The effects of music on room attendants' work performance.

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Abstract:

The purpose of this study is to investigate the influences of music on the work performance of hotel room attendants. Most of the hotels' guest rooms are equipped with radios. However, many room attendants are told not to turn on the music while cleaning the guest rooms. Is this policy effective? Can music enhance room attendants' work performance? An experiment was conducted in a business hotel in Taiwan. Music was found to have no significant impact on room attendants' work performance. Nevertheless, the majority of the participants did indicate that they liked to have music playing in the guestrooms while cleaning.

Keywords: experiments | music | work performance | productivity | hotel room attendants | hospitality administration | tourism industry

Article:

INTRODUCTION

The main responsibility of room attendants is to clean a hotel’s guest rooms. Room attendants are required to clean between fourteen and sixteen rooms within each eight-hour shift based on the U.S. national average for rooms cleaned, but the actual number may vary, depending upon the type and nature of hotel activity (Martin & Jones, 1992). Although hotels rely heavily on these workers to provide clean rooms, room attendants are generally unskilled and low-paid. In the past, these workers have been taken for granted by many of their employers. Most hotel guestrooms are equipped with radios. Nevertheless, many room attendants are told not to turn these radios on while cleaning the rooms. Is this policy effective? Does the policy neglect something positive? In fact, can music enhance the work performance of the room attendants and provide the hotel with a major efficiency benefit in addition to making their employees happier on the job? The purpose of this study is to seek the answer to that question and to investigate the influences of music on the work performance of hotel room attendants.

LITERATURE REVIEW

Music and Productivity

Music for industrial purposes came into its own during World War II, when management was willing to try anything to speed-up production (McPeak, 1946). Early reports on the influence of music on morale and worker productivity appeared in widely-read magazines, such as Time, Reader's Digest and other popular periodicals (Uhrbrock, 1961). Most of these results were based on questionnaires and interviews and indicated that the majority of workers "like music while they work" (Uhrbrock, 1961). Too often the effect of music on production, absenteeism, turnover, accident rates, and workers' attitudes were measured only in terms of the optimistic reports concerning music's effectiveness and the positive beliefs held by those responsible for installation and programming (McGehee&Gardner, 1949). Many claims were made without statistical support or citation of sources (Uhrbrock, 1961). Quantitative reports that indicated that music resulted both in an increase in the amount of production as well as improvement in the workers' attitudes toward their jobs were very sparse (Burris-Meyer, 1943; Fox & Embrey, 1972; Humes, 1941; Smith, 1947). H. C. Smith's research on the effects of background music on the productivity of radio assemblers showed that the output of assemblers increased from 4% to 25% (Smith, 1947). A recent quasi-experimental study administered by Oldham et al. (1995) on the relations between music and employee work responses also indicated that the use of personal-stereo headsets at a large retail organization improved the performance of employees.Anumber of other studies have also indicated music's positive effect on performance of various tasks in the educational and corporate environment (Kerr, 1954; Uhrbrock, 1961; Sundstrom, 1986). However, no published research on music and work performance has ever been conducted among room attendants in a hotel environment.

Even though some research indicated the positive effects of music on employee work performance, nevertheless, conflicting findings on the effects of music on work performance were reported (Freeburne&Fleischer, 1952; Smith, 1961; Newman, Hunt&Rhodes, 1966). Some researchers even suggested that music hindered task performance (Kirkpatrick, 1943). A study by McGehee and Gardner (1949) on music in a complex industrial job indicated that the introduction of music resulted in no increase in production although the employees believed that the music was beneficial to them in the performance of their jobs. Smith's (1961) later study on music failed to show any significant effects of industrial music on key-punch operators' output errors and absentee rates. A similar finding was reported by Devereux (1969) on a study of thirty-one telecommunications operators whose job required a combination of routine and complex activities. No significant change in overall work output during or after the trial period was found.

Music and Mood

Some other music studies have focused on music as a stimulus for triggering mood. Music is a powerful means of reducing fatigue and nervous tension, increasing relaxation and boosting levels of arousal or activity and in turn enhancing work performance (Diserens, 1926; Cardinell,

1948; Sundstrom, 1986). The research of Clynes and Manfred, noted scholars in both music and neurophysiology, indicate that appropriately structured music acts on the nervous system like a key on a clock, activating brain processes with corresponding emotional reactions (Clynes & Manfred, 1975;1977). A substantial body of research has indeed established that music can alter moods and that mood changes can affect behaviors such as absenteeism and turnover intention. (Yalch & Spangenberg, 1990; George, 1989).

Mood has been described as a phenomenological property of a person's subjectively perceived affective state and has been shown to have significant effect on behavior (Gardner, 1985). Previous studies have shown that mood does appear to have a substantial influence on an employer's performance. A positive mood seems to make a person kinder, more generous, more resistant to temptation and more willing to delay self-gratification (Isen & Levin, 1972; Berkowitx & Connor, 1966; Fry 1975). The above thoughts lead to the following four hypotheses.

Hypothesis 1: When cleaning guestrooms, room attendants who listen to music have higher work performance scores than room attendants who do not listen to music.

Hypothesis 2: When cleaning guestrooms, room attendants listening to music will report higher post-mood scores than room attendants not listening to music.

Hypothesis 3: Room attendants listening to music while cleaning the guestrooms will have higher post-mood scores than the pre-mood scores. Also, room attendants not listening to music will have no changes between their pre- and post-mood scores.

METHODOLOGY

An experimental study was performed to investigate the effects of music on the work performance of hotel room attendants. This experiment was conducted in Toong Mao Resorts and Hotels, Kao-Hsiung, which is a three-star business hotel located in Kao-Hsiung City in Taiwan. The hotel has 150 guestrooms. The treatment factor–music–was manipulated by having the presence and the absence of music in the guestrooms. The performance of the room attendants was measured by their average cleaning speed per room combined with room inspection scores. The average speed of cleaning a room was calculated by dividing the total time spent by the total number of rooms cleaned. The room inspection list used by the hotel to evaluate room attendant performance had a maximum of 100 points and was used as the criteria for scoring the quality of the rooms cleaned.

Subjects

The total number of room attendants at the Toong Mao Resorts and Hotels, Kao-Hsiung was nine. One room attendant was randomly chosen as the subject in the pilot study prior to the experiment. The remaining eight room attendants were randomly assigned to either a "music"

were all females, and their ages ranged from thirty-six to fifty-five years. The average age of these room attendants was forty-seven years. Their work experience in the housekeeping arena ranged from two to twenty years. Their average work experience in housekeeping was ten years. Their average workload within each eight hour shift is eleven rooms per person.

Pretest

Two pretests were conducted to determine the type of music and the volume of the music to be used for the study. The first pretest was conducted in a three-star business hotel with 200 guestrooms in Kao-Hsiung City. Eight female room attendants who had similar average ages (forty-six) and housekeeping work experience (an average of nine years) to the subjects were asked to complete the Music Preference Questionnaire. Frequency analysis on the Music Preference Questionnaire showed that the majority of the room attendants (50%) liked to hear Chinese pop music when cleaning a room. Thirty-eight percent (38%) of the room attendants liked to hear classical music, and thirteen percent of them preferred sound tracks. Hence, Chinese popular songs were selected for the study.

Another pretest was conducted on seven Hotel and Tourism Management (HTM) graduate students to determine the most appropriate music volume for the experiment. These seven HTM graduate students were all Chinese and listened to Chinese popular songs regularly. These students had working experience either at hotels or restaurants. According to the U.S. Department of Labor's noise exposure guideline, a 90-dB level is the maximum safe level for listening to music. A 60-dB level is typical of background music heard in stores and restaurants (Yalch & Spangenberg, 1990). The Chinese popular songs were played at five different volumes (60 dBs, 70 dBs, 75 dBs, 80 dBs, 90 dBs) for the seven graduate students. Seventy-five percent (75%) of the participants indicated that 70 dB was the most comfortable volume for their ears.

Measures

Peterson and Sauber's Mood Short Form (MSF) was employed in this study to measure the moods of the room attendants. The MSF is a four-item Likert scale and has been found to have acceptable levels of reliability and validity (Peterson & Sauber, 1983). In addition to the Mood Short Form, an additional four questions were added to the Post-Mood Short Form to examine the participants' opinions of having music played while they were cleaning the guestrooms.

Procedure

This experiment was conducted on September 29, October 1, October 5 and October 6 of 2002. Room attendants usually take a lunch break after cleaning approximately seven rooms in the morning. In order to minimize the experiment's impact on the hotel's operation, seven guestrooms were assigned to each participant and only two room attendants were randomly chosen to participate in the experiment each day. One was randomly assigned to rooms with music, while the other was not. On the dates of the experiment, the Executive Housekeeper

selected check-out single rooms from the floors. Before assigning rooms to the room attendants, the Executive Housekeeper inspected the cleanliness of the rooms. Rooms that were found to be either exceptionally clean or exceptionally dirty were not used as experimental rooms. The participants were asked to complete the Mood Short Form (pretest) before they began working. They were also timed during the experiment. Once the participants finished cleaning the assigned rooms, they were asked to fill out the Mood Short Form again (posttest). The Executive Housekeeper then checked the cleanliness of the rooms based on the hotel's room inspection standards. The average speed of cleaning one room was then calculated. Moreover, during the period of the experiment, no new company policies that might affect room attendants' productivity were introduced. The extraneous variable of history was already controlled in this study.

Dependent Variables

Productivity is the major concern of all industries. Unlike other industries, the success of the lodging industry relies on return guests. Providing quality service is the best way to attract repeat business and create customer satisfaction. Productivity and quality are equally important to the success of a hotel. Therefore, both of these factors–productivity and quality–were used as the indicators of room attendants' work performance.

DATA ANALYSIS

The independent-samples t-tests were employed to assess the statistical significance of the performance differences between the experimental and control groups. In order to examine the changes of room attendants' moods after cleaning seven guestrooms, analysis of covariance was conducted to determine if there were any differences between the control and experimental group in terms of the post-mood scores. Paired samples t-tests were conducted to see if there were any mood changes in the experimental group and the control group, respectively. In addition, frequency analysis was conducted to investigate the four extra questions on the Post-Mood Scale.

RESULTS

The results of the frequency analysis showed that the majority of the participants (75%) liked to have music playing in the guestroom while cleaning. The other twenty-five percent of the participants reported no opinion about this issue. None of the participants reported a dislike of music playing while they worked. When asked about the type of music they preferred to listen to while cleaning the guestrooms, seventy-five percent (75%) of the participants in the music condition indicated that they liked the Chinese popular songs playing in the guestrooms during the study. When asked about their average speed of cleaning a room, eightyeight percent (88%) of the participants reported their cleaning speed was 20-29 minutes per room. Only twelve percent reported less than 20 minutes.

The cleaning speed of the participants in the experiments ranged from 15 minutes 42 seconds to 22 minutes 8 seconds per room per participant. The quality range was from 89.43 to 93.43 out of the 100 points. The results of the independent-samples t-tests showed that there was no statistically significant difference in the average speed between the experimental and control groups (X = average speed per room, X music = 18 minutes 2 seconds, X no music = 19 minutes 59 seconds, P > .05). Thus, music had no significant effects on the average speed. The results of the independent-samples t-tests showed that there was no statistically significant difference in the quality of rooms cleaned (X = average quality per room, X music = 91.14, X no music = 91.92, P > .05). Music also had no significant effects on the quality of rooms cleaned. Hypothesis 1 was not supported.

The analysis of covariance on the post-mood scores showed there were no statistically significant differences between the control and experimental groups in terms of post-mood scores (X = average post-mood scores, X music = 4.5, X no music = 6.0, F = .057, P > .05). No significant mood differences were identified between the experimental and control groups at the end of the experiment. The data did not confirm

Hypothesis 2.

Paired-samples t-test was conducted to see if music had significant impact on mood changes in the experimental group. No mood changes were found in the experimental group (X = the average of mood scores, X pre-mood = 5.25, X post-mood = 6.0, P > .05). Music had no significant impact on the mood in the experimental group. The same paired sample t-test was conducted in the control group. No significant mood changes were found in the control group (X = the average of mood scores, X pre-mood = 3.25, X post-mood = 4.5, P > .05). Hypothesis 3 was partially supported.

DISCUSSION

The findings of this study indicate that music has no significant impact on room attendants' productivity and quality of work. As Smith (1961) and McGehee et al. (1949) have suggested, the more complex and varied the job, the less likely music is to increase production on it. Guestroom cleaning may at first appear to be a simple task when in fact it is not. As Schneider and Tucker (1989) indicated in their book, The Professional Housekeeper: "The seemingly simple function is not simple at all. It involves far more than cleaning the sleeping, eating, meeting, and washroom areas." It is a complicated procedure requiring many motions, actions and skills. It is a task with time pressure and quality demands: it required the entire attention of the room attendants. Therefore, playing music in the guestrooms or not playing music does not prove to have significant effects on their work performance. This study confirms Smith's view about music's impact on productivity of complex and varied jobs.

Also, the failure of music to increase room attendants' work performance could be attributed to the fact the room attendants in this study have developed their habits and tempo of work. Room

attendants with an average of ten years working experience in the field of housekeeping have reached a stable level of production and quality of cleaning rooms. It is possible that in this experiment that the effect of music was not sufficiently strong enough to break-up their established speed of cleaning a room and quality of cleaning a room.

Moreover, the small sample size (N = 8) may lead to the failure of meeting a statistically significant difference between the experimental and control groups. Randomization is a preferred procedure for ensuring the prior equality of experimental groups. The small sample size may have affected the effectiveness of the randomization in this study and in turn effect the results of the study.

The days of conducting the experiments may have had an effect on the findings of this study. When the experiments were conducted in October of 2002, the Tong-Mao Resorts and Hotels, Kao-Hsiung was fully occupied. During this month, room attendants were assigned up to 16 rooms–five more rooms than their regular workload. The pressure of cleaning the extra rooms may have caused them to pay full attention to work and thus to ignore the music. The extra rooms assigned may force the room attendants to speed-up regardless of the influence of music.

Even though the findings indicate that music has no favorable or unfavorable effect upon the work performance of the room attendants, it does show that the music was perceived favorably by the majority of the room attendants. Seventy-five percent of the participants liked to have music playing in the guestroom while cleaning. This finding is consistent with the previous studies. When the employees were asked their attitude toward playing music in the workplace, their reactions were uniformly positive (Kirkpatrick, 1943; Kerr, 1943; McPeak,1946; McGehee & Gardner, 1949; Smith, 1961; Uhrbrock, 1961; Devereux, 1969).

Room attendants are seldom chosen as the subjects for study. Many attendants were very nervous when the experiment was conducted even though they were informed by the Executive Housekeeper to clean the rooms as usual. The average speed of the participants in this experiment is 19 minutes which is faster than their normal speed. Their normal cleaning speed is from 20 minutes to 29 minutes per room. Based on the Hawthorne effect, workers increase outputs when they know they are observed. This factor can be used to explain why the participants cleaned the rooms faster than their regular speed and why the average speed of the control group was not significantly different from the average speed of the experimental group.

Contrary to what was expected, no significant mood changes were identified in the experimental group. Many reasons can be suggested for this finding. It is possible that the period of exposure of the participants to the music is not long enough to sustain the mood changes. It is also possible that due to the full occupancy on that day the extra room assignments have preoccupied the room attendants, thus negating the influence of music on their moods. The small sample size may have caused the failure to produce statistically significant differences in the t-test.

CONCLUSION

The purpose of this experimental study was to examine the impact of music on room attendants' performance, which included the speed of cleaning and the quality of the room cleaned. No statistically significant differences were found between the control group and experimental group in terms of work performance even though the majority of the participants said they enjoyed having music playing while cleaning the guestrooms. Requiring the room attendants to turn on the radio seems ineffective if the goal is to enhance work performance. The findings of the study also suggest that music has no negative effect on speed, quality or mood. Many hotels have policies in place that prohibit room attendants from listening to music while cleaning guestrooms. Seventyfive percent of the participants in the experimental group reported they enjoyed listening to music. Therefore, allowing room attendants to listen to music may actually be a positive policy. For an industry with high employee turnover rate which is highly dependent on employees to provide quality service, this finding may have meanings for hotel managers concerning having happy employees and retaining them.

LIMITATIONS AND FURTHER STUDIES

Several limitations were identified with this study. Laboratory experiments offer a high degree of control because they can isolate the experiment in a carefully-monitored environment. This experiment was conducted in a hotel, and therefore had lower control of extraneous variables.

In an attempt to minimize interference with the hotel's daily operation, this experimental study was limited to cleaning seven guest rooms, which was about four hours of work. If the time frame of this experiment could have been expanded to the full eight-hour shift of room attendants, it might have more accurately represented the room attendant's typical workday. Further related study can expand the experimental hours to eight hours, which can reflect room attendants' real working situation.

This study was limited to a three-star business hotel and the sample size was small. Hence, the applicability of this experiment is also very limited. Different hotels have different room standards, production requirements, and room settings, all of which make generalization most difficult.

However, this experiment is just an exploratory study conducted in a small scale hotel in Taiwan. A further study to explore the relationships between music and employee performance in the U.S. lodging industry could provide a cultural comparison. It is also suggested that the study be expanded to hotels of different classes to see the influences of music on room attendants' work performance in different segments of the lodging industry. A longitudinal study in which the participants would become more accustomed to the music environment and react naturally to the change in the work environment is needed. Future research can duplicate this study and focus on new employees and well-seasoned employees with a larger sample size. In order to decrease the effects of experimental dates, it is suggested that the future study be conducted on dates with

regular business volumes. Additional research is needed to explore the impact of moods on work performance and the effects of music on employee's job satisfaction, absenteeism and turnover.

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