

The Correlation Between Adolescents' Risk-Taking Behavior and Music Preference in Jakarta

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Abstract— The purpose of this study is to find out the correlation between music preferences and risk-taking behaviour in adolescents in Jakarta. The researcher included 562 students from five high schools representing each area of Jakarta using stratified sampling and cluster sampling techniques. The results showed that there was a significant correlation between adolescents' risk-taking behaviour and music preference. Risk-taking behaviour have positive and significant correlation with energetic and rhythmic music preferences and intense and rebellious music preferences. There are negative and significant correlation between risk-taking behaviour with reflective and complex music preference and upbeat and conventional music preferences. The strongest correlation is the negative correlation between risk-taking behaviour with upbeat and conventional music preferences ($r=-0.602$, $p=0.000<0.005$). Meanwhile, the weakest correlation is the positive correlation between risk-taking behaviour with energetic and rhythmic music preferences ($r=0.438$, $p=0.000<0.005$). these results indicate that individuals who tend to have risk taking behaviour have energetic and rhythmic or intense and rebellious music preferences and don't like reflective and complex or upbeat and conventional music, and vice versa

Keywords: risk-taking behaviour, music preference, adolescents, high school students

I. INTRODUCTION

Music has an important impact on the lives of teenagers. Music is used to reflect feelings, values of life, needs, and also conflicts in their life. For some teenagers, music is part of socialization and even personality development [1]. Most adolescents will make music as a means to reflect on themselves in the midst of the difficulties they are experiencing [2]. According to Sloboda and O'Neill [3], music is often associated with feelings, because music is considered a means of expressing feelings. In addition, music is also considered to change the feelings of listeners. Its proximity to human life makes many studies of music that are associated with behaviour in human life.

Research conducted by Ekinci et al. [1] found that teenagers who consumed alcohol, cannabis, and cigarettes tended to prefer metal music to light music such as pop. In addition, adolescents who tend to be aggressive, like theft, and participate in street gangs also prefer metal music. This shows that risk-taking behaviour correlate with music preferences in teenager. A study conducted by Roberts et al. [4] said that preference for certain types of music correlates with certain habits. The increase in suicides, smoking, and problems at school is related to their musical preferences for heavy metal and rock music. In addition to rock and metal music, the preference for other music also affects the increase in risk behaviour is a type of rap music that raises risk-taking behaviour problems such as murder, suicide, and other violent behaviour [5].

There are several risky actions taken by adolescents, such as taking illegal drugs [6]. There are several dimensions in risk-taking behaviour. First, impulsivity is a tendency to engage in unplanned behaviour and without considering the consequences that will occur [7]. Second, venturesomeness is the desire of individuals to behave at risk or do something that is risky. In this dimension, individuals place themselves in conscious danger [8]. Third, novelty-seeking is a personality trait associated with exploration activities in which individuals seek something new and interesting and can release dopamine and adrenaline when making new experiences [9]. Fourth, impulsive- sensation seeking, impulsivity related to sensation seeking is defined as the need to experience varied, new, and complex sensations to feel pleasure [7]. Zuckerman, Kuhlman, Joireman, Teta and Kraft [7] assume impulsivity and sensation seeking are related and can predict risk-taking behaviour so that the concept of impulsive sensation seeking arises.

Research conducted by Primack, Douglas, Fine and Dalton [10] found that the average the teenager heard the music for 14,7 hours every week. The results of the survey show teenagers who often listen to song lyrics with nuances of sex have higher level of sexual behaviour. The lyrics of the music heard will be sent as a signal to the brain by carrying system including parts of the amygdala brain [11]. So that people who are often exposed to music that contains sexual lyrics, violence, drugs, smoking, or other negative behaviours will send a message to the regulator of the sense of anxiety and fear that makes the brain part can't work optimally and will cause perception of things that is

normal, harmless, and not considered as a risky behaviour [4]; [11].

In addition to music lyrics, listening to music melodies, especially the preferred music melodies, has an effect on increasing risk behaviour. A study conducted by Halko, Maklea, Nummenmaa, Hlushuck, and Shurman [12], found that when participants listened to music they preferred, they tend to be more willing to doing a risky behaviour than when listening to unwanted music. This can suggest that risk-taking behaviour could increase caused by listening music that they preferred.

The musical melody successfully stimulates human emotions. Seymour and Dolan [13] said that emotional factors play a role in decision making. Music melodies that are liked can affect individual emotions and influence decision making which can increase speculation behaviour (risk) because the music melodies will make the listener feel annoyed, headaches, or depression [12]. When the amygdala response creates a sense of calm, the fear of speculation will be lower, but if the amygdala response creates a feeling of unease, the fear of speculation will be even higher. It is because the amygdala plays a role in human fear [11].

Music preference is a person's tendency towards certain music compared to other music [14]. [15] said that each individual has different music preference according to the characteristics of their respective audience. Individuals had different music preference is caused by the characteristics of the music, such as tempo, pitch, and rhythm [16]. According to Rentfrow and Gosling [2], there are 14 genres grouped into 4 categories. First, reflective and complex, consist of musical genres that are used to facilitate individual in introspection and have complex structures. This music group is described as having the slowest tempo compared to other categories, using acoustic instruments, and there are few songs of lyrics. The genres contained in the reflective and complex is classical, blues, folk and jazz. Second, upbeat and conventional, which is a music genre that emphasizes positive emotions and has a simple structure. This music group is described as having a fast tempo and using electric musical instruments. Genres in this category are country, religious, pop and soundtracks or theme songs. Third, energetic and rhythmic, which consists of a lively genre and emphasized the rhythm of the song. This music group is described as having many and complicated songs and lyrics. Genres in this category are dance/ electronica, rap/ hip hop, and soul/ funk. Fourth, intense and rebellious, consisting of genres full of energy and emphasizing the theme of rebellion. This music category is described as using electric instruments and full of enthusiasm. Genres in this category are alternative, rock, and heavy metal.

II. RESEARCH METHOD

A. Research Participants

The number of subjects in this study were 562 students from 5 different high schools in Jakarta. The participants of this research are 562 adolescents, aging between 14-18 years old ($M=16.3$, $SD=0.99$), 234 males and 328 females from 5 different senior high school students that represent every each area in Jakarta participated in this study. The sampling techniques in this study uses cluster sampling from five

different areas of Jakarta and a stratified sampling technique that is taking samples of one class from each grade level.

B. Measures

There are two scales used in this study, risk-taking 18 items (RT-18) developed by de Hann et al. (2016) and Short Test of Music Preference (STOMP) developed by Rentfrow and Gosling [2]. For measuring instrument for risk-taking behaviour, researcher adapted from The Risk- Taking 18 items from English into Bahasa. RT-18 is using Guttman scale, that participants need to choose between yes or no. The alpha- cronbach's score for impulsivity dimension is 0.588, example item of this dimension is "Apakah anda biasanya berpikir dengan cermat sebelum melakukan sesuatu?". The alpacronbach's score for venturesomeness dimension is 0.506, example item of this dimensions is "Apakah anda terbuka dengan pengalaman baru yang menyenangkan, walaupun orang lain takut melakukannya?". The alpha- cronbach's score for the novelty seeking dimension is 0.649, example item of this dimension is "Saya sering mengikuti kata hati, firasat, dan naluri saya tanpa memikirkannya dengan cermat". The alpha- cronbach's score for the impulsive sensation seeking dimension is 0.645, example of this dimension is "Terkadang saya melakukan hal yang berbahaya hanya untuk kesenangan saja"

Music preference dimensions consist of reflective and complex, upbeat and conventional, energetic and rhythmic, and intense and rebellious. The researcher adapted a music preference questionnaire called Short Test of Music Preference (STOMP) from English to Bahasa to measure the preference music consisting of 14 items. This scales was rated on a 7-point Osgood from 'Not at All True' (1) to 'Very True' (7). Alpha- cronbach's score for reflective and and complex dimension is 0.729, example of this dimension is "classic". Alpha-cronbach's score for upbeat and conventional dimension is 0.717, example item of this dimension is "pop". Alpha-cronbach's score for the energetic and rhythmic dimension is 0.673, example item of this dimension is "rap". Last, alpha- cronbach's score for the intense and rebellious dimension is 0.7777, example item of this dimension is "heavy metal".

C. Statistical Analysis

Collected data are processed by SPSS software. First, we check for the reliability of the three scales used by using Cronbach's Alpha. The validity of each item is measured by item-total correlation. Spearman- correlation for test correlation between risk-taking behaviour and music preference.

III. RESULT

Statistical analysis shows that risk-taking behaviour and music preference does not spread on normal curve ($p<0.05$). Based on the result of the correlation test using Spearman-correlation, it was found that risk-taking behaviour had a significant and negative correlation with reflective and complex dimension ($r=-0.488$, $p<0.05$) and also with upbeat and conventional dimension ($r=-0.602$, $p<0.05$). the result also shows that risk- taking behaviour had a significant and positive correlation with energetic and rhythmic dimension ($r=0.438$, $p<0.05$) and also with intense and rebellious dimension ($r=0.558$, $p<0.05$).

Based on the results of the correlation test, it can be seen that risk-taking behaviour has a significant correlation with music preference. The correlation test results show that the strongest correlation is the negative correlation between risk-taking behaviour and upbeat and conventional music preference. While the lowest correlation is a positive correlation between risk-taking behaviour with energetic and rhythmic music preference. For more details can be seen in table 1.

Table 1: Correlation between risk-taking behaviour and music preference

| Risk-taking behaviour with | p | R |
|----------------------------|-------|--------|
| Reflective & Complex | 0.000 | -0.488 |
| Upbeat & Conventional | 0.000 | -0.602 |
| Energetic & Rhythmic | 0.000 | 0.438 |
| Intense & Rebellious | 0.000 | 0.558 |

This is quite in line with the research conducted by several previous studies. The results of the studies indicate there is correlation between risk-taking behaviour and music preference. The study found that individuals who tend to have risk-taking behaviour preferred heavy metal and rock music that is included in the type of intense and rebellious music. Based on the analysis of the data obtained, researcher found a significant positive correlation between risk-taking behaviour and the type of intense rebellious music. In addition, this study also found a significant positive correlation with energetic and rhythmic music. Meanwhile, this study also found there are significant negative correlation between risk-taking behaviour with reflective and complex music and also with upbeat and conventional music [17]; [18]; [19].

Based on the data obtained, researcher found that 47 from 562 participants smokes cigarettes, 84 from 562 often to drink alcohol, 12 from 562 participants consuming illegal drugs, 280 from 562 driving a vehicle in a high speed, and 22 from 562 participants having sex without contraception. For more details can be seen in table 2

Table 2: Overview of subjects acting in risk-taking behaviour

| Risk Behaviour | Ever/often | Frequency (%) |
|-----------------------------------|------------|---------------|
| Smoking | 47 | 8.4 |
| Consuming alcohol | 84 | 14.9 |
| Consuming illegal drugs | 12 | 2.1 |
| Driving a vehicle in a high speed | 280 | 49.8 |
| Having sex without contraception | 22 | 3.9 |

IV. CONCLUSION

Based on the results of statistical analysis, it was found that there is correlation between adolescents' risk-taking behaviour with music preference. Individuals who have risk-taking behaviour tend to have energetic and rhythmic also intense and rebellious type of music as their music preference. It can be concluded that individuals with risk-taking behaviour more likely have music preference towards the genre of dance, rap, hip hop, soul, funk, alternative, rock, and heavy metal. Meanwhile, these individuals do not have music preference for the genres of classic, blues, folk, jazz, country, religious, pop, and soundtrack or theme songs.

These result shows that adolescents tend to doing risk-taking behaviour when exploring new things in seeking

identity. Researcher found that the most common risky behaviour among adolescents was driving a vehicle at high speed, in the second place was the behaviour of consuming alcohol and in the third place was smoking behaviour. For this reason, researcher provide advice for adolescents who have risk- taking behaviour to be more careful in acting.

Suggestions for the future research to be able to do control data on factors that cause high or low risk- taking behaviour od adolescents such as relationship with family, school situation, peer group, socio- economic status and where the adolescents usually gather with their friends who allowing them to take risk-taking behaviour because of mutual conformity between friends. Researcher also suggested that the research be carried out next not only for senior high school students but also for junior high school and primary school who are still included in the stages of adolescence. This will make the results obtained more complete and not only partially as in the research conducted in this study.

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