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**The influence of canned laughter in the sense of humor of healthy Greek adults. A pilot study with debatable results.**

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## RESEARCH ARTICLE

## THE INFLUENCE OF CANNED LAUGHTER IN THE SENSE OF HUMOR OF HEALTHY GREEK ADULTS. A PILOT STUDY WITH DEBATABLE RESULTS

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**Abstract**

**Background:** Humor is the individual's perception of something interpreted as funny. It is usually accompanied by emotional and vocal reactions, such as laughter. Scientists have long studied the factors that can influence this response and have argued whether it is contagious. Canned laughter is widespread in American situation comedies, but does it influence the sense of humor of the audience? To test this question, much research has been conducted, but the findings remain controversial.

**Method and Material:** This laid the foundations to create a study on healthy Greek adult population to examine the influence of canned laughter on their sense of humor, using independent sample test comparison in SPSS software. Thirty individuals were recruited through the convenient sampling method and participated in the study. Half of them watched a video with canned laughter in the background ( $M=6.53$ ,  $SD=2.1$ ), whereas the rest watched a video without canned laughter ( $M=5.46$ ,  $SD=1.77$ ). Then they were asked to evaluate the comicality of the video on a Likert scale.

**Results:** The data was collected with the use of questionnaires and the statistical analysis was conducted in SPSS. The results showed that there were no significant differences in the means of the two groups, concluding that there was not a direct influence of canned laughter on the humor of the participants,  $t(28) = -1.505$ ,  $p = .868$

**Conclusion:** Great limitations to this study were the sampling method, the language of the videos that were not in the native language of the participants, and the tendency of the participants to respond with socially liked answers.

**Keywords:** Humor, laughter, canned laughter, Greece.

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## INTRODUCTION

Humor is considered a versatile human response and has been the subject of study by many scientists. Many support that there cannot be a specific definition to describe humor, due to its intuitive character, which makes it difficult to be explained, but profoundly comprehensible in everyday human interactions.<sup>1</sup>

In an attempt to define humor, scientists consider it as a common human activity that consists of the propensity to experience or express what is perceived as funny and it is usually accompanied by an emotional and vocal response, such as laughter.<sup>2</sup> The central role of the sense of humor seems to be the individual differences, the stimulus that can provoke laughter, and the psychological state of the individual that makes them capable to appreciate humor.<sup>3</sup> An interesting research topic about humor is the variety of factors that can influence and alter individuals' perception of humor. It is supported that one of these factors can be canned laughter. In turn, canned laughter is a soundtrack of laughter that was first created and added to American situation comedies. The production of laugh tracks was first made by a machine called LaffBox. However, since LaffBox could not copy the feeling of true and spontaneous laughter, it was eventually replaced by records of laughs from the live audience.<sup>4</sup>

The main topic of this study is to examine the influence of canned laughter on the sense of humor of adult participants. According to Owren and Bachorowski,<sup>5</sup> laugh tracks cannot be uniquely associated with laughter elicitation, suggesting that the listeners' state could not be influenced by laughter sounds alone. Additionally, Waddell and Bailey<sup>6</sup> supported that canned laughter does not have a direct influence on the individual's sense of humor. However, Curran and their colleagues,<sup>7</sup> supported that laughter can be perceived as a communicative tool that can influence the emotions of the listener and affect their reaction. Moreover, Baranowski and their colleagues<sup>8</sup> came to support this point. Their research showed that in the condition that canned laughter was added, the participants viewed the content as funnier.<sup>8</sup> These contradictory suggestions triggered this research. Firstly, because there are no strong findings to support the influence of canned laughter in the sense of humor, and at the same time, due to the absence of Greek literature on

this topic made it necessary to design a study with Greek participants.

For this study, the research question was whether the presence of canned laughter could influence the sense of humor of individuals. Considering the previous research on the topic, the hypothesis was that there were not going to be any significant differences between the two groups. However, since this is the first time to conduct this study in the Greek population, it is possible to receive noticeable differences between the group that watched the video with canned and the group that watched the video with no canned laughter.

## MATERIAL AND METHODS

### Research design

This study examines the influence of canned laughter on the sense of humor. Therefore, the existence or not of canned laughter in the video was set as the independent variable (thus the group of the participant) and the score that the participants gave to the video they watched was set as the dependent variable. The score was measured on a Likert scale, which is used to measure a person's perception and view of some phenomena.<sup>9</sup> The obtained data were then analyzed with the IBM SPSS Statistics (5th edition) using independent samples t-test.<sup>10,11</sup> The statistical approach of independent sample t-test was selected because the study involved the comparison of the mean score and general differences between two independent groups.<sup>12</sup>

### Participants

Forty healthy, Greek adult participants were approached. Thirty of them agreed to participate in the study, consequently, the participation rate was 75%. They were all familiar with technology and had a basic understanding of the English language. The participants of this study were the method of convenient sampling.<sup>13</sup> The study consists of 60% female and 40% male participants, while ages ranged from 18 to 47 years old (M= 27,27 SD= 6,76). The participants then watched two videos. 50% of them watched a video with canned laughter in the background and the rest watched a video with no canned laughter. The first group consisted of 66.7% females and 33.3% of males, whereas the second of 53.3% females and 46.7% males.

### Materials and/or Tools

To collect the data two videos were used, one with canned laughter<sup>14</sup> and one without<sup>15</sup> which were displayed on mobile devices. Additionally, a questionnaire was given, and the information gathered was analyzed with SPSS software (5<sup>th</sup> edition).<sup>10</sup>

### Procedures

Once the research topic was assigned, the preparation of the research design began, based on the code of ethics of the British Psychological Society.<sup>16</sup> After the ethical approval of the design on the 12th of December 2022 the creation of a consent form, debrief sheet, and participant information sheet started. Thirty healthy, Greek, adults agreed to participate in the study. Then, the researchers distributed the documents to the participants. After they filled them, they watched a video (with or without canned laughter in the background) and they were asked to score it on a Likert scale from 1 to 10, where 1 is "Not funny at all" and 10 is "Extremely funny". The sampling procedure began on the 14th of December and concluded on the 21st of December 2022.

### RESULTS

An independent samples t-test was conducted to examine the influence of canned laughter on the sense of humor in an adult population. According to the statistical analysis, Levene's test shows that the assumption of equal variances is not violated.<sup>11,12</sup> Furthermore, there is no significant difference in the scores for 15 participants who watched the video with canned laughter ( $M=6.53$ ,  $SD=2.1$ ) and the 15 participants who watched the video with no canned laughter ( $M=5.46$ ,  $SD=1.77$ );  $t(28)=-1.505$ ,  $p=.868$ . The findings support that canned laughter has no effect on the sense of humor of the participants.

### DISCUSSION

Studies have published controversial data regarding the influence of laughter soundtracks on the sense of humor. Thus, this study aimed to examine canned laughter and its influence on the sense of humor of a healthy Greek adult population. The results showed that the presence or absence of canned laughter

did not raise significantly different reactions in the participants. More precisely, the group that watched the video with the addition of canned laughter, did not present higher scores on the funniness of the video than the group that watched the video with no canned laughter. These findings aligned with the suggestion of the aforementioned literature for controversy on the impact of canned laughter on the humor of individuals.

More specifically, the results of this research corresponded to the studies of Owren and Bachorowski<sup>5</sup> as well as of Waddell and Bailey<sup>6</sup>, who indicated that laugh tracks do not have a direct connection to the humor of individuals and cannot cause genuine laughter. However, the research findings were opposed to the ones of Curran and their colleagues<sup>7</sup> as well as of Baranowski and their colleagues,<sup>8</sup> who supported that canned laughter could enhance the laughter reaction of individuals, making the content funnier than in the absence of canned laughter. Furthermore, Weber and Quiring in a recent study,<sup>17</sup> argued that laughter and humor could be influenced by laughter tracks, depending on the emotional state and character of the individual, which control whether they are going to be affected by the presence of canned laughter or not.

One profound limitation of this study was that the videos used were not in the native language of the participants but in English. This arouses some issues regarding the cultural differences and language comprehension of the participants. It is considered that there might be some misunderstandings of the humorous lines of the videos. On the other hand, since the video belongs to an extremely popular series in America, there might be a chance that the participants had already been exposed to this video in its canned laughter version, leading to biased responses. Additionally, since canned laughter is basically a characteristic of American situation comedies, it might not be considered influential for the Greek population. Also, an important limitation was the sampling method chosen. Convenience sampling offered participants from similar backgrounds, depriving the study of versatile responses. Lastly, it should be taken into consideration the possibility that the participants gave socially liked answers.<sup>18</sup> Considering the limitations of this research, future studies in Greece may use a different sampling method and use original videos or materials in Greek.

## Conclusion

Humor is a part of human communication that expands globally to every culture. It can be influenced by many factors, such as culture, individual differences, or the social impact of laughter. The findings of this study gave controversial results suggesting that it would be debatable whether laughter tracks (canned laughter) can influence the sense of humor. It is highly suggested that similar designs and studies take place in the foreseeable future using a Greek sample.

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## Conflicts of interest

The authors report that the research was conducted in the absence of any commercial or financial affairs that could be considered a potential conflict of interest.

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