



**STUDY, MUSIC AND COMPREHENSION**

**Lav Kumar Singh\***

Department of Psychology, APSM College, Barauni, Begusarai, Bihar 851112

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**ABSTRACT**

Students often listen music during study. In recent times, the music listening behaviour is getting popular day by day thanks to advent of gadgets especially the all-in-one smartphones. The author of this paper attempted to find the effects of music when listened during study on the comprehension of the students. For this purpose, a number of studies, after scanning through title and/or abstract have been analysed. Basically, studies were undertaken for measuring and comparing the effects of three types of musical conditions. The musical conditions were (i) instrumental music, (ii) lyrical music and (iii) no music (silent condition). At last, it was found that instrumental music, when listened during reading, has significant positive effect on comprehension. But, no significant difference found between the effects of lyrical music, when listened during reading, and no music on comprehension. Also, the effect of music was found contingent upon the nature of study material. Some recommendations have also been made on the basis of results.

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**INTRODUCTION**

People listen music basically for entertainment. Some of them listen music lying down in arm chairs, sofa, couch or recliners without any activities. On the other hand some people prefer to listening music while doing some activities. The activities include washing clothes, cleaning house, cooking food etc. Moreover, many skilled or semi-skilled people like Tailor, Carpenter, Mason, Mechanic etc also listen music while doing their work as their work/job does not demand continuous attention. They do their job successfully keeping themselves entertained at the same time. The reported benefit of this entertainment is that they don't feel monotonous and get exhausted even after working for long hours.

But the matter becomes really intriguing when students listen music during their study. This is interesting because the act of studying requires more attention and more concentration than any other type of activities discussed earlier. Hence, it is imperative to assess the effect of music during study on the performance of the students.

**Objective**

The aim of the present review paper is to know the effect of music on comprehension of those students who study while listening music.

**METHOD**

For the purpose of assessing the effects of music on comprehension while studying, a number of studies after scanning through title/abstract have been analysed.

**Review of Studies**

Martin *et al.* (1988) reported after his study that subjects' test performance was slightly higher when they listened instrumental background music during their study than with lyrical music or no music [1]. While, Henderson (1945) found negative effect of popular music on participants' performance with respect to mathematics and verbal comprehension test [2]. Whereas, positive effect of classical music or no music on comprehension was reported by him [2]. Thus, it suggests that the effect of music on comprehension depends upon the nature of study material and type of music.

Kiger (1989) reported that participants did well on comprehension exams with low information loaded music (repetitive rhythm and no lyrics) than with high information loaded music or without music [3].

Kathryn Wagner and colleagues also found in their study that students' test scores increased significantly in the presence of instrumental music than with lyrical music or no music [4]. But, no difference were found on the comprehension due to difficulty level of the reading passage [4]. It means that the groups who read easy passage while listening music performed no better than the group who read difficult passages with music. Their findings are antithesis of the common notion that difficult passage reading requires more concentration

\*Corresponding author: **Lav Kumar Singh**

Department of Psychology, APSM College, Barauni, Begusarai, Bihar 851112

compared to easy material and hence its retention/comprehension gets hampered by the listening of music.

Ozlem Erten and colleagues (2012) undertaken a comprehensive study on the effect of music while reading on reading comprehension. They measured the effect of non favoured music without lyrics, non favoured music with lyrics and favoured music with lyrics. They reported in their result that the group who did not listen music while reading fared significantly better than those groups who listened favoured music with lyrics, non favoured music with lyrics and non favoured music without lyrics [5].

S A Anderson (2010) found notable damaging effect of music on comprehension for participants showing a stronger inclination for listening to music while studying [6].

Furnham and Bradley (1997) reported that the specific effect of music are difficult to predict because of different forms of individual experience associated with particular music [7].

In the study of Patton and colleagues (1983), participants preferred silent situation for reading work whereas, mathematics and written assignments were completed while listening to music [8]. They also reported in the survey that students considered radio and stereo as beneficial but television as a moderate distraction [8].

In a very remarkable study of Beentjes and colleagues (1996), music was found as beneficial for paper and pencil assignments but detrimental in performance of learning assignments [9].

As per Limited capacity theorists, music possibly hamper cognitive performance because of the limited amount of mental resources used for cognitive processing (Basil, 1994) [10] and (Lang, 2000) [11].

Etaugh and Michaels (1975) said that student who usually listen to music while studying fared better on comprehension test in presence of music than those who occasionally listen to music when reading [12]. This implies that unfamiliar sounds distract the attention of students more than the familiar words which results in poor performance.

Similarly, Etaugh and Ptasnik (1982) did research on the frequency of music listening behaviour while reading [13]. They found that the subjects who rarely studied with music performed better on comprehension test during quiet setting whereas, those who always studied along with listening to music displayed greater comprehension during music conditions [13]. These findings can be explained in light of Habit effect. The subjects become habitual of listening to music while reading and thus it doesn't hamper the comprehension. This is due to subjects need not to allocate their attention to the lyrics of music to understand the same.

According to musical complexity theory, notwithstanding, music can lead to increased performance, increased complexity within music lead to a decrease in performance compared to less complex music (Furnham & Bradley, 1997) [7] and (Furnham & Strbac, 2002) [14]. However, lyrics can increase the complexity as another level of processing for the cognitive process.

Banbury and Berry (1998) reported that background noise combined with words decreased memory, whereas wordless background music did not have any pronounced effect [15].

## RESULT AND DISCUSSION

After going through the all studies discussed above regarding effects of music on comprehension, it can be concluded that:-  
(i) Instrumental music (without lyrics) compared to lyrical music or no music is beneficial for the comprehension when listened during reading or studying as reported by Martin (1988) [1], Kiger (1989) [3] & Kathryn Wagner and colleagues [4]. It may be due to instrumental music has no poetry or lyrics hence requires little cognitive processing and we devote complete attention and cognition to the assignment at our hand. Whereas, in lyrical condition we have to allocate some attention to the lyrics in order to understand their meaning and also to correlate the lyrics with our important events of life. However, if we become habitual to particular lyrical music then it seems to have no effect on the comprehension because we need not to decipher the meaning of the lyrics and of course to correlate with our personal events every time. Results of Etaugh & Michaels (1975) [12] and Etaugh & Ptasnik (1982) [13] support above assumption.

However, no music (silent condition) was found more beneficial on the comprehension of the students by Ozlem Erten and colleagues (2012) [5] and SA Anderson (2010) [6].

(ii) There is no significant difference between the effects of lyrical music and no music condition on comprehension.

(iii) Effects of music depends upon the nature of study material. Music has positive effect on comprehension when the study material is mathematical work or paper pencil assignment. On the other side, it has negative effect on learning assignments as found by Patton *et al.* (1983) and Beentjes *et al.* (1996). The probable explanation is that as written assignment and mathematical work demand least control and concentration of the mind the same is completed with ease while listening music. Further, listening music keep refreshed the students and they manage to stay focused on the task without distraction caused by monotony. In other words, music help them avoid distraction and stay focused on their work. But reading work and learning assignments are full time job as it captures the mind cent percent. Hence, silent atmosphere was preferred by the students for this type of work in the study of Patton *et al.* (1983) [8].

But, before generalizing the effect of music, while listened during study/reading, on the comprehension, the study of Furnham & Bradley (1997) [7] will have to be taken into account. They found that effect of music can vary person to person as each and every individual may have different experience associated with particular music [7].

### Recommendations

Based on the findings of above discussed studies, it is recommended that instrumental music should be preferred while studying. The Instrumental music having low information and slow speed may be more beneficial. However, if someone feels distraction even with this type of music; better to go with no music at all.

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