological safety in the relationship between pleasant music and voice behavior. A survey was conducted with 241 hotel employees in China. Structural equation modeling analysis results show that pleasant music was positively related to psychological safety, which was positively related to voice behavior. Further, psychological safety fully mediated the relationship between pleasant music and voice behavior. We discuss the implications of our findings to understand the mechanisms through which pleasant music boosts employees' voice behavior, and suggest future research directions.

Keywords
pleasant music; music in the workplace; psychological safety; employee voice behavior; prosocial behavior; workplace environment

Article Highlights

- Pleasant music was positively related to employees' psychological safety.
- Employees' psychological safety was positively related to their voice behavior.
- Psychological safety fully mediated the relationship between pleasant music and employee voice behavior in the workplace.

In today's rapidly changing business environment, *voice behavior*, which is defined as an expression of constructive opinions about work-related issues that is aimed at improving organizational performance (LePine & Van Dyne, 2001; Van Dyne & LePine, 1998), is important for many companies (Royer et al., 2008). Employee voice can lead to enhanced organizational innovation, competitive advantage, and organizational performance (Royer et al., 2008; Torre, 2019; Torre et al., 2021). Previous studies have found a potential positive influence of environmental characteristics on voice behavior (Morrison, 2011). Researchers have, therefore, increased their attention to the type of work environment that leads to voice behavior and how this works (Frazier, 2013; Morrison et al., 2011; Yang & Wang, 2020).

Music in the workplace has also been receiving more scholarly attention in recent years (Landay & Harms, 2019; Raglio et al., 2020), and researchers have shown that workplace music is positively linked to the task performance and contextual performance components of employee performance (Landay & Harms, 2019).

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For example, Payne et al. (2017) showed in their examination of service workers that music was an important facilitator of employees' interaction with customers. They found that employees actively interacted with customers when they were satisfied with their music experience. Haake (2011) observed that music helped office employees become inspired and concentrate on their work. Further, Lesiuk (2005) showed that listening to music boosted software company developers' positive affect and increased their work quality.

The relevance of music in the workplace for voice behavior has not yet been examined, although prior researchers have explored the link between music and *prosocial behavior*, which refers to voluntary behavior aimed at benefiting others (Barnett, 2011). These studies found that *pleasant music*—that is, positive and activating music that has positive emotional valance and high arousal (Ritter & Ferguson, 2017)—was positively related to prosocial behavior (Kniffin et al., 2017; North et al., 2004). As voice behavior is a form of prosocial behavior (Morrison, 2014; Van Dyne & LePine, 1998), it is plausible to hypothesize that music will also be related to voice behavior.

However, the perceived risks involved in voice behavior make it difficult for employees to speak their thoughts (Van Dyne et al., 2003). Ge (2020) proposed that employees voice their suggestions when they perceive enough psychological safety in their organization. Yang and Wang (2020) also found that psychological safety is a vital mechanism accounting for the effect of various contextual antecedents on voice behavior. Thus, we examined the relationship between workplace music and voice behavior through the mediator of psychological safety, and built and tested a model incorporating these variables.

Literature Review and Hypothesis Development

The kind of behavior entailed in expressed voice is a characteristic of organizational citizenship behavior (Choi et al., 2013). Organizational citizenship behavior is an outcome of listening to music that can improve positive employee behavior and attitudes (Landay & Harms, 2019). Music relaxes unnecessary nervous tension and creates a pleasant work atmosphere (Beckett, 1943); thus, it can be perceived as a positive gesture on the part of the employer. This perception should motivate employees to reciprocate by, for example, engaging in voice behavior. Indeed, social exchange theory emphasizes the importance of reciprocity, for example, good things given with the expectation of receiving good things (Emerson, 1976). Social exchange relationships generate the willingness of employees to invest effort in extrarole behaviors, including voice behavior (Albrecht, 2012; Van Dyne & LePine, 1998). From a social exchange theory perspective, workplace music can be viewed as a good thing offered by employers, to which employees reciprocate with effort by voicing their constructive suggestions. Thus, we proposed the following hypothesis:

Hypothesis 1: There will be a positive association between pleasant music and employees' voice behavior in the workplace.

Music is inherently involved with the expression of emotion (Landay & Harms, 2019), and has a crucial emotional influence because rhythms and sounds have a significant impact on the regions of the human brain responsible for processing sadness, joy, and nostalgia (Meyer, 2019). Listening to music can lead to positive emotional consequences like relaxation, optimism, and enthusiasm (Oldham et al., 1995; Webster & Weir, 2005). According to emotions as social information theory (Van Kleef, 2010), positive emotions communicate interpersonal security, resulting in a safe social context (Liu et al., 2015). Music is also considered an effective method for affecting people's psychological state (Terwogt & Van Grinsven, 1991). Previous research has found that listening to music is effective in reducing psychological stress (Fallon et al., 2020; Huron, 2006). When individuals listen to pleasant music, they are relaxed and feel less stressed (Jeong, 2008; Jiang et al., 2016). Stress is one of the greatest threats to safety as it causes burnout effects (Michel, 2016). Therefore, we proposed the following hypothesis:

Hypothesis 2: There will be a positive association between pleasant music and psychological safety in the workplace.

Psychological safety is an affective state in which employees feel comfortable engaging in constructive discussion without fear of censure (Nembhard & Edmondson, 2011). Prior research has consistently found that psychological safety is positively related to voice behavior (Detert & Burris, 2007; Ge, 2020). Psychological safety reflects the belief that risky behavior will not result in personal loss (Detert & Burris, 2007). When employees feel at risk of a threatening atmosphere, they choose to protect themselves and keep silent (Van Dyne et al., 2003). In contrast, when employees perceive psychological safety in their work role, they tend to demonstrate voice behavior and express their suggestions (Ge, 2020). Thus, we proposed the following hypothesis:

Hypothesis 3: There will be a positive association between psychological safety and employees' voice behavior in the workplace.

Therefore, it is possible that psychological safety will mediate the relationship between pleasant music and voice behavior, that is, pleasant music will enhance psychological safety, which will promote employees' voice behavior. Thus, we proposed the following hypothesis:

Hypothesis 4: Psychological safety will mediate the relationship between pleasant music and employees' voice behavior in the workplace.

Method

Procedure

We employed a survey to collect data from employees at two hotels in South China, where specifically programmed music is used to improve the hotel atmosphere. Participants volunteered to take part in the survey and provided written informed consent. After briefly introducing the research purpose, we distributed 310 questionnaires via email with the help of each hotel's human resources department. Participants were told to think about the music in their workplace when answering the questions. Finally, 241 valid responses were returned (response rate = 77.7%). This study was approved by the ethics committees of our universities.

Participants

Of the participants, 157 (65.1%) were women and 84 (34.9%) were men (M_{age} = 27.7 years, *SD* = 6.84, range = 22–34). On average, their organizational tenure was 6.5 years (*SD* = 3.59, range = 3–10). Regarding their department, 51 (21.2%) were employed in the front office, 48 (19.9%) in housekeeping, 45 (18.7%) in food and beverage, 36 (14.9%) in recreation, 28 (11.6%) in security, and 33 (13.7%) in other department types.

Measures

We used a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree* to measure each variable. First, the original English scales were translated into Chinese by an English teacher whose native language is Chinese. Second, the Chinese version was back-translated into English by a bilingual researcher. Third, two business school professors reviewed the translation and back-translation, and conferred with us to obtain the final version.

Pleasant Music

Pleasant music was assessed with Yalch and Spangenberg's (2000) six-item scale, which was adapted from Donovan and Rossiter (1982). Sample items are "The music sounds happy," "The music sounds contented," and "The music sounds hopeful."

Psychological Safety

We measured psychological safety with Yang and Wang's (2020) three-item scale adapted from May et al.'s (2004) scale. The items are "I feel free to be myself at work," "I feel free to express my opinions at work," and "I feel completely comfortable in the environment at work."

Voice Behavior

We measured voice behavior with Van Dyne and LePine's (1998) six-item scale. We replaced the words "the particular employee" with "I." A sample item is "I will give my suggestions about how to make this organization better."

Results

Confirmatory Factor Analyses

Descriptive statistics, correlations, and internal consistency reliabilities are shown in Table 1. We conducted a series of confirmatory factor analyses to test the measures' discriminant validity. Three measurement models were assessed: a three-factor model (pleasant music, psychological safety, voice behavior), a two-factor model (pleasant music + psychological safety, voice behavior), and a single-factor model (pleasant music + psychological safety + voice behavior). The results show that the three-factor model provided a better fit to the data, chi-square/degrees of freedom ratio (χ^2/df) = 1.57, root mean square error of approximation (RMSEA) = .05, incremental fit index (IFI) = .98, comparative fit index (CFI) = .98, than did either the two-factor model, χ^2/df = 3.79, RMSEA = .14, IFI = .76, CFI = .76, or the single-factor model, χ^2/df = 7.66, RMSEA = .20, IFI = .58, CFI = .58. As these findings provide evidence of discriminant validity, common method variance was not a serious concern in this study.

Table 1. *Descriptive Statistics, Correlations, and Internal Reliability Values for Study Variables*

	M	*SD*	α	1	2	3
1. Pleasant music	3.98	0.73	.85	1		
2. Psychological safety	3.62	0.70	.90	.35**	1	
3. Voice behavior	3.67	0.82	.83	.32**	.37**	1

Note. N = 241.
** $p < .01$.

Structural Equation Modeling Analysis

We used structural equation modeling to test the hypotheses. As shown in Figure 1, the path coefficient between pleasant music and voice behavior was not significant, whereas the path coefficients between pleasant music and psychological safety, and between psychological safety and voice behavior were significant and positive. Thus, Hypothesis 1 was not supported, and Hypotheses 2 and 3 were supported. In addition, we used bootstrapping analysis (5,000 replications) to further verify the mediating effect of psychological safety. The results show that the indirect effect of pleasant music on voice behavior via psychological safety was significant and the 95% confidence interval did not contain zero. Thus, Hypothesis 4 was supported.

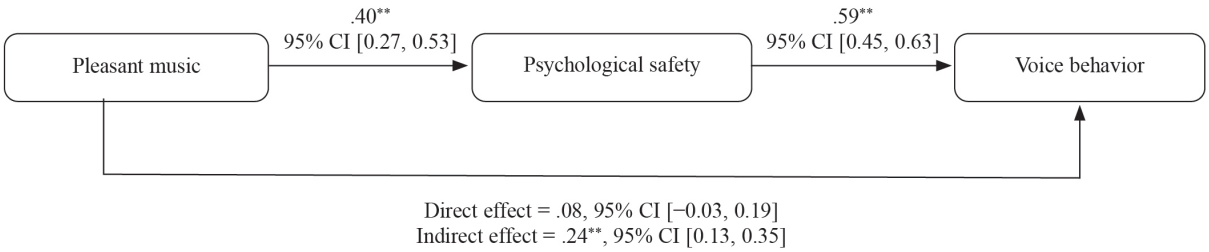

Figure 1. *Results for Hypothesized Model*
Note. CI = confidence interval.
** $p < .01$.

Discussion

We investigated the mechanisms underlying the relationship between pleasant music and voice behavior in the workplace, focusing primarily on the mediating role of psychological safety. The results show that pleasant music was indirectly and positively associated with voice behavior via psychological safety. Our findings have important theoretical and practical implications.

Theoretical and Practical Implications

We have responded to the call for further examination of the effect of music in the workplace, following Landay and Harms's (2019) suggestion that future researchers seek to understand the role of music in regard to additional work-relevant variables. Our finding that pleasant music was not positively related to employees' voice behavior is inconsistent with prior results showing that pleasant music was positively related to prosocial behavior (Kniffin et al., 2017; North et al., 2004). It appears that pleasant music does not directly affect employees' voice behavior. Landay and Harms, by contrast, found that music had an impact in the workplace via the mediators of mood and emotion. It is possible that demographic factors have an influence in this regard. Our sample was quite young overall, and research has shown that age has significant effects on music perceptions and understanding of emotions (Robazza et al., 1994).

To our knowledge, we are the first to examine the mediating effect of psychological safety in the pleasant music–voice behavior link in the workplace; thus, this is our most important finding. This result provides empirical support for the argument that pleasant music has beneficial effects on the psychological and behavioral outcomes of adult listeners (Kmpfe et al., 2011). Our results highlight the motivational implication of psychological safety in transmitting the effect of pleasant music to voice behavior: Employees perceive psychological safety from listening to pleasant music, which results in their engagement in voice behavior.

From a practical viewpoint, our findings also have implications for organizations. We have provided empirical evidence for the importance of psychological safety in the facilitation of employees' voice behavior. Therefore, it is not sufficient to only include pleasant music within a work environment to have a good effect on employee voice. Managers should seek to establish a level of psychological safety in the workplace to leverage the contribution of pleasant music to encouraging employees to engage in voice behavior.

Limitations and Directions for Future Research

There are several limitations in this study. First, we used a cross-sectional research design, which does not allow for the inference of causality. Future researchers could use longitudinal or experimental designs to replicate our findings. Second, participants assessed their own voice behavior. Although the confirmatory factor analysis results indicate that common method bias was not a significant concern, future researchers could use supervisor assessment to measure subordinates' voice behavior. Third, we focused only on the role of psychological safety. Future researchers could explore the role of other psychological resources in the relationship between pleasant music and voice behavior in the workplace.

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Both authors contributed equally to this article and should be considered as co-first authors.

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