

EFFECTS OF DAILY COMMUNICATION SKILLS ON EMOTIONAL EXPRESSIONS OF PERFORMERS

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Background

Previous studies have suggested that there is an association between the daily communication skills of performers and their ensemble performance. When their daily communications skills are higher, their ensemble performance evaluations are also better. However, it remains unclear whether this pattern is actually related to the acoustical characteristics of their performances.

Aims

This study aimed to examine the relationship between the characteristics of performed sounds of a musical piece with different intended emotional expressions and their daily communication skills.

Method

Six skilled female pianists participated in this experiment ($M_{\text{age}}=38.7$). They played a short piece consisting of 11 bars. A professional composer created the piece for this study, considering the need to avoid implanting a specific emotional impression into the piece. The experiment was conducted in a quiet room of the Nagoya Institute of Technology using an electronic piano (Yamaha, Clavinova CLP-535). The performances were recorded as MIDI data. Participants were allowed to practice the piece until they were satisfied. The participants played the piece intending six types of emotional expressions, namely; happiness, sadness, fear, anger, tenderness, and no emotion at all. The order of the performance of emotional expressions was randomized. Participants were instructed to play while imagining that listeners could determine each type of intended emotion. They were allowed to change tempo, timing expression, and dynamics; however, they were required to keep in pitch, follow the score, and repeat playing their rendition of each emotional expression until they were satisfied with their performance. After the performances were completed, the participants responded to questionnaires, including the Japanese version of the Affective Communication Test (ACT, a scale for daily nonverbal expressiveness) and questions about attributions.

Results

The relationship between the performances and the ratings of ACT indicate that there is a positive correlation between ratings of ACT and the average duration of the emotional expression. There existed a positive correlation between ACT and the standard deviation of the velocity of MIDI data in the expressions of sadness, anger, and tenderness. There also existed a positive correlation between the ratings of ACT and standard deviations for the equivalent of an 8th note duration in the expressions of sadness and fear. In addition, participants whose ACT ratings were high showed significant differences when performing the expressions of sadness and tenderness for the duration of the whole performance. These two types of emotions were observed to be difficult for listeners to determine while listening to the same musical piece being played with different emotional expressions.

Conclusions

The main findings of this study were: (1) that performers with higher communication skills were more significantly able to alter the piece for its entire duration and volume; (2) that this tendency differed depending on the types of intended emotional expressions being played; and (3) that the performers with higher ratings of ACT yielded more significant differences between the intended emotional expressions that were supposed to be ambiguous for listeners.

Keywords

communication skills; emotion; musical communication; piano performance; MIDI