



RESEARCH ARTICLE

THE EFFECTS OF EMOTIONS ON STUDENTS' SELF-MOTIVATION: MUSIC, LYRICS AND INSPIRATIONAL EVENTS AS EMOTIONAL STIMULI

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ABSTRACT

This study examines the effects of positive and negative emotions on students' self-motivation. Participants' emotions were stimulated with music, lyrics, and inspirational event. There were 259 participants taking part in this study; 56 males (21.6%) and 203 females (78.4%) with a mean age of 20.16 (SD=.95). We predicted that both positive and negative emotions contributed to self-motivation. We measured emotional levels using the Positive and Negative Affect Schedule (PANAS) scale and motivational levels using a self-motivation scale. Participants were divided into two groups; experimental (141) vs. control (118). Both groups watched videos of runners in the Olympic Games. In the experimental group, all three elements (music, lyrics, & an inspirational event) were presented to the participants; in the control group, only two elements (music & an inspirational event) were presented. In the experimental group, positive emotions (i.e., being alert, active, determined, inspired & attentive) contributed to 16.9% of the variance in self-motivation, $\beta=.41$, $t(134) = 5.12$, $p=.00$, whereas, in the control group, positive emotions contributed only 7% of the variance in self-motivation $\beta = .41$, $t(110) = 2.88$, $p=.00$. In both groups, negative emotions (i.e., feeling upset, hostile, ashamed, nervous, & afraid) did not show any contribution to self-motivation. The findings showed that emotions stimulated by combined music, lyrics and an inspirational event contributed more significantly and positively to self-motivation than music and an inspirational event alone. Therefore, we suggested that music, lyrics and inspirational events could be used to stimulate students' self-motivation. However, a follow-up study needs to be conducted to examine the sleeper effect on self-motivation to determine whether the effects are maintained over time.

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INTRODUCTION

People tend to hear music because it helps them to express their emotions and regulates their emotional state (Lonsdale & North, 2011). Various strategies have been used to stimulate human motivation and emotions including with instrumental music, music with lyrics and inspirational stories. We cannot separate ourselves from music in our daily lives because it is pervasive. Past researchers have stated that music plays a prominent role in people's everyday lives (e.g., Thayer and Levenson, 1983; Zentner et al., 2008). Music is among the more pleasing, motivating, and satisfying everyday artistic activities during adolescence (Miranda and Gaudreau, 2013) and can directly induce emotion (Juslin and Laukka, 2004; Juslin et al., 2008). A variety of music triggers a large range of drives and emotions which in turn, induce a particular class of mental experiences known as feelings. These feelings are often, though not necessarily, pleasurable. Music is widely used in conjunction with visual stimuli to enhance the negative

or positive emotional experience of movies (Habibi and Damasio, 2014). Emotional responses and the corresponding brain activity were found to be stronger in the amygdala, para hippocampal cortex and the hippocampus when sad or fearful images were presented together with congruent musical stimuli compared with pictures presented alone (Baumgartner et al., 2006). Music and inspiring film footage can change people's emotional state, inducing self-motivation. Entertainment industry for instance, uses music in movies, documentaries or to induce emotions for specific goals. Moreover, people in business and learning environments, people use music to achieve certain goals such as influencing shopping behaviour and interest in learning. Thus, as suggested by Thayer and Levenson (1983), music has been used to influence shopping behavior and worker productivity. Music has also established a foothold in the treatment of mental and physical illness, with music therapy now being used in many rehabilitation institutions. The use of music to affect changes in people's emotional state is most strikingly evident in film and television, from which a new profession in film music composition has emerged and several colleges now offer degrees in this subject. Music that accompanies inspiring lyrics

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might have more effect on specific goals such as self-motivation. As an example, positive emotions from watching an inspiring story with music and song lyrics can enhance self-motivation. A study by Djikic (2011) evaluated three groups of participants who were exposed to three different conditions. Two types of comparison were made to determine the effects of music on positive emotions. The first compared music-containing conditions (music & lyrics; music only) with no music containing condition (lyrics only). The second compared lyrics containing conditions (music & lyrics; lyrics only) and no lyrics containing condition (music only). It was found that music had an enhancing effects on the personality change index when the music, and no music containing conditions were compared.

Furthermore, the lyrics containing conditions was found to have a significantly smaller personality change index than the no lyrics containing condition revealing a suppressing effect by lyrics on the personality change index. Djikic's (2011) study thus showed that lyrics alone are less effective in enhancing psychological effects. Although Djikic's study revealed that lyrics had of an enhancing effect on psychological elements such as personality, we believe that the effects might increased if lyrics were used together with inspiring music. In our study, we examined the interactive effects of music, lyrics and an inspirational story on self-motivation. It is apparent that both visual and musical stimuli are capable of producing significant changes in levels of physiological activity and that both can be examined within a dimensional framework of emotion. However, there is a lack of research on the emotional response caused by the simultaneous presentation of visual and musical elements (Ellis & Simons, 2005). Therefore, there is a need to investigate the effect of music, lyrics and inspirational stories on psychological elements such as emotion and motivation. To see if the effects of emotions on human motivation could be more pronounced by combining the three elements (of music, lyrics & inspirational stories), the interactive effects of these three elements were examined in this study. We believe that the combination of the three elements might increase students' self-motivation more than using only two of these elements.

MATERIALS AND METHODS

Purpose of the Study

The objective of this study is to examine the effects emotions (i.e. negative emotion (NA) & positive emotion (PA)) on students' self-motivation in two different groups (i.e., control & experimental groups).

Participants

This study involved 259 participants from an introductory psychology course. Although the participants come from different programs, they were similar in terms of their academic year, courses and age. There were 259 participants who took part in this study; 56 males (21.6%) and 203 females (78.4%). They were divided into two study groups (experimental vs. control group). There were 141 participants in the experimental group and 118 participants for the control group. It was a quasi-experiment without randomly assigned groups. Participants were divided into experimental and control groups and asked to focus on a video and to fill a set of questionnaires consisting of a demographic profile, Positive and Negative Affect Schedule (PANAS) scale and self-

motivation scale immediately afterward. Participants were instructed to respond to the PANAS scale first. They responded based on their emotions after they watched the video. Participants were then instructed to rate their motivational level with regard to the video. In the experimental group, participants watched the inspirational true story of Derek Redmond who participated in the 100 meters in the Summer Olympics in Barcelona. Derek finished his race with support from his father despite a leg injury. The video was created by Connie Lynne and presented with music and lyrics from a song entitled 'You raised me up' by Josh Groban. In the control group, each participant watched a video in the 100 meters world record. The accompaniment for this video was super bass music by DJ Fruit-Y without lyrics.

Instruments

Each participant responded to a set of questionnaire comprising three sections; a demographic scale, A PANAS scale and self-motivation assessment tool.

Section A: Demographic scale

There were four items in the demographic profile measuring age, academic level, types of academic program and gender.

Section B: PANAS Scale

We used the International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) scale to measure emotions (Thompson, 2007). This scale was designed to measure participants' present emotions (i.e., after watched the video). The scale consists of negative and positive affects that might represent the participants' emotion after they heard and watched the video. The PANAS scale contains two subscales: positive affect (PA) and negative affect (NA). Positive affect includes feeling alert, inspired, determined, attentive and active, while negative affect includes feeling upset, hostile, ashamed, nervous and afraid. Each subscale consisted of ten items using a 5-point scale ranging from 1 (never) to 5 (always). Past research has reported that the reliability of the PANAS scale based on present emotions was $\alpha = .89$ for PA and $\alpha = .85$ for NA (Watson, Clark & Tellegen, 1988). In our study, for the experimental group the PA reliability was $\alpha = .66$ and NA reliability was $\alpha = .65$ for the control group, the PA reliability was $\alpha = .79$ and NA reliability was $\alpha = .69$.

Section C: Self-Motivation Assessment Tool

The self-motivation assessment tool (Butz, 2010) used to measure participant awareness of self-motivation consisted of 12 items. Higher scores corresponded to greater self-motivation. The response scale was: 1 (never) to 4 (very often). Items included statements such as 'I believe that if I work hard and apply my abilities and talents, I will be successful'. The self-motivation scale reliability for the experimental group was $\alpha = .83$ and for the control group, was $\alpha = .82$.

RESULTS

Data Analysis

The data was analyzed by using IBM SPSS Statistics 20.0. The hypotheses were analyzed using simple regression to examine the effects of emotions on students' self-motivation.

Reliability of PANAS Scales and Self-Motivation scale

The study shows that the reliability of the PANAS scales (positive & negative affects) and self-motivation scale for the experimental and control groups were acceptable, ranging from .65 to .83.

Table 1. Reliability of PANAS Scale and Self-Motivations Scale

Group	PANAS Scales		Self-Motivation
	Positive Emotion	Negative Emotion	
Experimental	.66	.65	.83
Control	.79	.69	.82

RESULTS

Table 2 shows the pattern of participants' demographic characteristics (see Table 2 for the detailed description). In terms of age, the mean and SD were $M=20.16$ ($SD=.95$).

Table 2. Participants' Demographic Profile

Variables	N	Percentage
Gender		
Experimental Group		
Males	41	29.10
Females	100	70.9
Control Group		
Males	15	12.7
Females	103	87.3
Programs		
Program 1	59	22.8
Program 2	48	18.5
Program 3	39	15.1
Program 4	59	22.8
Program 5	53	20.5
Missing	01	0.4
Age		
19-20	220	84.9
21-22	30	11.6
23-24	6	2.4
30	1	.4
Missing	2	.8

Table 3. Simple Regression Analysis with Positive and Negative Emotions as Independent Variables Predicting Self-Motivation

Self-motivation				
Predictor	β	R^2	t	sig
Positive Emotions	.68	.17	5.12	.00
Negative Emotions	.15	.01	1.22	.22

In The Experimental Group

We predicted that both positive and negative emotions would show significant effects on self-motivation. The study however, showed that only positive emotions showed significant effects (being alert, inspired, determined, attentive & active) contributed 17% of the variance on self-motivation $\beta=.41$, $t(134) = 5.12$, $p=.00$. Negative emotions did not show any significant effect on self-motivation.

Table 4. Simple Regression Analysis with Positive Emotions as Independent Variables Predicting Self-Motivation for the Control Group

Self-motivation				
Predictor	β	R^2	t	sig
Positive Emotions	.37	.07	2.88	.00
Negative Emotions	-.23	.03	-1.68	.10

Similar results were revealed for the control group. We predicted that both emotions would show significant effects on self-motivation. The study however showed that only positive emotions (being alert, inspired, determined, attentive & active) as it contributed 7% of the variance in the self-motivation $\beta = .41$, $t(110) = 2.88$, $p=.00$.

DISCUSSION

Inspirational Motivational Music Video and Self-motivation

Different people have different ways of stimulating their motivation. According to Miranda and Gaudreau (2011) positive emotions that caused by listening to music were associated with greater emotional well-being (i.e., greater positive affect and lesser negative affect). In addition, the use of music has been found to increase not only students' satisfaction with their lessons and but also their intrinsic motivation (Digelidis *et al.*, 2014). However, we believe that when music with inspirational lyrics is the musical background for an inspiring event, it can stimulate self-motivation, as everyone can be affected by these factors. Our study revealed that participants who simultaneously received three types of stimuli (music, music with lyrics and an inspiring story) tended to show a higher self-motivation score compared with participants who watched a motivational video with music but no inspiring lyrics. Music accompanied by lyrics and an inspirational event can stimulate positive emotions which can increase self-motivation among participants.

The study, however, did not reveal the effects of negative emotions (i.e., feeling upset, hostile, ashamed, nervous and afraid) on self-motivation. This may be because negative emotion tended more often to be perceived than felt, while various kinds of positive emotions can be aroused by music and perceived by music (Zentner *et al.*, 2008). This finding has been supported by Gabrielsson (2002), who found that music rated as fearful or sad tended to produce a positive effect. In addition, negative emotions would be perceived as expressive properties of music instead of as an actual emotional response to music (Zentner *et al.*, 2008). One of the larger difficulties in studying music and emotion is the considerable disagreement about whether humans experience musical emotions in the same way they experience gut emotions (i.e. sadness, anger, fear, etc.) (Ellis and Simons, 2005). In our study, positive emotions stimulated through music, lyrics and an inspiring event increased students' self-motivation more powerful stimulus than listening to music alone. This is in accordance with Konecni's (2008) study, which found that thinking of a real-life emotional event was a far more powerful stimulus than only listening to music of the same valence. In that, the effects of 'sad', 'neutral' and 'happy' music on participants' emotional states were compared.

The finding was that for music to produce emotions, its effects must be cognitively mediated by memories and associated with powerful real-world events. In this study, we could not control participants' previous self-motivation. However, we tried to reduce this limitation by instructing each participant to rate his or her self-motivation based on the video watched. Another limitation of the study concerned the participants, which comprised only students. Students' daily habits (e.g., music listening) might be different from one another. It is further possible that some participants had a higher than average

interest in music. Therefore, the study needs to be replicated with more heterogeneous samples in terms of age and occupation. This is because individuals vary to a significant degree in what music means to them and in what they get out of it (Schoen, 1928).

Conclusion

Our study suggests students' motivational level can be increased by stimulating their positive emotions by showing them an inspirational event accompanied by music and inspiring lyrics. High self-motivational can contribute to good academic achievement, as revealed in past studies (e.g., Christiana, 2009; Gamboa et al., 2013). For future studies, it might be interesting to measure specific elements of music, such as the melody, dynamics, timbre and rhythm in future studies as studied by past researchers (e.g., Madsen, 1997; Geringer and Madsen, 1996). This may help us to understand the contribution of each component of music, lyrics and inspirational events to people's emotions. It might be also interesting if a researcher measured only one variable to examine its effect on positive and negative emotions and on self-motivation. Our research findings suggest that the three elements (music, lyrics and inspirational events) can be used as stimuli to increase students' self-motivation. We suggest that a follow-up study be conducted to examine whether the effects of positive emotions on self-motivation are maintained over time.

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