



## Happy music and employee creativity in the workplace: Psychological safety as a mediator

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The importance of music is a key topic that has been studied in many disciplines. We examined the relationship between employees' perception of happy music and their creative performance, and explored the mediating effect of psychological safety in this link. Data were collected from 315 employees working in three large hotels located in Mainland China. We performed structural equation modeling to test the proposed research model. Results show that employees' perception of happy music was positively related to creative performance, and this relationship was mediated by perceived psychological safety. Therefore, employees produced creative outcomes while perceiving the happiness of music in the workplace, in part because they felt psychologically safe. Our findings offer organizations practical insight into how to promote employee creativity by using music as an effective tool for enhancing the quality of the work environment. Implications for future research are discussed.

### Keywords

happy music; work environment; workplace music; psychological safety; emotion; creativity; creative performance

### Article Highlights

- Perception of happy music was found to positively influence employees' perception of psychological safety and creative performance.
- Perceived psychological safety mediated the relationship between employees' perception of happy music and their creative performance.
- Future studies could control for possible confounding effects between perception of happy music and creativity, including time of day and personal preference for style of music.

In today's modern business environment the success of an organization relies largely on employees bringing forth creative and useful ideas for problem solving and for product or process innovation (Thompson, 2003). Many studies have devoted attention to determinants of employee creativity, including personal and contextual characteristics (D. Liu et al., 2016; Oldham & Cummings, 1996; Shalley et al., 2004). In particular, prior researchers have focused on the role of the work environment in spurring creativity (Amabile et al., 1996). For example, Tsai et al. (2015) analyzed data from tourism and hospitality organizations in Taiwan, and showed that a supportive work environment featuring procedural justice,

knowledge sharing, motivation, and promotion enhanced employees' creativity performance. Using a sample of Chinese hotel employees, Yang (2020) found that fun in the workplace had both a direct and an indirect positive influence on employee creativity.

Music as a stimulus for psychological motion (Jones, 1981, 1982) is recognized as an important environmental condition for work performance (Landay & Harms, 2019). Researchers have also supported the positive link between workplace music and employee performance, such as task performance and organizational citizenship behavior (Landay & Harms, 2019; Raglio et al., 2020). However, the question remains as to how workplace music exerts its impact. Landay and Harms (2019) noted that music acts via the mediators of listeners' mood state and emotional state to influence behavior. We aimed to extend the music literature by examining the effect of listening to happy music in the workplace on employee creative performance. Creative behavior is inherently risky and, to engage in creative activities, employees need to perceive that they have psychological safety support (K. Liu & Ge, 2020). *Psychological safety* is an emotional state in which people feel safe when taking interpersonal risks in the workplace (Edmondson, 1999). Research has demonstrated that psychological safety is a predictor of individual and team creativity (e.g., Agarwal & Farndale, 2017; Hu et al., 2018). Moreover, it has been shown that psychological safety mediates the effects on employees' creativity of the work environment, like workplace fun (Yang, 2020). We expected that psychological safety might function as a mechanism affecting the relationship between workplace music and employee creativity. This study is a response to the call (Landay & Harms, 2019) for conducting research to seek understanding of the role of music in improving creative outcomes. The theoretical model is presented in Figure 1.

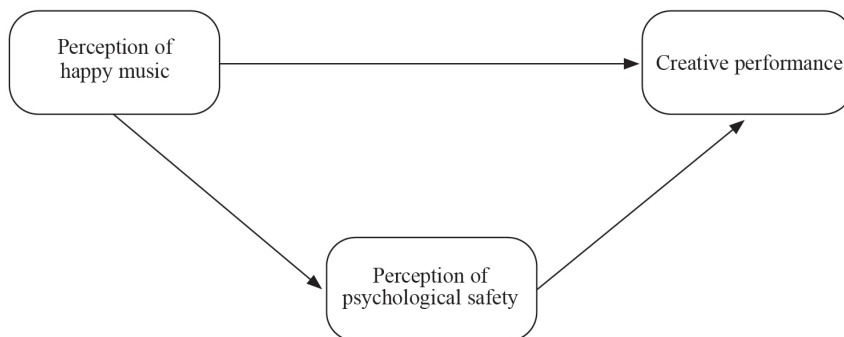


Figure 1. *Theoretical Model*

### Hypothesis Development

*Creativity* is generally conceived of as the ability to produce original, novel, and potentially useful ideas regarding products, process, and problem solutions (Amabile et al., 2005). Research has indicated that listening to music while working can improve task performance (e.g., Fox, 1971). Oldham et al. (1995) found that employees with access at work to their favorite music exhibited an increase in performance compared to a nonlistening control group. Ritter and Ferguson (2017) examined the impact of listening to music on creative thinking and found that participants who listened to happy music performed better on a divergent thinking task than did participants who performed the task in silence. Ritter and Ferguson argued that listening to music could offer innovative and efficient ways and means to foster creative cognition in various settings where creative thinking is needed. Moreover, employees listening to music at work is beneficial for enhancing their inspiration as well as improving concentration and engagement in their work (Haake, 2011). Therefore listening to music functions as a mechanism to fuel creative performance (Hoever et al., 2015; K. Liu & Ge, 2020). Hence, we suggested that employees would be enthusiastic about their work,

think creatively, and employ creative energy in their tasks under the condition of listening to happy music.

**Hypothesis 1:** Perception of happy music will be positively related to employees' creative performance in the workplace.

It is known that music essentially affects one's emotional state because rhythms and sounds have a significant influence on the regions of the human brain that are responsible for processing sadness, joy, and nostalgia (Meyer, 2019). Listening to music may result in positive emotional consequences, such as relaxation, optimism, and enthusiasm (Oldham et al., 1995; Webster & Weir, 2005). According to social information theory (van Kleef, 2016), being in a positive emotional state serves as a heuristic cue informing people that a situation is safe and everything is going well (Clore et al., 2001). Researchers have reported that listening to happy music is effective in reducing psychological stress, and psychological stress is viewed as a great threat to psychological safety (Jiang et al., 2016; Michel, 2016).

Researchers have explored the positive association between psychological safety and employee creativity (e.g., Liang & Fan, 2020). These authors also recognized psychological safety as a crucial precursor of employee creativity. According to Edmondson's (1999) definition that psychological safety describes a work climate in which employees feel safe to engage in certain risky behaviors, the perception of psychological safety functions as a predictor of involvement in risky behaviors. Climates perceived as psychologically safe may attenuate employees' perception of potential risks when they propose new ideas because they will not fear that they will be blamed in such climates (Edmondson, 1999, 2004; Liang & Fan, 2020).

According to Shek and Schubert (2009), listening to enjoyable music puts individuals in a good mood, which enhances their arousal to an optimal level, and thus results in better performance at work. On the basis of the arguments presented above, a perception of happy music may lead to a positive emotional state in the listener, such as feeling psychological safety, which is important in increasing creative output. Thus, we suggested that psychological safety would be a mediating bridge connecting the perception of happy music and employee creative performance.

**Hypothesis 2:** Employee perception of psychological safety will positively mediate the relationship between the perception of happy music and creative performance in the workplace.

## Method

### Participants and Procedure

This study was approved by the ethics committees of our universities. The human resources departments of three hotels in Mainland China assisted us in approaching their staff in the front office, housekeeping, and food and beverage departments, and inviting them to participate in the study. Programmed music is always used in these hotels, with the objective of improving the hotel atmosphere.

A paper-and-pencil survey was conducted to collect subordinate–supervisor dyadic data. After confidentiality and anonymity were assured, we distributed 400 survey forms. Participants were instructed to answer the survey items in terms of the music that was currently playing in the background in their hotel. In order to avoid common method biases, the survey was conducted in two waves. In Wave 1, staff members' perception of both happy music and psychological safety were obtained. Two weeks later, in Wave 2, supervisors assessed their subordinates' creative performance. No supervisor rated more than two of their subordinates in this survey.

Finally, 315 subordinates completed the survey, and 219 supervisors were successfully matched with the responses of these subordinates, yielding a 78.75% response rate. Among the subordinate participants, 175 were women (55.56%) and 140 were men (44.44%), and they were aged between 26 and 41 years ( $M = 32.71$ ,  $SD = 6.54$ ), with a work experience tenure ranging between 4 and 12 years ( $M = 7.63$ ,  $SD = 3.77$ ). As regards level of education, 94 (29.84%) had a junior college education, 140 (44.44%) had a bachelor's degree, and 81 (25.72%) had a master's degree or higher academic qualification.

## Measures

Perceptions of happy music and psychological safety were measured using a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Creative performance was measured using a 5-point Likert scale ranging from 1 = *not at all creative* to 5 = *very creative*. To ensure meaning equivalence, items for measures developed in the English language were translated from English to Chinese and then back-translated to English by two organizational behavior professors who were fluent in both English and Chinese.

### **Perception of Happy Music**

Yalch and Spangenberg's (2000) six-item scale, which was adapted from Donovan and Rossiter (1982), was used to measure the perception of happy music. Sample items are "The music sounds happy" and "The music sounds hopeful."

### **Perception of Psychological Safety**

Yang and Wang's (2020) three-item scale, which was adapted from the scale developed by May et al. (2004), was used to measure the perception of psychological safety. Sample items are "I feel free to be myself at work" and "I feel completely comfortable in the environment at work."

### **Creative Performance**

Oldham and Cummings's (1996) three-item scale was used to measure employee creative performance. Sample questions are "How original and practical is this employee's work?" and "How creative is this employee's work?"

## Reliability

The Cronbach's alphas of the studied variables are shown in Table 1. All three factors had acceptable alpha values (> .70), showing good reliability and internal consistency of all the scales.

Table 1. *Descriptive Statistics and Cronbach's Alphas for Study Variables*

Variable	$\alpha$	$M$	$SD$	1	2	3
1. Perception of happy music	.93	3.42	0.67	1		
2. Perception of psychological safety	.93	3.37	0.55	.34**	1	
3. Creative performance	.89	3.54	0.50	.47**	.40**	1

Note.  $N = 315$ .

\*\*  $p < .01$ .

## Results

### **Discriminant Validity**

We conducted a confirmatory factor analysis, using chi square ( $\chi^2$ ), degrees of freedom ( $df$ ), root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker–Lewis index (TLI) to test if the hypothesized model captured distinct constructs. The results show that the three-factor model (perception of happy music, perception of psychological safety, and creative performance) had a reasonably good fit to the data,  $\chi^2 = 80.66$ ,  $df = 51$ ;  $\chi^2/df = 1.58$ ; RMSEA = .04, CFI = .98, TLI = .98. Further, the fit of

this model was better than that of the model in which all items were combined into a single factor,  $\chi^2 = 697.53$ ,  $df = 54$ ;  $\chi^2/df = 12.92$ ; RMSEA = .20, CFI = .64, TLI = .56. These findings support the discriminant validity of the variables.

### **Hypothesis Testing**

We used structural equation modeling to test the hypotheses with Amos 24. In line with our prediction, perception of happy music was positively and significantly related to employee creative performance,  $.38$ ,  $p < .001$ , 95% confidence interval (CI) [0.20, 0.56], supporting Hypothesis 1. Additionally, perception of happy music was positively and significantly related to perception of psychological safety,  $.34$ ,  $p < .001$ , 95% CI [0.16, 0.52]; and perception of psychological safety was positively and significantly related to employee creative performance,  $.27$ ,  $p < .001$ , 95% CI [0.14, 0.40]. The indirect effect was tested using bootstrapping analysis (2,000 resamples). Results show that the indirect effect of perception of happy music on employee creative performance through perceived psychological safety was  $.09$ ,  $p < .001$ , 95% CI [0.04, 0.15]. Thus, Hypothesis 2 was supported.

### **Discussion**

In this study we analyzed the mediating effect of employees' perception of psychological safety in the workplace on the relationship between the perception of happy music and creative performance. According to our findings, perception of happy music was positively related to employee creative performance, and perceived psychological safety played a mediating role in this relationship.

### **Theoretical Implications**

This study extends the literature in several ways. First, our findings expand understanding of the role of music in relation to work-relevant variables (Landay & Harms, 2019). We have answered the call by Landay and Harms (2019) for more research on the creative outcomes of music. Our study provides direct evidence that perception of happy music played a crucial role in enhancing creative performance. Second, consistent with the view that music is an effective method to induce mood and emotion (Västfjäll, 2001), we found that perception of happy music was positively related to perception of psychological safety. This finding provides empirical support for the argument that listening to happy music has a beneficial impact on personal psychological and behavioral outcomes (Kämpfe et al., 2011). Thus, our study contributes to the literature on the effect of listening to music by expanding the scope of positive outcomes that are facilitated by happy music.

Moreover, we examined the mediating role of psychological safety in the perception of the link between happy music and creative performance. As predicted, perception of psychological safety positively mediated the relationship between perception of happy music and creative performance. This finding further contributes to the literature by supporting the view that music affects work-relevant outcomes through mood and emotion (Landay & Harms, 2019). The effect of perception of happy music on creative performance was partially mediated by psychological safety. Our results demonstrate this underlying process in the connection between perception of happy music and creative performance. Lesiuk (2005) reported that positive emotions evoked by workplace music are positively related to task performance. Similarly, we have revealed that perception of happy music induced a perception of psychological safety and promoted employee creative performance. To our knowledge, this study is the first to explore the relationship of perception of happy music with employee creative performance by introducing the mediator of psychological safety. Given that psychological safety functions as an important mediating mechanism underlying the link between workplace environment and creative performance (Yang, 2020), it is essential and timely to integrate psychological safety into the relationship between workplace music and creative performance.

## Practical Implications

Our results have implications for managerial practice. First, the main effect of perception of happy music on employee creative performance indicates the significant role of perception of happy music in employee creative performance. Dul and Ceylan (2011) suggested that managers should design a work environment in their organization that is appropriate for facilitating the creative process, leading to improved creative performance. Playing happy music within the work environment will enhance the creative performance of employees. Second, the mediating effect of psychological safety in the main effect relationship suggests that it is important to consider how workplace music is perceived and which emotions it evokes. Managers of organizations should attach importance to establishing a climate of psychological safety. By cultivating psychological safety among employees, perception of happy music will enhance their creative performance.

## Limitations and Future Research Directions

Two major limitations should be addressed in this study. First, the use of cross-sectional data might have introduced the potential for common method bias, even though the confirmatory factor analysis results show that common method bias was not a major concern. Future research with a longitudinal or experimental design could be conducted to infer cause–effect relationships. Second, given that the hotels in our study selected and played different styles of music according to the time of day, it is highly likely that respondents perceived the music as happy or unhappy depending on what they were listening to at the time. Future research should be conducted to examine the effect of happy music on employee creativity while controlling for this confounding effect. Another aspect for future research consideration is whether all individuals perceive a specific musical work as happy, and if some people dislike having any background music when working.

## Conclusion

This study fills a research gap in the music literature. It is important to understand the role of music in facilitating creative performance when examining the impact of music in the workplace. The results show that employees' perception of happy music enhances their creative performance both directly and also indirectly via enhanced perception of psychological safety. These findings reinforce the value of employees' perception of happy music for stimulating their creativity.

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