

**How teenagers use music to manage their mood: An initial investigation.**

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## **How teenagers use music to manage their mood: An initial investigation.**

Music is especially meaningful and popular during adolescence (Tarrant 2002). It is the most preferred leisure time activity for many adolescents (Fitzgerald, Joseph et al. 1995) with music listening being consistently rated as the most favoured way of spending time in doors (North and Hargreaves 1999). The range and diversity of musical genres available to adolescents is ever increasing, with the mp3 revolution making it possible to download an extraordinary variety of songs from every part of the globe (Scannell 2001). This level of access increases the necessity for educators to be informed about the potential impact of music listening given that teenagers spend most of their time in school.

The Parent-Teacher Association of America, along with the American Academy of Paediatrics, has challenged the music industry with a vast range of accusations in relation to the provision of music to adolescents. Rock music in particular has come under fire for its associations with adolescent suicidality and heavy metal music has also been targeted by the Parent's Music Resource Centre for its links with antisocial behaviours (Scheel and Westefeld 1999). Allegations have been made about backmasking satanic messages in some songs, although these have mostly been proven to have more superficial intentions – namely commercial success (Blecha 2004). The impact of themes of extreme violence, rebellion, sexual promiscuity and rebellion typically used in hip-hop and heavy metal music can be mitigated to some degree by research that suggests teenagers listen to the music more than the lyrics (Gantz, Gartenberg et al. 1978; Mark 1988; Wass, Raup et al. 1988; Steinberg 1996), which in many cases are already heavily disguised by distortion and dramatic singing styles.

In addition to public concern about a causative relationship between listening to aggressive styles of music and bad behaviour, research has consistently identified a relationship between poor mental health and adolescent music preferences for rap, rave and/or heavy metal music (eg. Stack, Gundlach et al. 1994; Scheel and Westefeld 1999; Lacourse, Claes et al. 2001; Tarrant, North et al. 2001; Anderson, Carnagey et al. 2003; Rustad, Small et al. 2003; North and Hargreaves 2005). Some researchers suggest that certain types of music can act as a priming agent for aggressive or suicidal thoughts (Anderson, Carnagey et al. 2003; Rustad, Small et al. 2003). Others argue that it can escalate behaviour to antisocial or risk-taking levels (Stack, Gundlach et al. 1994; Stuessy 1996; Roberts, Dimsdale et al. 1998). These theories are supported by a range of studies that have highlighted specific relationships between self-harming / suicide and a preference for heavy metal and Goth music (Lester and Whipple 1996; Young, Sweeting et al. 2007), or between antisocial behaviours and rock / heavy metal music (Arnett 1991; Gowensmith and Bloom 1997; Fruben, West et al. 2001; Bushong 2002). Stack has been one of the most provocative researchers on this topic, going so far as to calculate a relationship between the dominance of country and western music on local radio and higher than average suicide rates (Stack and Gundlach 1992). They have also endorsed the suggested relationship between heavy metal music and suicide susceptibility, although his investigation of variables ultimately led to the suggestion that lack of religiosity was more strongly related to a suicidal state of mind than a preference for heavy metal music.

In contrast to simplistic public interpretations of these findings, researchers have often suggested that certain music preferences are suggestive of *vulnerability* to mental health problems (Scheel and Westefeld 1999). This is in keeping with

research that proposes a reflective relationship between adolescents' music preferences and their mental health status. Roe's (1987) study found that musical choices were related to student's current academic success and to their self-predicted future success. His results identified that the more isolating the music of choice, the more isolated the teenager felt, leading to the conclusion that music preferences reflect self-perception. This has been supported by Took and Weiss (1994) who suggest that early failure in the school system leads to an increased interest in heavy metal music. Coleman's early study (1960) also supports this premise, revealing that adolescents who failed to achieve in school tended to turn toward heavier media use as an escape from confronting the meaning of their failure. The literature provides ample support for the premise that a preference for heavy metal music is related to challenging life circumstances, whether related to mental illness or problems in familial or personal relationships. But significantly, results of Lester and Whipple's (1996) study identified that past suicidal ideation and preference for heavy metal music was not linked to current suicidal ideation or depression, suggesting that this may be a transient state for many adolescents.

At a more basic level, it is also important to consider the role of adolescent music from a developmental perspective. The process of identity formation that defines this stage of development is built upon the transition from family to peer alliances (Erikson 1965). Healthy adolescence is defined by the rejection of the primacy of the family unit in preference for the development of social networks. Music can be seen as integral in this process, with adolescent music inciting parental concern from the gyrations of Elvis Presley through to the sexually provocative film clips of Madonna and into the heavy metal music of Slayer and the rap era of Eminem. It can be argued that it is essential for adolescents to identify with music that is not approved of by concerned adults, and that relevant themes of confusion and identity are only represented in the lyrics of the more rebellious musical genres (Lull 1987). Frith (1981) has noted that musical preferences serve as a 'badge' of group membership with like-minded peers. Studies have shown that personal preferences for musical styles such as folk or country and western are often disguised in the peer context because this phenomenon is well understood by teenagers (Tarrant, North et al. 2000). In fact, one study showed that the 'in-group' of teenagers perceived that all peers liked the same music, but that the 'out-group' simply liked it less (Tarrant, North et al. 2001).

Despite the wealth of commentary on the negative influences of music, it is generally accepted that music can play a positive role in the lives of adolescents. Lacourse and colleagues (2001) discovered that the vicarious release experienced through music listening was actually inversely related with suicidal ideation for girls. Sullivan (2003) found that many black listeners in his American sample found rap music life affirming. Biological measures have been found to improve post-listening to rock music in comparison to a control group, even though self-report of mood was not influenced (Field, Martinez et al. 1998). Mood control and mood improvement have been theorized as central to music experiences for teenagers (Saarikallio and Erkkila 2007). Their qualitative investigation of 8 Finnish adolescents implied that "the importance of music is intrinsically related to enjoyment and positive experiences" (p. 104). It functioned as entertainment, revival, strong sensation, diversion, discharge, mental work, and solace. Although music listening sometimes resulted in temporary decreases in mood, their participants described how this progressed through to positive outcomes through a sense of understanding or clarification. This journey through emotional responses is similar to an earlier study

(Gantz, Gartenberg et al. 1978) based on the analysis of descriptions generated by adolescents where the role of music is stated as: relieving tension; taking their mind off things, passing time and negating boredom, as well as helping them feel less alone and creating or maintaining a good mood.

Saarakallio and Erkillä (2007) suggest that research has commonly focused on negative mood outcomes and have recommended a focus on positive outcomes in response to music. They have also described an intentionality to mood regulation through music listening which contrasts with the assumedly passive relationship between teenagers and their music preferences implied in the majority of the literature. In their study, the teenagers described the importance of voluntary selection of music that suited their mood and context in the moment. They did not set out to improve their mood, but they instinctively knew what kind of music they needed to listen to and described 'good' music as being able to fit several different moods and situations.

In order to further investigate the positive use of music to influence mood, the research question driving this study was:  
How successfully do teenagers use self-selected music to influence their mood?

## **Method**

### *Participants*

Data was collected from 111 older adolescents at an inner-metropolitan school in the city of Melbourne, Australia. The sample set consisted of 342 students in Years 10 and 11 at the participating secondary college. It was initially intended that a cluster sample would be achieved comprising all students, however local ethical requirements dictated the need for active consent that relied on the return of hardcopy forms signed by parents. A low return rate was anticipated by school staff in keeping with their usual experience of paper returns and an incentive of CD vouchers was therefore instituted to make the return more likely, with a 32% return ultimately being achieved.

The region in which the school is located is considered to be mildly socio-economically disadvantaged and is the most culturally diverse area in the State of Victoria. Only 40.3% of the population were born in Australia, and 52.7% speak a language other than English, namely Vietnamese, Chinese, Italian and Greek, in decreasing order. A growing disadvantage is evidenced in this region, with the working poor making up a majority of the population. Life expectancy is significantly lower than the state average, and the score on Disability Adjusted Life Years shows that it is the lowest in the State according to Australian Bureau of Statistics figures (2002).

### *Ethics*

Active consent was solicited from all 111 participants, plus one parent or guardian of each participant, following the distribution of a plain language information statement (PLS) via mail out to families of students in Years 10 and 11. The PLS explained the focus of the project as investigating "whether there is a relationship between the ways that young people listen to music and their happiness and health". It outlined the voluntary nature of the project and noted that the survey would be filled out without the submission of any identifying information.

### *Procedure*

Students were taken out of class in groups of 10 to participate in the on-line survey. The schedule for participation was coordinated by a contracted teacher who collected the groups of students from each class group based on the return of consent forms. A computer laboratory with 10 computers was made available for the day with each computer set up for access to the survey that was available with password access via the web-page of the collaborators homepage (Centre for Adolescent Health, Royal Children's Hospital, Melbourne). The teacher monitored student access to the survey, and provided a reminder that participation was voluntary and anonymous. Students were asked not to talk during the time taken to answer the questions and to remain seated quietly until all students indicated they were finished. Students spent an average of 14 minutes completing the on-line survey, with a maximum time of 25 minutes being taken.

### *Survey Design*

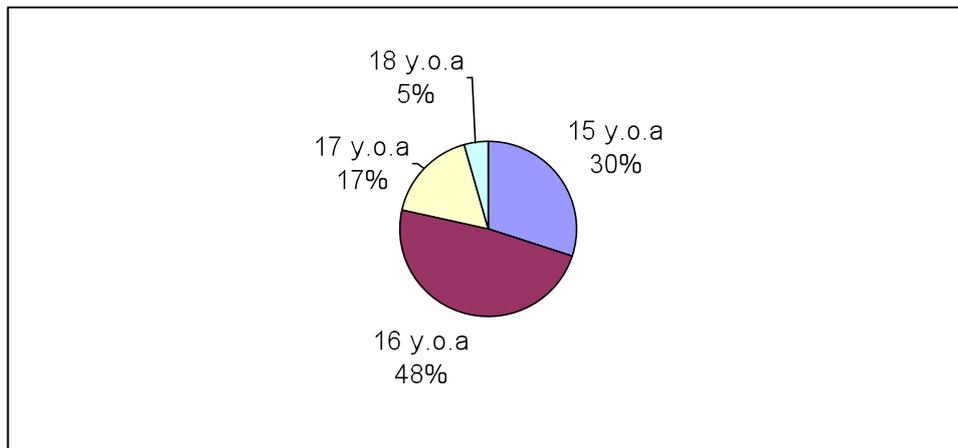
The survey consisted of five sections that collected data on a range of variables relevant to the intended analysis. Section 1 comprised questions to gather the socio-economic data, including a question on religiosity. Section 2 concerned musical attributes such as estimated hours spent listening to music each week and mode of listening. Section 3 sought general information regarding music preferences, including how changeable these preferences were and whether this was influenced by peer's preferences. This section also gathered information on the different types of emotional responses that motivated music listening. Section 4 concerned the use of music for five particular moods: happiness, sadness, stress, anger and boredom. The authors chose these moods because they were thought to be easily understood, relatively separate from each other as well as commonly experienced by adolescents. For each mood, the respondent was asked how often they listen to music, what type of music they listen to and how they usually feel afterwards.

Section 5 comprised the Kessler Psychological Distress Scale - 10 (K10) (Kessler, Andrews et al. 2002), used to determine the mental health status of the participants. The K10 is a validated tool that measures non-specific psychological distress based on questions about negative emotional states experienced by respondents in the four weeks prior to interview. It has been used in a number of Australian surveys of the general population (ABS 2003) and strong associations have been found between high scores on the K10 and diagnoses of anxiety and affective disorders (Andrews and Slade 2001; Furukawa, Kessler et al. 2003). In this context, it was felt that a tool encompassing a wide range of psychological distress was appropriate for our analysis of a general adolescent population. Furthermore, the test is simple, brief, valid and reliable, and this made it a convenient tool to use with adolescents in the context of a school setting. K10 scores were calculated using the CRUFAD (Clinical Research Unit for Anxiety and Clinical Depression) scoring method that rates participants according to risk of psychological distress – either no/low level of risk (scoring between 10 – 15); medium level of risk (scoring between 16 – 29) or high level of risk (scoring between 30-50).

## RESULTS

Of the 111 participants, 62% were male and 38% were female. Ages ranged from 15 to 18 years and the majority of respondents were 16 years of age (See Figure 1). This is a slightly larger variation of age than is traditionally associated with years 11 and 12 in an Australian secondary school.

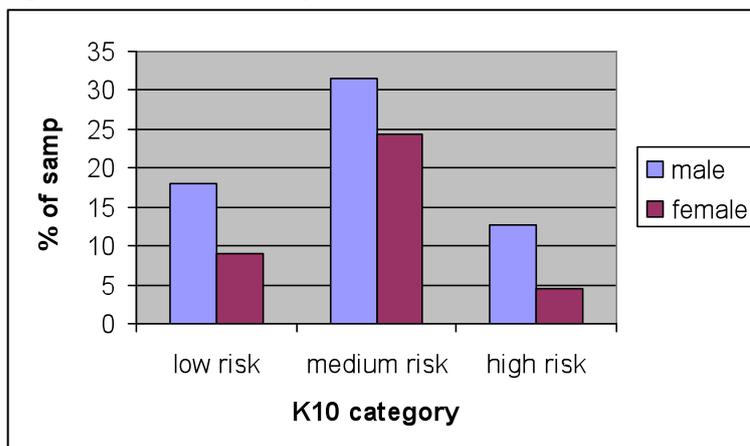
Figure 1: Age Distribution



The socio-economic status of the adolescents in our sample was spread quite evenly, with 25.22% of the teenagers' parents having accessed tertiary-level education, 18.92% having completed full secondary-level education, and 20.27% having completed the first four years of their secondary education. A similar proportion of adolescents did not know their parent's level of education (26.57%). The reported cultural background of the participating adolescents was predominantly European (45.95%), with a further 22.52% stating that they were of Anglo-Saxon descent and 15.32% of Asian background. In sum, these two variables suggest that our sample is an approximate reflection of the geographic region from which it came.

Following CRUFAD scoring of psychological risk, 56% of respondents were found to be in the medium risk of psychological distress category, 27% in the low risk category and 17% in high risk. (see Figure 2).

Figure 2: Distribution of K10 Scores by Gender



### Mode of listening

The authors were particularly interested in the mode of listening to music as it was considered to represent accessibility to music. The rapidly increasing popularity of computers and Mp3 players for music-listening was captured by our data set, with 31.53% of students using computers to listen to music and 29.73% of students stating preferred use of Mp3 players.

### Time spent listening

Results in this area support the widely-accepted view that adolescents spend a lot of time listening to music. Interestingly, in this study the average time spent listening to music increased as the risk-level increased (see Figure 3). Furthermore, the average time spent listening to music varied for each mood, with the most hours of music listening overall occurring during states of boredom and happiness (see Figure 4).

Figure 3: Average Time Spent Listening to Music

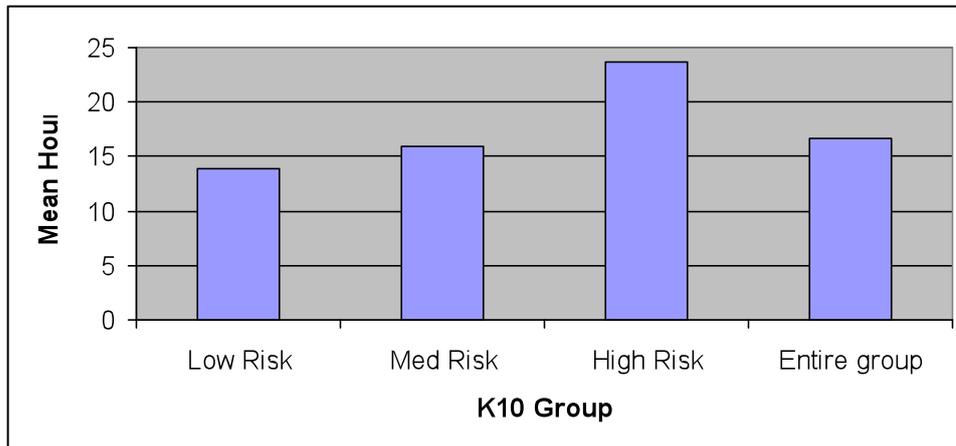
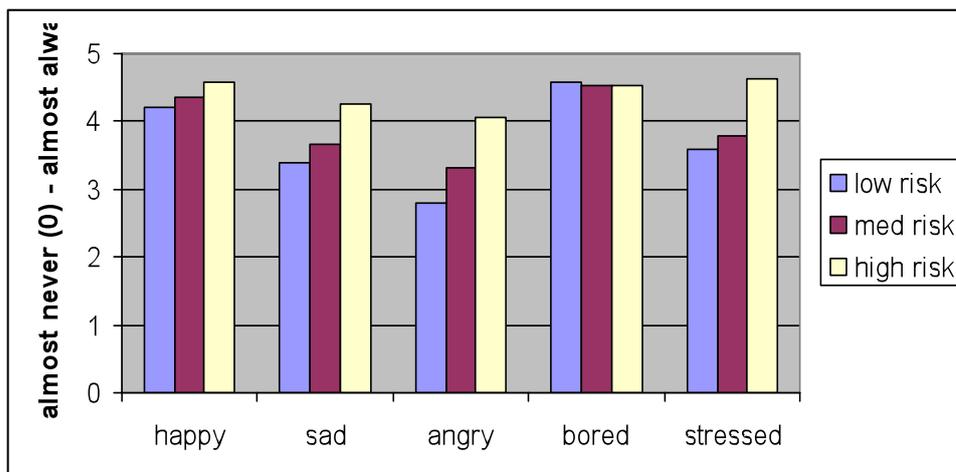


Figure 4: Average frequency of music listening during each mood



#### Variability of music preference

Almost half the respondents disagreed with the suggestion that their musical preferences were always changing (47.65%), while 31.53% agreed. A large proportion of respondents were undecided on the matter (19.82%). These results showed no significant trends when linked to the different levels of risk for psychological distress scored on the K10.

#### Influence of peers

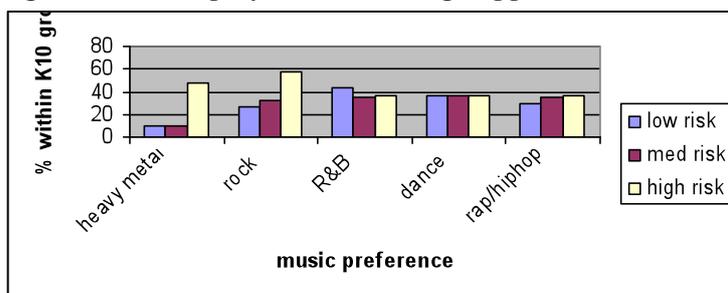
An equal proportion of respondents disagreed and agreed that their music preferences were the same as their peers (37%), with the remainder of respondents stating that they were undecided. As with the previous variable, these results showed no significant trends when linked to the different levels of risk for psychological distress scored on the K10.

*Use of music to manage moods*

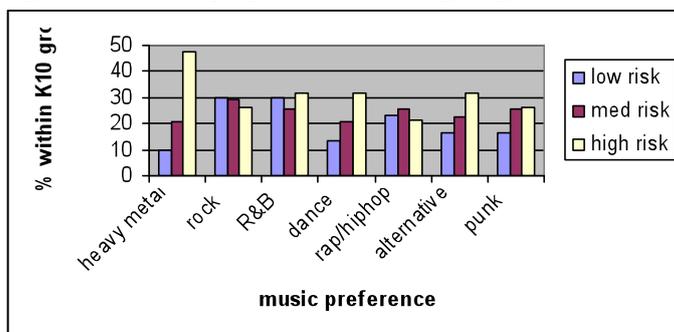
The results of our study found that these adolescents most frequently used preferred music to enhance their mood and reported feeling better after listening. This was most apparent in states of boredom and happiness where 68.47% and 60.36% of students respectively reported improvements after listening to music in these mood states. Fewer students reported improvements after music listening for moods of anger and sadness (45.95% and 47.75% respectively).

For each mood, the students were able to articulate particular music preferences. Rock, rap/hip-hop, R&B, dance and heavy metal were the most common preferences across all moods. Typically the group who scored as high-risk of psychological distress indicated the strongest preference for heavy metal while the low-risk group indicated a strong preference for dance music. Dance music featured much more prominently across all levels of risk during happy moods (see Figure 5), while participants at all levels of risk nominated punk, heavy metal and alternative music preferences for managing moods of anger (see Figure 6) and sadness (see Figure 7).

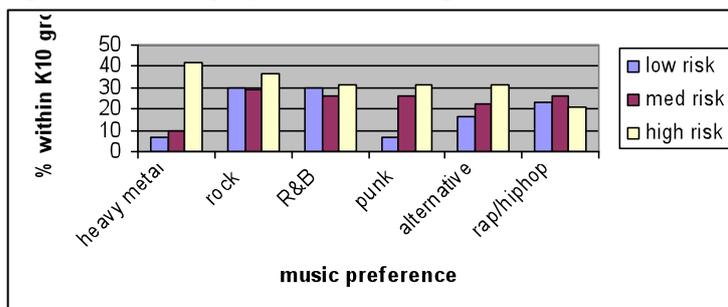
*Figure 5: Music preferences during happiness*



*Figure 6: Music preferences during anger*

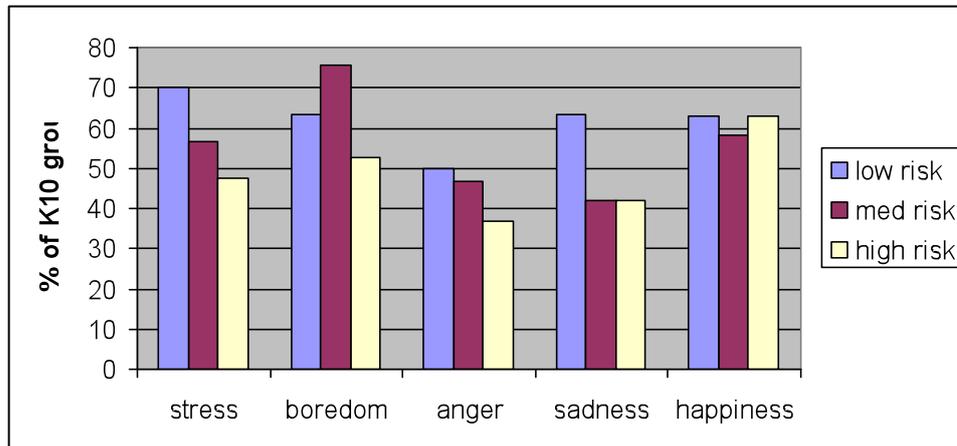


*Figure 7: Music preferences during sadness*



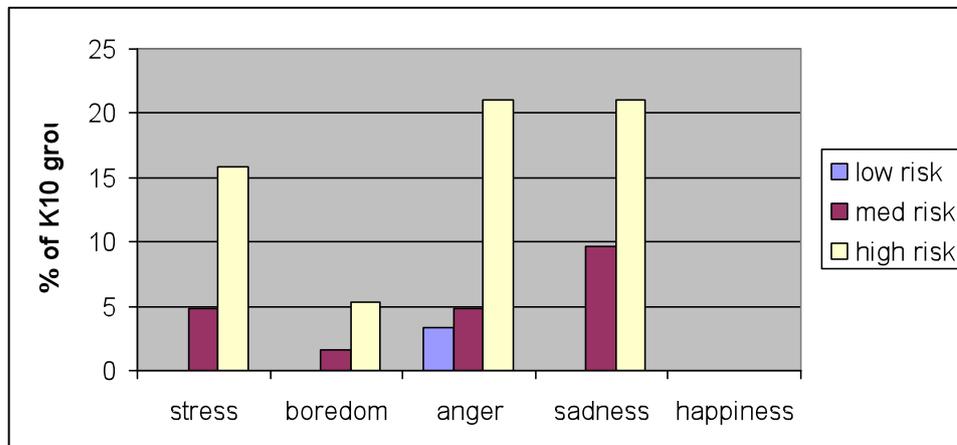
Data from the present study also revealed a small group of adolescents who were not successful in the mood enhancement endeavour. The high-risk of psychological distress group (n=19) consistently reported the least percentage of improved moods through listening to music, except for 'sadness' where it was similar to the medium-risk group, and 'happiness' where all groups were relatively equal (See Figure 8).

Figure 8: Mood improves after listening to music



The high-risk group also always reported the highest percentage of worse moods after listening to music, except for 'happiness' where no groups reported worse moods (See Figure 9).

Figure 9: Mood deteriorates after listening to music



Chi-square tests indicated that the only element of significance from the study was that the high-risk teenagers preferred heavy metal in general and across all moods. Other conspicuous music preferences, such as rock or R&B were not significant. Of those respondents who preferred heavy metal in general, 19 were male and 9 were female. Compared to the gender distribution of the overall sample, this is not significant. The cultural background of these heavy metal listeners was predominantly European (67%), followed by Anglo-Saxon (16.67%) and Asian (6.67%). One heavy metal listener did not report cultural background. Only 16.67% of these listeners described themselves as practising a religion which is in keeping with Stack's (1998) suggestion that non-religious people are more at risk of suicidal thoughts, or in this case, high risk of psychological distress.

## Discussion

The results of this study suggest that young people generally feel that they successfully manage the influence of music in their lives. The participants chose to listen to music for an average of 17 hours per week, a considerable amount of time given the requirements of schooling and sleeping. This is significantly less than American studies that report between 4-6 hours per day (Steinberg 1996), or 56.6 hours per week (Wass, Raup et al. 1988), although similar to English studies that suggest around 2.5 hours per day (North and Hargreaves 2000). Participants describe actively changing their preferred music in order to interact with and reflect their current mood, with the majority of adolescents doing this in a way that enhances their mood. This is in keeping with findings from Saarikallio and Erkkilä's (2007) study, where the young people described that they had a sense of the kinds of music that they needed to listen to. The participants in this study were able to articulate their genre preferences across a range of moods and indicated the influence of their musical choices. Although their responses were removed from the actual experience of music listening, a problem posed by Sloboda and O'Neil (2001), this did allow them the opportunity to reflect on whether their strategies had been successful or not.

This is relevant when considering worse moods following music listening were reported particularly by the high-risk, psychological distress group. One possible explanation could be the concept of delayed hedonic gratification proposed by Larsen (2000). This model suggests that some strong emotional experiences may result in an initial deterioration of mood, but ultimately result in an improvement. This argument is used by Saarikallio and Erkkilä (2007) to explain the phenomenon described by their participants of feeling worse immediately after listening, but ultimately finding the experience helpful either by increased clarity or greater understanding. However this is an unlikely explanation in the context of this study since participants were reflecting on experiences in the past four weeks. It could be assumed that any delayed positive effect would have been enacted by this time, thus altering how they answered the question. Another possible explanation may be more closely related to their level of psychological distress, which may cause them to evaluate their situation more negatively, thus resulting in reporting feeling worse.

In relation to music access, participants in this study reported frequent use of home computers and mp3 players to access audio files for music listening. Both purchase and listening to music in this way is more anonymous than for previous generations who perused music stores and carried their purchase to the sales desk, and then used identifiable CDs even in portable listening sources such as CD players. By downloading music, young people are now able to select music of their own preference in the privacy of their own home. The lesser than anticipated influence of peers on musical choices may reflect a change in light of the new capacities made available via the personal computer and mp3 players. This music is privately accessible via headphones and means that teenagers are able to disguise any unusual musical preferences amongst the tracks they have downloaded, thereby increasing their opportunities for privacy. It also means that they are free to access a range of music during different moods, suggesting that their answers to the survey are more likely to reflect actual uses of music rather than desired behaviours. This information confirms that the relationship between young people and music is not passive and that personal control is being further increased by access to the full gamut of musical styles available for download via the internet.

Most of the young people in the study perceived themselves as successfully managing their moods through music listening. They listened more when they were happy or bored, supporting the premise that the most common use of music is for pleasure or distraction (Saarikallio and Erkkila 2007). Those participants who scored as high risk for psychological distress listened the most often, with an average of 24 hours per week, whilst those who ranked as low risk averaged 10 hours less of listening in the given week, perhaps indicating a greater desire for mood improvement amongst the high-risk participants. In this study, 102 students confirmed that music listening made them feel better, with very few participants rating themselves as feeling worse after listening in any mood, although the high risk cohort proved to be a non-significant, but notable exception as discussed below.

For the average teenager, it would seem that music is an increasingly accessible and much enjoyed medium for improving a good mood and for passing time. The low and medium risk cohort both showed a tendency towards the genres of dance, R&B and rap/hip-hop music when in a positive state, as did the high risk group to a certain degree. Although the authors had assumed that 'popular' music would be indicated by the selection of the category titled 'Top 40' songs, these findings provide tentative indications that dance and R&B music now fulfil the role of pop music. Pop music is, by definition, popular with the masses, and Shuker (2001) has presented it as a reflection of popular culture. Within the cohort captured by our study, the most popular music was not the music most frequently purchased in music stores and therefore generating the 'Top 40' ratings. It is possible that Top 40 music now represents the musical preferences of a much younger cohort of music consumers who are primarily funded by parents during shopping excursions. Older adolescents, who are spending more time in the privacy of their rooms "creating walls of sound that repel adults" (p.78, Becker 1992), are purchasing or downloading a different genre of music. This suggests that dance, R&B and rap/hip-hop styles are the new pop (popular) music for mid-adolescents. This has implications for the use of Top 40 as a significant reference in future studies on this topic.

The results of this study do not endorse Schwartz and Fouts' (2003) finding that eclectic music listening indicates less risk of psychological distress. Where Schwartz and Fouts proposed that healthy adolescents listen to a wide range of musical genres dependent on their mood, this study found that the low-risk of distress participants showed a strong preference for the 'new pop' (dance music) across all mood states. Similarly, the high-risk cohort showed a consistent loyalty to heavy metal music, although rock music did dominate preferences in a positive mood. Further studies are necessary in order to validate or disprove the appealing, but as yet unproven, healthy eclecticism theory.

Heavy metal music has traditionally been associated with more deviant behaviour (Scheel and Westefeld 1999; Lacourse, Claes et al. 2001), presumably in relation to a more distressed state of mental health. Whilst the results of this study confirm this assumption, the most important finding is that the majority of highly distressed adolescents used heavy metal music to successfully manage their moods (on average approximately 60%, N=10). This finding supports a more complex relationship between selected music and mood, which is influenced more by intention of listening than by the inherent nature of the musical material itself.

### *Research Recommendations*

The K10, although not specifically designed for adolescent cohorts (Kessler, Andrews et al. 2002), was chosen for this study, and found to be an effective tool for

measuring the outcomes. The K10 distribution between low / medium / high risk of psychological distress in the adolescent cohort contrasted with outcomes from adult surveys in Australia (Andrews and Slade 2001; Furukawa, Kessler et al. 2003) and may be accounted for by the fact that mental illness is on the increase in the Australian community in all age groups including adolescence. Alternately, it is also possible that this level of psychological distress is reflective of the region where the study took place, which is mildly socio-economically disadvantaged.

Future studies might introduce a randomised sampling procedure in order to secure an even distribution of gender. In this study there was an uneven distribution of gender (62.1% were male). Gender is viewed as one of the most influential variables when examining the relationship between adolescents and their music (Roe 1987; North and Hargreaves 2000; Schwartz and Fouts 2003; Laiho 2004).

Although survey research was well-suited to gathering initial information about adolescent's use of music, a more productive investigation might include qualitative interviews in addition to the quantitative data. The authors suggest that a mixed methods approach in future would help to investigate the most likely position that "music is both a reflection of, and an exacerbating influence on, attitudes, values, and behaviours, when the idiosyncrasies of the individual and the stimulus are considered" (Bushong 2002, 77).

### *Implications for Schools*

The mood management questions show that the teenagers at high-risk of psychological distress reported the highest percentage of worse moods after listening to music and the lowest percentage of improved moods after listening to music. With further research, this may show that those adolescents at high risk of mental health issues are not as adept at using music to enhance their level of mental health. Within the school system staff might intuitively recognise those students who are most at risk and be able to initiate discussions with them about the effectiveness of their music listening. It is important not to criticise the genre itself, as this would naturally result in a defensive response from any music lover to their preferred music, but to focus on how it is being used. This may lead to productive discussions and relationships, particularly if the professional is willing to listen to the music and ask about it.

The significance of heavy metal music to the high-risk K10 group does require further understanding. While the majority of heavy metal listeners did report improved moods, it is still important to acknowledge the vulnerable minority of heavy metal listeners who reported worse moods and find ways to validate their choices without further endangering their mental health. Further research may unravel the mysteries of the importance of music to adolescents, and provide helpful insights for teenagers, parents and teachers.

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## **ABSTRACT**

The influence of music on the moods and behaviour of young people has been much contested. Parents and teachers have voiced concerns about the manipulation of young people by the music industry, while researchers commonly understood the relationship between teenagers and their music preferences as reflective. This article reports on an investigation examining how successfully teenagers use music to influence their mood, based on a sample of 111 Australian older adolescents. Survey data revealed that most teenagers used their personally preferred music to improve their mood. Results also identified a significant relationship between teenagers who scored as high-risk to psychological distress and a preference for heavy metal music, with a small minority of this cohort feeling worse post- listening. The suggestion that preferences for metal music may indicate a vulnerability to poor mental health is considered, and suggestions are made about approaching at risk teenagers in schools to assess the effectiveness of music listening.

## **Key Words**

Music  
Adolescents  
Psychological Distress  
Mood Management  
Heavy Metal