

# The Effect of Exposure to Humorous Content in Japan Animation on Stress Level

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**ABSTRACT.** *Japanese animation has been very influential in china and around the world. Previous researches regarding Japanese animation viewing claimed both the positive and negative relationship between Exposure to Japanese Animation and Stress Level. This study, aiming to clarify this conflict, confirmed that Exposure to Japanese animation is positively associated with Stress level. Nevertheless, this study finds that exposure to humorous content in Japanese animation is also positively associated with stress level.*

**KEYWORDS:** *Japanese animation, Exposure effect, Stress level, Humor*

## 1. Introduction

The Coronavirus Disease 2019(COVID-19) epidemic became a world widely destructive natural disaster event holding a place in the history. The COVID-19 epidemic has caused serious threats to people's physical health with panic disorder, anxiety and depression, especially for youngster tend to obtain a large amount of information from social media that can easily trigger stress higher(Qiu et al. , 2020). Based on such a severe situation of pandemic, we wanted to confirm the relationship between animation exposure and stress level.

Previous research has shown Japanese comics and animation have been very popular and influential from the 1980s to the present in Asia. Nowadays, almost all Asian countries have their own versions of Japanese comics and their routine Japanese animation series broadcasted on television(Wai-ming&Ng, Wai-ming, 2002). With the widespread use of high-tech products, animation websites, forums and subtitle groups gradually established in internet, opening up channels for more Chinese teenagers to access Japanese anime works. Plus, based on the factor that young people have broad thinking, active thinking, full of curiosity and fantasy about the unknown, and have a psychological tendency to explore self-positioning, Japanese anime produces a variety of themes of narrative style such as fantasy, action, journey, sports, romantic drama, comedy, which perfectly captures the psychological characteristics of young people and strives to meet to their psychological needs in plot design(Fukunaga, 2006;Lu&Zhang, 2019a), thus teenagers will easily be influenced during the process of forming the value of

themselves. Above all, we decided to investigate whether the exposure of Japanese animation and its specific contents affect the stress level.

To summarize, since the connection between the effect of media exposure and stress level has been arguing by the researchers along the way, this requires further discovery to ascertain of the authentic association of these two items. Plus, it has not been studying about the association between the effect of Japanese animation exposure and stress coping strategy by none of the researchers, so we wanted to fixate on it too. Therefore, we are now doing a research in order to propose some suggestions for all the people around the world suffering from this harsh period of time on relieving stress and also helping people to choose the proper and effective stress coping strategy.

## **2. Literature Review**

### ***2.1 The Effect of Japanese Animation Exposure on Stress Level***

The association between media use and stress level has been studied widely during the past decades (Ben-Zur et al. , 2012; Collins&Cox, 2014; Dougall et al. , 2005; McHugh et al. , 2018; McNaughton-Cassill, 2001). It has been shown that exposure to television programming can alter mood states (Hesse, n. d. ). Admittedly, some research claims that media use is also associated with stress coping (Ben-Zur et al. , 2012; Lew et al. , 2019; McHugh et al. , 2018). For example, addiction to social media is associated with the audiences preference for coping strategy (Sriwilai&Charoensukmongkol, 2016). Moreover, an experiment also confirmed that exposure to Japanese animation could relieve one's pressure psychologically because of the surreal situation in animation works (Lu&Zhang, 2019b).

As Mood Management Theory suggested, (Dolf Zillmann, 1988b, 1988a) selective exposure to media content and the selection of media stimuli is driven by hedonistic motivation. This theory, initially referred to as the theory of affect-dependent stimulus arrangement (D. Zillmann&Bryant, 1985), is founded on the underlying assumption that individuals are driven to terminate or mitigate negative affective states and to maintain and reinforce positive influences. In order to achieve these hedonistic goals, individuals rearrange their stimulus environments by aiding them in the optimization of mood via maximizing positive affect and minimizing aversive mood states. However, there is just one situation, media exposure, shows a high efficiency among multifarious options for stimulus arrangement. Through the mediums of environments, narration, or social interaction, media exposure prompts symbolic stimulus arrangement (Arnett, 2014).

Reinecke (2009) suggests that the social interactions involved in digital games and the deriving social support is an underlying reason for the capability of digital games to improve stress recovery. Social support in offline contexts is considered as a significant impact on recovery (S Folkman, 1984) (Schwarzer&Knoll, 2007) and other related research has suggested that one of the ways leisure activities provide

stress relief on account of the companionship they encourage(Iwasaki&Mannell, 2000). For instance, the alternative sources of support from other players and members of gaming communities provided in digital games(Collins&Cox, 2014). Thus, the social interaction generated by the media is one of the recovery methods that provides stress relief.

However, this research is aiming for a long-term and stable stress level after the exposure of animation, while other studies have confirmed the effect of media use on stress recovery. Some researchers explored media use as a form of escapism, providing a more enjoyable experience away from the limitations and negative affect of everyday life, and dive into a more pleasant world of media entertainment(Katz&Foulkes, 1962). Zillmann further develops the mood management theory that divides it into two distinctive processes based on the duration, short-term versus and long-term hedonic goals(Dolf Zillmann, 2000). The purpose of spontaneous and short-term hedonistic behavior is instantaneous pleasure and emotional optimization, while the telic hedonism refers to the acceptance of negative mood and unpleasant affective states in the interest of subsequent hedonic gratifications(Arnett, 2014). Also, Sriwilai and Charoensukmongkol(2016)argued that those who are addicted to social media would be more likely to use emotion-focused stress coping which is regarded as maladaptive coping because results from PLS analysis strongly confirmed that people with high addiction to social media tended to have lower mindfulness than those with lower addiction, in terms of it just affect individuals temporarily divert their attention from stress. Once the problem resurfaces again, more stress will be generated (Chang, 2012). Under the condition of media use, the concept of recovery functions for a short-term experience, while the concept of resilience functions in a long-term experience(Reinecke&Rieger, 2020). Due to the similarity of principle between Japanese animation and social media, the consequences above can also be proved to Japanese animation's;thus, we propose the following hypothesis.

Hypothesis 1: Exposure to Japanese animation is positively associated with stress level.

## ***2.2 The Effect of Humor Exposure on Stress Level***

Recent researches suggested that the effect of media on people(e. g. cultivation effects)are better conceptualized as content-specific rather than the degree of media exposure(Aubrey et al. , 2013;Jin&Jeong, 2010;Perse, 1986;Potter, 2014). Furthermore, depending on the content of programming, television viewing can produce either physiological arousal or relaxation(Dolf Zillmann, 1991). For example, exposure to humorous material facilitates coping with stressful events by reducing state anxiety and negative affect in general(Berk, 2000;Cann et al. , 2000;Isen et al. , 1987;Newman&Stone, 1996;Yovetich et al. , 1990). In the early studies, researchers have already found that the changes in daily mood can alter the response to potential infections of immune system. what's more, being in a positive mood was predictive of a more effective response by one's immune system. Thus, exposure to humor, with or without accompanying distinct humorous appearance or

behavior, should be conducive to minimize the negative impact of potentially threatening social as well as physiological events(Stone et al. , 1987). Contemporarily, other researchers also proposed corresponding evidence that being in a positive mood influences cognitive processes in an ideal manner, biasing mind toward positive information, and make it possible to make more positive evaluations of events(Isen et al. , 1987) .

To a large extent, being contact with humorous material could deal with pressure or anxiety. According to an experiment setting a situation where the participants wait for electric shock, the researchers found that comparing to the participants who were not at the exposure of “humorous tape” or “no tape”, participants exposure to humorous tape were less affected by anxiety when suffering nervous tension. The positive affective state produced by humorous materials which is an opposite state could effectively function in preventing it from negative state interfering problem-solving process(Yovetich et al. , 1990). Newman and Stone(1996)supported the stress-moderating role of humor, both in terms of physiological and mood measures. Their research showed that compared to those who produced the serious narration, the other group of those who produced a funny film narration had less negative effect. And that rated themselves as marginally less tense after watching stressful film or showed lower reactivity of tense during the stressful film than those who narrate serious content.

One of the mechanisms by which humor has a beneficial effects has been summarized, showing that humor treatment (video segment created by selecting a variety of televised comedy specials)could simply generate an elevated positive affective state that neutralizes recent negative experience, resulting in a more positive affective condition than the neutral treatment(video segment taken from a televised travel documentary)because of the humor's more positive impact. In other words, if you generate more positive affect, then the combination with an unpleasant event, while lowering the affective state, will still leave you with a positive residual affect(Cann et al. , 2000).

According to the recent studies, the significance of exposure to humor as a strategy to reduce the negative emotional impact of unpleasant, stressful events may depend, at least in part, on the timing of the humor, has been indicated. Also, they found that exposure to the humorous materials best as a preventative rather than as a cure in response to stressful event evoking anxiety emotions. A dose of humor before the unpleasant event inhibits the experience of anxiety, plus reduces the amount of anxiety experience. (Cann et al., 2000)

Hypothesis 2: Exposure to humorous content in Japanese animation is negatively associated with stress level.

### 3. Method

#### 3.1 Population and Sampling

A cross-sectional online survey was conducted in Shenzhen China through the online survey service SoJump. The population of this study was the Japanese Animation viewers in China. Due to limited resources, a convenience sample was used to collect the data. The questionnaire was distributed and collected via several Chinese social network services such as Wechat, Qzone, QQ and Weibo, and Stream Video platforms such as Bilibili. A snow ball procedure was deployed to increase the pool of the participants. Subjects recruited early were asked to share and retweet the questionnaire.

#### 3.2 Measurement

Japanese Animation Exposure measures the 1)total amount of exposure, which refers to how many hours have you spent on animation;2)frequency of exposure, which refers how often do you watch animation on average of weekday and weekend. They were scored on a five-point frequency scale, ranging from 1(never) to 5(always).

Humor exposure were measured for the frequency of exposure, in terms of 'How often do you watch humorous content in Japanese animation for the past period of time'. They were also scored on a five-point frequency scale, ranging from 1(never) to 5(always).

The measures of the variables were adopted from previous studies. Stress level was measured using the 21-item versions of the Depression Anxiety Stress Scales(DASS)in clinical groups and a community sample developed by(Lovibond&Lovibond, 1995). Stress consists of seven items whose sample items include 'agitated', 'touchy' and 'intolerant of delays'. Respondents indicate the extent to which they experienced each of the symptoms depicted in the items during the previous week on a 4-point Likert-type scale between 0(Did not apply to me at all) and 3(Applied to me very much, or most of the time).

### 4. Results

Hypothesis 1, Exposure to Japanese animation is positively associated with stress level, was confirmed. A correlation analysis was conducted to test the relationship between Japanese animation and Stress level. The result showed that Exposure to Japanese animation is positively associated with Stress Level( $r=.13$   $p<.05$ ).

Hypothesis 2, Exposure to humorous content in Japanese animation is negatively associated with stress level, was rejected, the correlation between humorous exposure and stress level was significant yet the relationship was positive. A correlation analysis was conducted to test the hypothesis. The result showed that

Exposure to humorous content is positively associated with Stress Level( $r=.17$   $p<.01$ ).

## 5. Discussion

The main objective of this research is to explore the effect of Japanese animation exposure, its humor exposure on stress level. Importantly, our findings have provided additional evidence to the literature not only on the effect of overall exposure to Japanese animation on stress level, but also the effect of exposure to humorous content in Japanese animation on stress level, which is an area that still lacks empirical investigation at the present time. Specifically, the study put forward a positive correlation between humorous content and stress level.

Some researchers put forward that the overall media exposure is negatively associated with the stress level; in contrast, others suggests that it's positively associated. Result of this study effectively supports the latter finding; we observed that a higher exposure of Japanese animation can lead to a higher level of stress rather than reducing stress extent. we believe that avoidance of media use is the valid method for relieving the stress. Even if you are laughing very loudly during the period of time you watch animation, it doesn't make you unwind after all, for you still refuse to face the radical source of your stress. What's more, the media addiction can result in a low mindfulness, which also engender emotion exhaustion significantly. In particular, the more concentration you put in the media, not only the more stress you will suffer but also the more hardship you will encounter to cope with the stress effectively(Christopher&Gilbert, 2010; Sriwilai&Charoensukmongkol, 2016). Moreover, due to the fact that we were measuring a period of time participants watching animation, such long-lasting time puts more stress on them(Dolf Zillmann, 2000).

Although no evidence was found for the linkage of the humor exposure and stress level is negatively associated, we discovered a completely opposite factor of this: the effect of humorous content in Japanese animation is positively associated with the stress level. So far, we propose two possible reasons for this surprising result. First off, we confirm that the correlation between humor exposure and violence exposure is highly significant. During the process of watching some humorous series of Japanese animation, the violent scenarios are most likely to mix into and alternate with humorous content, which cannot explicitly be separated in anime for measurement. Research showed that comedy programs are less likely to show violence being punished. Because violence in comedy is more likely to be committed by heroes, viewers would be more likely to regard it as less serious than if it were villains(Heath&Gunter, 1986). Secondly, based on the previous theoretical evidence, the exposure before an unpleasant event was more beneficial than exposure after the event, in terms of that humor as preventative functions the best in limiting some negative moods or affect; in addition, the moods that were affected by the timing of the humor treatment were "tension" which is one of the items we measured for testing the stress level(Cann et al. , 2000). Nevertheless, we do not have the ability to master the exact timing whether our participants were watching

humorous content of Japanese animation before or after their stressful events happened, so this factor may blur out our result of the measurement.

## 6. Conclusion

This study illustrates the relationship between Japanese animation, its specific content and stress level. Starting from about 2020, novel Coronavirus will continue to spread from China to intrude on people's life, travel, physical health, economic trends and mental state that cannot be ignored all over the world. As a big thing deeply loved by teenagers in the world, Japanese animation not only makes us fully understand Japan, but also imperceptibly influences our life, our mental state and behavior. So far, we have conducted such a study on the impact of watching Japanese anime on stress and stress coping, with the ultimate aim to enable people to cope with the negative emotions brought by the epidemic and even in daily life more effectively and to correctly select coping strategies for stress.

This research provides some practical solutions concerning some negative emotions and potential risks of wrong coping strategy after watching Japanese anime. Statistical evidence showed that approximately 70% of the participants are teenagers under-age; generally, they have not yet fully formed mature values, so in a very vulnerable and unstable stage of age, even though there are in humorous scenarios with a bit of violence in anime, based on not removing the violent plots so as to preserve the story's integrity, the children are easy to get caught in a spiral of justice judgment or even distort the correct behaviors, which leads to stressful events (Bryant et al., 1981). Therefore, we propose the following two principal suggestions or improvements for Japanese anime production and publishing company of animation works, or the Saret (The State Administration of Radio Film and Television) of China supervising animation works, especially for children, full age group or dangerous behaviors are likely to implement in realistic life. First off, adding some essential scenarios that reveal the wrongness of the character who commit acts of violence such as sanctions, warnings, or punishments. Whoever is in the protagonist in the story, in the role of showing justice, being applauded for his/her behavior (Albert Bandura, 2001; Liss et al., 1983). Secondly, the severity of their mistakes should be demonstrated in the subsequent plots or the warning sign should be clearly marked out that do not attempt imitating from this video during the broadcast of anime.

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