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Humor as a Regulator of Negative Emotions

Abstrakt

Artykuł prezentuje badania, które miały na celu udzielić odpowiedzi, czy humor reguluje emocje negatywne. Badania przeprowadzono w paradygmacie poprzedzania. Pierwsza grupa zastała wprowadzona w nastrój negatywny, u drugiej natomiast wywoływano nastrój pozytywny. Następnie badanym prezentowano dowcipy, które poddawane były ocenie stopnia ich zabawności. Przeprowadzone obserwacje wskazują, że ocena dowcipów pojawiających się na początku jest zgodna z nastrojem poprzedzającym ich ocenę i jest wyższa w grupie osób z nastrojem pozytywnym. Zauważono jednak, że ekspozycja kolejnych bodźców humorystycznych sprawia, że ocena zabawności dowcipów ulega zmianie i jest wyższa w grupie osób, u których wytworzono nastrój negatywny. Wskazuje to, że regulacja emocji pod wpływem bodźców humorystycznych może nastąpić wraz z prezentacją kolejnych dowcipów

Słowa kluczowe. Humor, regulacja emocji, nastrój, poprawa nastroju, poprzedzanie

Abstract

The article presents research that aimed to answer whether humor regulates negative emotions. The studies were conducted in the paradigm of precedence. The first group was entered into a negative mood, in the second one however, a positive mood was induced. Afterwards, the respondents were presented with jokes, which were subjected to the evaluation of the degree of their funniness. The conducted observations indicate that the evaluation of jokes emerging at the beginning is consistent with the mood preceding their evaluation, and is higher in the group

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of people with a positive mood. It was noted however, that the exposure of subsequent humorous stimuli causes that the assessment of the jokes' funniness changes and is higher among people in whom a negative mood was produced. This indicates that the regulation of emotions under the influence of humorous stimuli may occur along with the presentation of subsequent jokes.

Key words: Humor, regulation of emotions, mood, mood improvement, precedence

As a consequence of positive psychology, more and more attention is devoted to the study of difficult situations in everyday life (Fredricson, 2003; Seligman, 1993). Therefore, interest in humor, treated as a regulator of emotions, keeps growing. In terms of positive emotions, humor can be used as a way of maintaining or increasing the status quo. The organism does not require mobilization and increased levels of activation whenever the body is exposed to danger. The emerging negative emotions serve an adaptive function because they inform about danger. The result is mobilization and we focus on removing the threat. However, it is not always possible to remove the threat, especially when negative emotions are so strong that they hinder performance. At that moment, humor becomes a way to counteract hindrance. According to Lund, Utz, Castera and De Vries (2008–2009), people who lose a loved one and experience a relatively high degree of humor, express less sadness and fewer signs of depression. However, the situation was unfavorable for those assigning importance to laughter and humor when they could not show it. They experienced, then, more discomfort than those for whom humor was not relevant.

Experimental research shows that those involved in humor and laughter express a greater tendency to be satisfied, and are more energetic, less depressed, irritated and nervous. Humor helps control emotions and manage them.

Numerous laboratory studies indicate that humorous stimuli, such as funny movies, make us laugh more often and more intensely. Laughter and smiles are an expression of positive emotions evoked by humor. The higher the level of positive emotions, the greater the expression accompanying it. Laughter and smiling alone, without humorous stimuli, can induce a feeling of mirth, as observed in the experiments (Strack, Martin and Stepper, 1988). In these experiments, respondents were asked to keep a pencil horizontally in their mouths, which forced them to express a similar facial expression, as when laughing. The second group was asked to hold a pencil clamped in their teeth. Both groups conducted an evaluation of pictorial humor and their mood was assessed. Research indicated that a higher mood accompanied those of the first group, which also rated the humorous stimuli more highly. An increased positive mood under the influence of humor was indeed apparent.

Humor also counteracts negative emotions, such as depression and anxiety. Danzer and colleagues (in: Martin, 2007) got three student groups into a mood of despondency, and afterwards presented one group with a fun audio recording; in the second one an interesting but humorousless lecture on geography; the third group was not presented with any content. In the first group, a significant reduction in anxiety to its basic level was observed.

Many similar experiments have been conducted involving manipulation of humorous stimuli aimed at mitigating emotional stressors. In another study involving three groups, after watching a film showing circumcision, participants in the first group were asked to create funny stories, in the second to create non-humorous stories, while in the third there was no task to execute. It was observed that in the first group, women who created the amusing narratives reacted negatively, but only minimally, to the dramatic scenes of the video. In the case of boys, there were no such differences.

A similar method was applied in an experiment by Newman and Stone (1996), which also confirms humor's positive characteristics during difficult situations, if the situations actively create entertaining narratives.

The manipulation of humorous stimuli provides interesting information about their impact on the experienced mood and direction of thinking. The specific nature of humor causes it to affectively modify the activity of preceding stimuli. Compensation of strong negative emotions by positive ones is known (Taylor, in: Kolańczyk, 2004). This can also be explained by Richard Solomon's theory of opposing processes, which indicates that initial negative reactions subside in favor of a gradually increasing positive affect and vice versa.

Interesting studies have been carried out by Cann, who also presented a stressful film, after which people in one group watched a funny video, in the second a film devoid of humor, and the third group did not watch anything. From these studies it resulted that in people watching funny videos positive emotions occurred, but the level of anxiety persisted. In another experiment, Cann, Calhoun and Nance (2000) determined that the modifying effect of humor on stress took place only when humorous stimuli preceded a stressful situation. As it results from these studies, the level of negative emotions is lower, if stress is preceded by watching a neutral movie; the same applies to depression and anger – their levels decrease – when a neutral video is issued after a stressful film. However, a humorous movie acts as a moderator of mood if it is aired before a stressful film.

The authors of the experiment suggest that levels of depression and anger can be reduced by counteracting them with positive humorous stimuli. On the other hand, anxiety is considered cognitive. A humorous stimulus preceding an obtrusive cognition of a further event, reduces anxiety, because the event is interpreted

in accordance with the humorous stimulus preceding it. It follows that the humor plays an informative role, directing how the stimuli succeeding it will be interpreted and evaluated.

Other researchers believe the same: that changing one's perspective to perceiving life humorously makes it possible to maintain distance away from negative situations and emotions (Martin, Kuiper, Olinger and Dance, 1993). A threatening situation becomes transformed cognitively into something that one can laugh at (Lefcourt and Martin, 1986). Positive emotions replacing anxiety allow one to think more flexibly about a difficult problem and seek a solution to it (Nezu and Nezu 1988; Fredrickson, 2001). Nezu also underlines that responding to stressful situations with humor wins over your surroundings, which provide support to a smiling person. However, people manifesting negative emotions are rejected by societies.

Research also indicates that under the influence of humor one's perception of reality changes. Following humorous stimuli, hope increases. Also, one can observe that people watching TV comedies take a different approach to monotonous and boring tasks; they are more mobilized and excited, and treat them as challenges, although executing the tasks may be similar to the those performed by persons who have not watched a comedy.

Strick, Holland, van Baaren and Knippenbger (2009) take yet another direction in determine the impact of humor on negative emotions. The starting point of their analysis are studies by Van Dilled and Koole, who observed that people solving difficult mathematical problems have fewer negative emotions after seeing negative stimuli compared to people solving easy tasks. These researchers suggest that this is related to a scarcity of attention resources which were focused, at the time, on mathematical tasks (Schmidt, 2002).

Strick, Van Baaren, Holland and Knippenbger (2009) showed that solving incongruency also requires attention. Incongruency distinguishes humor from other nonhumor positive emotions. It distracts attention that plays an important role in the regulation of negative emotions.

To sum up the above review of research, it can be stated that humor regulates negative emotions, because it invokes strong positive emotions accompanying it. However, there are many uncertainties that were observed by Martin and Lefcourt (1983). In their view, re-education of stress is possible only when humor is produced during a stressful situation. This does not occur if people have to appreciate humor in order to perceive it in the environment. Lehaman, Burke, Martin, Sultan and Czech (2001) believe that the appreciating humor may also be important, but only in cases where there is moderate negative stimuli in the individual's environment. Their work, according to expectations, may increase the humor mood and

minimize anxiety. Prerost (1988) points out that systematic inclusion of humor in psychotherapy can help improve a patient's functioning.

Research method

Research objective

The aim of our research was to respond to the idea that humor when used in stressful situations serves as a moderator of mood. Previously cited studies point to the validity of further research because their conclusions lack unequivocalness. Research on how humor is preceded indicates that stimuli preceding the target stimuli are consistent with the direction given to them. Kolańczyk (2004) notes, however, that we follow affect when there are no other certain guidelines of evaluating and making decisions. Besides, a person is guided by affect, when one is forced to feel and the resources of attention during a target activity are taken away. Studies using preceding stimuli prepare the perceptual system to respond to a "so-called" target stimulus, which are neutral stimuli. In the case of the studies presented below, specific jokes stimuli were used, which themselves are affective. It was an attempt to answer the question whether in a stressful situation the emerging positive stimuli such as jokes evoking positive emotions neutralize the effect of the preceding negative stimuli. Kolańczyk also notes that instructions given to respondents is of great importance. The subjects' task was to estimate how much they liked a joke; that is, the respondents conducted favorable ratings on a scale from -5 to 5. Such a scale was introduced to facilitate the respondents use of a negative extreme.

Referring to the results of the presented studies, the following research question was asked:

1. Is the funniness of jokes consistent with the mood that precedes a joke assessment?

It took the form of detailed questions:

1a. Will persons in a positive mood evaluate more highly the funniness of jokes compared to those in a negative mood?

Research concerning precedence indicates that there is a correspondence between a preceding stimuli and the evaluated object (Kolańczyk, 2004). However, the humorous stimuli are so specific that they themselves possess affect-generating potential. In addition, research on humor suggests that humor appreciation does not always have an impact on minimizing negative emotions (Martin and Lefcourt, 1983). Although, in the case of negative stimuli of moderate intensity we can expect a mood change, induced by thinning, from a negative to a positive

one, this being the effect of exposure to positive humorous stimuli (Lehaman, Burke, Martin, Sultan and Czech, 2001).

Accordingly in the precedence paradigm, the assumption is that preceding negative stimuli can decide about a lower assessment of jokes in the group of subjects presented with pleasant preceding stimuli, than can those with positive precedence. However, we cannot exclude the fact that the specific nature of the target stimuli (jokes) is so strong that it will change the experienced emotions from negative to positive, along with continuing to expose more jokes.

Another research question is therefore:

2. Will the presentation of jokes change the mood caused by earlier precedence? The following, more specific question, was formulated:

2a. Will people put in a negative mood continually evaluate higher and higher the humorous stimuli as a way to compensate for the earlier negative feelings?

This will be determined by positive assessments of the jokes' funniness.

The research method

The study involved 80 people (40 women and 40 men), students in the age range from 20–23 years. For the final studies, questionnaires from 78 people were used, rejecting two due to incomplete data. Respondents were assigned to two groups. In the first group, they were presented with pictures having negative overtones: a screaming, angry politician; a fight; the attack on John Paul II; and a scene of violence between partners. The second group was presented with pictures having positive overtones: the welcoming of smiling politicians; a photo of an old lady wearing boxing gloves; a smiling John Paul II during one of his pilgrimages; partners hugging each other.

At the second stage, respondents assessed jokes. For study purposes, four categories of jokes were used: political, aggressive, religious, and sexual. The respondents received an answer sheet and carried out assessments on a 10 point scale: – 5 to 5. Twenty jokes were evaluated; they were presented one after the other on slides.

Results analysis

For statistical analysis, the Student's *t* test was used to assess differences in the assessment of jokes. The first five jokes were compared in pairs, then another five, and so on. Statistical analysis showed that the first five jokes were rated higher in the group presented with positive stimuli; these differences are statistically significant. It can, therefore, be concluded that the first hypothesis was confirmed: there is affect compatibility between preceding stimuli and the target stimulus.

These results suggest that the tested individuals were feeling-oriented, which means that the mood induced in them directed the evaluation of the jokes. Therefore, the emerging jokes in the negative precedence (NP) group are rated low. You can even suppose that for some people they have an aversive character because they do not correspond with their mood and are regarded as inadequate to the situation. In the group of positive precedence (PP), the produced mood is positive, and positive emotions generated by jokes sustain it.

The average rating of the funniness of the first five jokes in the PP group is $M = 9.16$; $SD = 10.32$ and in the group of NP $M = 4.35$; $SD = 10.26$, $t(76) = -2.061$; $p < 0.05$.

The evaluation of the next jokes indicates an existing dynamic. Evaluating the funniness of jokes gradually increases in group NP and does not differ from the assessments made by the persons from group PP. The average funniness rating of the next five jokes in group NP is $M = 13.60$; $SD = 15.21$ and in the PP group is $M = 14.79$; $SD = 18.06$. The observed differences are statistically insignificant. Evaluations of joke funniness in the two groups are, therefore, comparable. The result implies that a gradual domestication with humorous stimuli occurs and begins to regulate emotions in the NP group. The mood evoked by jokes is so strong that it begins to dominate the mood which had been the effect of the unpleasant viewed scenes.

This effect increases along with the presentation of the next five jokes. Still, no differences are observed between the studied groups, although the averages of results show higher scores in the NP group ($M = 25.40$; $SD = 16.22$) than in the PP group ($M = 19.66$; $SD = 25.28$). Visible is a further increase in positive ratings in the NP group compared with the PP group. With high probability, it can be assumed that the higher average funniness joke scores are caused by the continued exhibition of humorous stimuli. Not only is the amusement level maintained in the PP group, but the subjects' mood increases, affecting how the emerging jokes are evaluated.

It should, however, be noted that although the various jokes have a specific character, their perception and evaluation are often diverse. The observed ten-

dency may be coincidental. The subsequent jokes can be characterized by a higher level of comedy than those presented earlier. Maybe it is the level that impacts assessment growth. Also a situation may occur where a specific joke decreases the funniness of the entire group of jokes.

Comparing the assessments of the last presented jokes indicates that joke funniness of in the NP group ($M = 40.70$; $SD = 19.38$) is higher compared to the PP group ($M = 28.84$; $SD = 32.26$) $t(76) = 1.97$; $p < 0.05$. In addition to the rise in differences between the two groups, the growth of joke evaluations is apparent. One can infer that the test persons are influenced by the joke-induced mood by. They adopt a playful convention.²

Discussion

Our study results allow one to conclude that presenting jokes can regulate strong negative emotions. One can, however, agree with Martin and Lefcourt (1983) that this regulation may not occur when the humorous stimuli is too weak to involve the respondents in feeling them. Then we observe a between the negative sign of preceding stimuli and the sign of the target stimuli. The correspondence is visible until the following humorous stimuli do not gradually regulate the induced negative mood. Prerost's observations (1998) may explain the dynamics. A systematic exposition of jokes, from a therapeutic point of view, induces a desired effect, namely to reduce the negative mood. Prerost makes similar observations in reference to the systematic introduction of humor. Sporadic use of humor works too weakly to change a long-established mood. Cumulative humorous stimuli, even average humor, become, in total, a strong stimulus that could regulate experienced emotion. Humorous stimuli directly following an induced negative mood may meet with negative feedback, because there is too much disproportion between the experienced mood and the injected humor to generate positive emotions. They are simply perceived as aversive stimuli, irrelevant to the

² Additional comparative analyses were conducted by changing the number of jokes in sets to three. This was to confirm the effects described above. The results indicated that, with the difference, the first three jokes are not statistically different, but the average grade in the PP ($M = 6.03$; $SD = 5.77$) group is higher than in the NP group ($M = 4.14$; $SD = 5.86$). For the next three jokes, the evaluation of jokes was higher in the PP group ($M = 5.29$; $SD = 7.27$) than in the NP group ($M = 2.42$; $SD = 7.66$) and was close to obtaining a level of significance ($t(76) = -1.699$; $p < 0.93$). In the case of further comparisons, statistically significant differences can be observed, while the assessment of jokes is higher in the NP group. This is consistent with the results presented above. The observed differences, resulting from changes in calculating the results, may be explained by the specific nature of individual jokes that are characterized by varying degrees of comicalness. One joke's evaluation may significantly affect the entire set's evaluation.

situation. Gradual familiarization with humorous stimuli restores them to positive stimuli which can then cause positive emotions. Further joke exposures lead to a point where respondents no longer have ambivalent evaluations towards a joke; rather, it is only perceived as a desirable object since it evokes a comic effect.

Apart from that, some jokes, largely characterized by farce, can quickly affect negative emotions. Also not necessary is the intensified exposure of humorous stimuli.

Our studies indicate the need for a reliable selection of jokes for testing in terms of their comic type. Nevertheless, the observed effects are important for those who use humor in their therapeutic practice.

They point to the need for a systematic dispensing of humorous stimuli, but they also require caution in the selection of those stimuli.

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