Function of Music Listening: A Literature Review on the Concept and Psychometric Properties of Function of Music Listening Scales

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Keywords: FML, Function of Music Listening, Measurement, Music Psychology, Psychometric

Abstract: Listening to music is an activity performed both consciously and unconsciously by humans. This raises many questions; thus, research on the function of music listening continues to grow, and new functions of listening to music have been discovered. This has led to the development of a very broad range of functions and the development of new measuring instruments for listening to music. Therefore, this study aims to conduct a literature review on the history of the development of the function of music listening and to use various measuring instruments to obtain a broad and clear picture of the function of music listening. The literature search strategy was carried out by searching for articles using the Web of Science and Scopus databases to find articles that examined the function of music listening and the development of the function of listening to music scales, and it was found that there were 9 research developments and adaptations of measuring instruments to see the function of listening to music. The potential implication of this literature review is to provide clear guidelines for researchers−especially in the field of music psychology−about the concept of the function of music listening, as well as about the valid and reliable instruments that can be used for research on the function of music listening.

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1 INTRODUCTION

Listening to music is an activity that is carried out by many people, from children to the elderly. Based on the Media Info Center (Shaleha, 2019), adults aged 18 years spend an average of 21 hours per week listening to music via the radio. Apart from that, the activity of listening to music in Indonesia itself can be seen from the use of streaming music service applications. According to CNN Indonesia, listeners to streaming music service applications in Indonesia are among the most active in listening to music compared to other countries in the world, where the average Indonesian listens to music for at least three hours a day (Anggraini, 2017).

Because it has become part of human daily life, the activity of listening to music has been widely studied. Based on the results of existing research, the majority say that listening to music has an effect on listeners. Several studies that have been conducted reveal that listening to music can reduce stress

(Rosanty, 2014; Oktaviani et al., 2016; Aristawati et al., 2022) and anxiety (Oktaviani et al., 2016; Paramita et al., 2016; Permana, 2017; Waryanuarita et al., 2018). More than that, based on the results of previous review of the research on the functions of music conducted by Schäfer et al. (2013), it seems that many results converge on the fourth dimension of the function of listening to music: (1) social functions, such as expression of one's identity or personality; (2) emotional functioning, such as the induction of positive feelings; (3) cognitive or self-related functions, such as escape; and (4) arousal-related functions, such as calming down or killing time (Schäfer et al., 2013).

The many psychological functions of music listening that were found indicate that the daily

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Ekaputra, H. J., & Andriani, F.
Function of Music Listening: A Literature Review on the Concept and Psychometric Properties of Function of Music Listening Scales
In *Proceeding of the International Conference on Current Advancement in Psychology (ICCAP) 2022 - Psychology for Sustainable Recovery in the Life after the Pandemic,* page 80-87

experience of music listening is a unique and varied experience that individuals have. Therefore, this study aims to conduct a literature review on the history of development as well as various measuring instruments for listening to music.

2 METHODOLOGY

This study is a Narrative Review study conducted to provide a brief review of the history of development and the quality of the psychometric properties of measuring instruments for the function of music listening, so as to provide recommendations for the most appropriate measuring instruments for further research needs. The data collection strategy for this narrative review was carried out by searching articles using the Web of Science database, using keywords ("music listening scale"), ("music scale"), ("music questionnaire"), and also (music questionnaire).

Table 1: Search results from the *Web of Science*.

Search Terms	Total
"Music Listening Scale"	2
"Music Scale"	59
"Music Questionnaire"	17
Music Questionnaire	3,742

Scientific articles included in this narrative review must meet the following criteria: (1) aim to develop instruments to measure the function of listening to music; (2) report the psychometric properties of this instrument; (3) published in Indonesian or in English; and (4) published within the 2012-2022 timeframe. The exclusion criteria from scientific articles are: (1) the measuring instrument developed is intended for therapeutic use, and (2) published outside the 2012-2022 timeframe.

3 RESULT

Based on predetermined inclusion and exclusion criteria, nine scientific articles are considered to meet the requirements as literature for this narrative review.

Table 2: Scientific article search results.

Author Name (Year)	Scientific Article Title
Chin & Rickard (2012)	The Music USE (MUSE) Questionnaire: An Instrument to Measure Engagement in Music
Saarikallio (2012)	Development and Validation of the Brief Music in Mood Regulation Scale (B-MMR)
Garrido & Schubert (2013)	Adaptive and maladaptive attraction to negative emotions in music
Mas-Herrero et al. (2013)	Individual differences in music reward experiences
Saarikallio et al. (2015)	Development and validation of the Healthy-Unhealthy Music Scale
Vanstone et al. (2015)	Measuring engagement with music: development of an informant-report questionnaire
Kuntsche et al. (2016)	Development of the four-dimensional Motives for Listening to Music Questionnaire (MLMQ) and associations with health and social issues among adolescents
Groarke & Hogan (2018)	Development and Psychometric Evaluation of the Adaptive Functions of Music Listening Scale
Groarke & Hogan (2020)	The Eudaimonic Functions of Music Listening Scale: An Instrument to Measure Transcendence, Flow, and Peak Experience in Music

3.1 Concept of Function of Music Listening

In the articles published in this literature review, the definition of the function of music listening is still not widely explained. Most of these articles mention that music has a function in human life and shows different functions. This indicates that the function of music in human life is very broad. A review of 28 empirical studies conducted by Schäfer et al. (2013) found 129 functions of music listening that seemed to converge on four dimensions: social, emotional, cognitive, and physiological function (Schäfer et al., 2013). The breadth of music-listening functions that have been discovered has caused concepts related to music-listening functions to be under-theorized in the psychology literature (Sloboda et al., 2001).

Anthropological literature has also revealed one reason why the psychological theory of the function of music listening has not yet been developed. This is related to the social contexts in which music

engagement occurs. According to the anthropological literature, it is necessary to know what happens when a person is listening to music, for example, is the participant alone or with other people? If there are other people, in what relation is the participant to the others? Does the participant engage in other forms of practical or social action (e.g. working, socializing, praying, exercising, etc.)? These factors are critical to determining what kinds of functions music that is part of that particular context might support (Hargreaves & North, 1999; Sloboda & O'Neill, 2001).

3.1.1 Definition of Function of Music Listening

Due to theoretical limitations regarding the concept of the function of music listening, this study first attempts to examine the definition of "function" itself first. According to the book "The Anthropology of Music" by Merriam (1964)Nadel (1951) summarized the various uses of the concept of "function" in the social sciences into four main types:

- "function" is used as a synonym for "operating," "playing a part", or "being active"
- "function is made to mean non-randomness," that is, "all social facts have a function"
- Function denotes the interdependence of complex, intermediate, and reciprocal elements. Function may be taken to mean the specific effectiveness of any element that fulfills the requirements of the situation, that is, answers an objectively defined purpose.

However, when talking about the "function of music listening", it returns again that this is related to social contexts. In other words, talking about the function of listening to music is not only talking about how music can attract the majority of people to be able to participate in it, but more importantly, it is mainly looking for generalizations that apply equally to all people. Therefore, the word "function" especially in Nadel's fourth sense, "function can be construed as the specific effectiveness of any element in which it satisfies the requirements of the situation, that is, satisfies objectively defined goals" is more likely to be used in an attempt to make a preliminary assessment of the functions of what is seen as a universal culture (Merriam, 1964).

This is also in line with the understanding of the function of listening to music according to Greb et al. (2018), that Function of Music Listening (FML) refers to the intensity of using selected music to achieve certain goals in certain situations, such as evoking personal memories, getting energy, or making time pass faster (Greb et al., 2018). Thus, when discussing the function of listening to music, two factors are considered, namely, specific goals and also situations. This is also supported by North & Hargreaves (1996) and Groarke (2017), which states that music-listening behavior in everyday life can be influenced by the function of listening to music performed and also by the context of listening to music. Thus, the difference in the experience felt by music listeners depends on their goals and also the context or situation in which the listeners listen to music.

3.1.2 Individual Factors of the Function of Music Listening

The first factor in FML is specific goals, which are related to individual differences. Greb et al. (2018) stated that typology research has attempted to group people according to the way they engage with music. This assumption is based on the assumption that listeners consistently try to achieve the same goals by listening to music. Some findings of empirical studies based on this approach look at differences between gender, age, and personality traits.

Greb et al. (2018) found that in several studies on gender differences, the majority of these studies consistently showed that women tend to use music for affective functions (e.g., expressing feelings and emotions), coping, and enhancement (Boer et al., 2012; Chamorro-Premuzic, 2012; Kuntsche, 2016; North, 2010). According to North (2010), women are more likely than men to report listening to their favorite music because of enjoyment, to relieve boredom, to relieve tension, and to reduce loneliness. For men, North (2010) found that men tend to use their favorite music to be creative and use the imagination, to create a mental image for themselves, and to please friends (Greb et al., 2018). This is supported by research conducted by Chamorro-Premuzic et al. (2012), who found that men tend to use music for cognitive or intellectual reasons, as well as research conducted by Verma (2021) who also found that males are higher than females in cognitive regulation.

Furthermore, in the context of age differences in the FML, Greb et al. (2018) reported somewhat mixed findings regarding the effects of age on the FML. Lonsdale and North (2011; Greb et al. 2018) showed that participants beyond adolescence and early adulthood are less likely to use music to regulate their emotions, participants over 30 are less likely to reminisce through music, and participants over 50 less frequently report using music for social functions. (Laukk 2007; Greb et al., 2018) showed

that the elderly (aged 65–75 years) use music to experience emotions and to relax. Meanwhile, according to Groarke (2017), "personal meaning" and "personal space" emerged as the most influential FML for the group of young adults. For the group of older adults, Groarke (2017) found that older adults reported that music could transport the listener away from the mundane, transcend everyday experiences, and considered strong emotional experiences to be a critical driver of other FML.

For the context of personality traits in the FML, Greb et al. (2018) noted that several studies have found a link between personality traits and FML, such as openness to experience was found to be associated with cognitive and intellectually stimulating FML, also neuroticism and introversion with affect-regulating functions (i.e., regulating moods and emotions; Chamorro-Premuzic & Furnham, 2007; Chamorro-Premuzic, 2009; Chamorro-Premuzicet al., 2012; Chamorro-Premuzic, 2009; Vella & Mills, 2017; von Georgi & Hock, 2015). Apart from personality traits, it seems that intelligence as well as mental state were also found to affect the FML. Chamorro-Premuzic and Furnham (2007) showed that intelligent and intellectually engaged people are likely to listen to music for cognitive stimulation (Greb et al., 2018). Moreover, Greb et al. (2018) also found that several studies have demonstrated that people with poor mental health (for example people suffering from depression or negative affectivity) or well-being (e.g., life satisfaction) tend to listen to music for coping or affect-regulating functions (Getz et al., 2012; Kuntsche et al., 2016; Laukka, 2007; North, 2010; Randall & Rickard, 2016; Randall, 2014; Vella &Mills, 2017; von Georgi et al., 2006).

Thus, the existence of individual differences in listening to music found by Greb et al. (2018) as well as other recent studies, seems to have an influence on individuals' specific goals in listening to music.

3.1.3 Situational Factors of the Function of Music Listening

The second factors in the FML are related to the situation. Greb et al. (2018) stated that music listening always occurs through a triangulation between the listener, the situation, and the music. This situation can be explained through the 'what', 'when', 'where', 'who', and also 'how' questions.

The first is about the "what" question. Greb et al. (2018) noticed that several studies have shown that an important situational characteristic of FML is the core activities are carried out while listening to music. Several studies have consistently found that listening to music mostly occurs during personal maintenance (e.g., housework, cooking), active leisure activities (e.g., exercise, socializing), and travel (e.g., driving, walking; Greasley & Lamont, 2011; Juslin, Liljeström, Västfjäll, Barradas, & Silva, 2008; North et al., 2004; Sloboda, O'Neill, & Ivaldi, 2001).

The second is about the 'where' question. According to Greb et al. (2018), one question that immediately arises when talking about listening to music in certain situations is where the activity of listening to music occurs. Greb et al. (2018) observed that the majority of studies in this context consistently find that nowadays, listening to music is mostly done at home, while driving, or while using public transportation (Greasley & Lamont, 2011; Krause, North, & Hewitt, 2014; North et al., 2004). Furthermore, research conducted by Krause et al. (2014) found that the intensity of the consequences of listening to music varied across listening locations (for example, music in a gym was more motivating than music in a restaurant). This indicates that the function obtained from listening to music depends on the situation.

The third is about the 'when' question, which refers to when music is heard. This is related to time when listening to music, as North et al. (2004) and Rana and North (2007) found that their participants were more likely to use music during the workday (8:00 a.m. -4:59 p.m.) than during the evening (5:00 -11:00 p.m.), either to help pass the time or to help concentrate and think during the workday. In addition, the listener's momentary mood must also be considered is the listener's momentary mood (Greb et al., 2018). As is well known, the most common functions of music listening related to initial moods are those concerned with affect regulation, such as people selecting music to moderate their arousal to an optimal level (Konečni, 1982) or to reach certain arousal state goals (e.g., choosing arousing music to get energized during exercise; North & Hargreaves, 2000). Thus, this indicates that the listener's mood also needs to be considered, considering that the mood of the listener can also be said to influence how the individual chooses specific goals from listening to music (Greb et al., 2018).

The next question is about the 'who' question, which according to the anthropological literature is also one of the reasons the psychological theory of the FML has not yet been developed (Hargreaves & North, 1999). Greb et al. (2018) stated that the presence of other people plays a crucial role in the characterization of listening. Although the results of previous studies have shown mixed results, these studies have shown significant effects from the

presence of other people, such as Liljestrom(2012) who found more intense emotional responses to music when people listened together with a close friend or partner, or Egermann et al. (2011), who observed more intense responses when people listened to music alone (Greb et al., 2018).

The last part is about the 'how' question, specifically regarding the context related to how music is heard. Greb et al. (2018) viewed this context in two ways: the level of choice as well as the mode of presentation of the music. According to Greb et al. (2018), the concept of level of choice can refer either to the fundamental fact that people can choose the music they listen to, or to the different ways people select the specific music they are listening to (selecting a certain piece, enabling shuffle mode, etc.). Most of the studies found by Greb et al. (2018) show that a higher level of choice is associated with a higher level of beneficial FML, such as enjoyment, relaxation, and help in concentrating/thinking (Greasley & Lamont, 2011). These findings are also supported by Krause (2014) who showed that for people who do not have any control over what they listen to, music is unlikely to fulfill purposive or actively engaged functions (Greb et al., 2018). The second context is the music's mode of presentation, which is strongly related to the listener's level of choice. Krause et al. (2015) suggested that FML might also be dependent on the mode of presentation, where the results of their research show that devices that rely on controlled listener input (MP3 players, smartphones, and the like) are associated with purposive and actively engaged consequences of listening to music while validation-seeking consequences (e.g., making oneself look good) were associated with live music performed in public (Greb et al., 2018).

3.2 Measurement Instrument of Function of Music Listening

This section briefly reviews the psychometric properties of each measurement tool included in this literature review.

3.2.1 Music Use Questionnaire (MUSE)

The Music Use Questionnaire (MUSE) was developed by Chin and Rickard (2012). This questionnaire was developed to obtain an instrument that assesses the multidimensional and continuous nature of musicianship, which extends the concept of "musicianship" beyond formal music training and performance factors, and captures both quantity and quality of music production and reception (Chin & Rickard, 2012). The internal consistency results of this questionnaire produce a Cronbach's alpha coefficient value for each item above 0.70, with an average = 0.87. In addition, this questionnaire development also shows a significant correlation between items for factor analysis ($\chi 2(7626) = 24196.52$, $p < .001$).

3.2.2 Brief Music in Mood Regulation Scale (B-MMR)

The Brief Music in Mood Regulation (B-MMR) scale was developed by Saarkallio (2012), which is a shortened version of the Music in Mood Regulation scale developed by Saarkallio (2008). This scale was developed to obtain a scale that can measure mood regulation with music and explore individual differences in mood regulation as expressed through the use of this scale (Saarkallio, 2008). The internal consistency results of this scale produce a subscale with a Cronbach's alpha coefficient value between 0.73 to 0.88, with a total Cronbach's alpha coefficient value = 0.93. In addition, the original scale of the B-MMR scale development also shows that the scale is a fit or acceptable model ($\chi 2(728) = 3369.25$, P = .001; CFI = .909; TLI = .902; RMSEA = .049; and SRMR = .050).

3.2.3 Like Sad Music Scale (LSMS)

The Like Sad Music Scale (LSMS) was developed by Garrido Schubert (2013). The scale was adapted primarily by substituting the word 'music' for the word 'film/s' wherever it had been used in the Sad Film Scale (SFS; Oliver, 1993). The LSMS was designed to measure liking of sad music and also to examine listening habits which might reflect the case of participants who have a pattern of listening to sad music despite their deriving little or no enjoyment from it (Garrido & Schubert, 2013). The internal consistency results of this scale have a Cronbach's alpha coefficient value = 0.802.

3.2.4 Barcelona Music Reward Questionnaire (BMRQ)

The Barcelona Music Reward Questionnaire (BMRQ) was developed by Mas-Herrero et al. (2013). This questionnaire was developed to obtain an instrument that assesses different facets of music and reward experiences related to music (Herrero et al., 2013). The internal consistency results of this questionnaire produce a subscale with a Cronbach's alpha coefficient value between 0.78 to 0.93, with a

total Cronbach's alpha = 0.92. In addition, this questionnaire development shows that it is a fit or acceptable model (CFI = .99, GFI = .99, and RMSEA = .074).

3.2.5 Healthy-Unhealthy Music Scale

The Healthy-Unhealthy Music Scale was developed by Saarikallio(2015). This scale was developed to obtain an instrument that assesses the music engagement of young people as an indicator of healthy/unhealthy behavior, from the particular perspective of proneness for depression (Saarikallio, et al., 2015). The internal consistency results of this scale produce Cronbach's alpha coefficient values for the Healthy dimension = 0.78 and the Unhealthy dimension = 0.83. In addition, this scale development shows that it is a fit or acceptable model (two-factor model: $\chi 2(63) = 136.549$, CFI = .908, RMSEA = .075, RMR=.088; three-factor model: $\chi 2(62) = 137.320$, CFI = .906, RMSEA = .076, RMR = .079).

3.2.6 Music Engagement Questionnaire (MusEQ)

The Music Engagement Questionnaire (MusEQ) was developed by Vanstone et al. (2015). This questionnaire was developed to obtain an instrument that can be a meaningful evaluation of an individual's musical life and encompass the emotional, social, and cognitive aspects of everyday experience as well as music-specific activities (Vanstone et al., 2015). The internal consistency results of this questionnaire have a Cronbach's alpha coefficient value = 0.92.

3.2.7 Motives for Listening to Music Questionnaire (MLMQ)

The Motives for Listening to Music Questionnaire (MLMQ) was developed by Kuntsche et al. (2016). The MLMQ was developed based on the Short Form of the Drinking Motive Questionnaire Revised (DMQ-R SF:Kuntsche & Kuntsche, 2009), and was developed to obtain an instrument that can assist in studying the motives of listening to music from the perspective of mood regulation (Kuntsche et al., 2016). The internal consistency results of this questionnaire produce Cronbach's alpha coefficient values for enhancement dimensions = 0.61, coping dimensions = 0.86, social dimensions = 0.82, and conformity dimensions = 0.83. In addition, this questionnaire development demonstrated that it is a fit or acceptable model (CFI = 0.953, TLI = 0.931, RMSEA = 0.064, SRMR = 0.049). The Adaptive Functions of Music Listening (AFML) scale was developed by Groarke Hogan (2018). This scale was developed to obtain an instrument that can measure individual reasons for listening to music, as well as test the results of the function of listening to music (Groarke & Hogan, 2018). The internal consistency results of this questionnaire produce a Cronbach's alpha coefficient ranging from 0.80 to 0.90. In addition, this scale development shows that this scale is a fit or acceptable model: $\chi 2(946) = 1,879.33$, $p < 0.001$, Q = 1.99, CFI = 0.94, RMSEA = 0.042 (90% CI, 0.039–0.045).

3.2.9 Eudaimonic Functions of Music Listening Scale

The Eudaimonic Functions of Music Listening Scale was developed by Groarke Hogan (2020). This scale was developed to obtain an instrument that can fill an important gap in the literature regarding the measurement of a wider range of music listening functions, in particular, focusing on eudaimonic FML (Groarke & Hogan, 2020). The internal consistency results of this scale yield a total Cronbach's alpha coefficient values = 0.85. In addition, this scale development shows that this scale is a fit or acceptable model: $\chi 2 (11) = 20.71$, p=0.036, Q= 1.88, CFI = 0.99, SRMR = 0.026, RMSEA = 0.051 (90%CI, 0.013–0.085).

4 DISCUSSION

Based on the search results, it can be seen that of the nine scientific articles reviewed, there are seven scientific articles which are articles that aim to develop an instrument to measure the function of listening to music from the start. The two other scientific articles are articles that adapt from other measuring instruments and are adapted to see the function of listening to music, namely The Motives for Listening to Music Questionnaire (MLMQ; Kuntsche et al., 2016) and The Like Sad Music Scale (LSMS; Garrido & Schubert, 2013).

Furthermore, the psychometric characteristics of each article that discusses the instrument for measuring the function of listening to music, can be seen in Table 3.

Table 3: Psychometric characteristics of measuring instruments.

Instruments	Internal Consistency	Structural Validity

Music Use Questionnaire (MUSE)	0.87	$\chi 2(7626) = 24196.52$, $p < .001$
Brief Music in Mood Regulation Scale (B-MMR)	0.93	CFI = .909; TLI = .902; RMSEA = .049
Like the Sad Music Scale (LSMS)	0.802	-
Barcelona Music Reward Questionnaire (BMRQ)	0.92	CFI = .99; GFI = .99; RMSEA = .074
Healthy-Unhealthy Music Scale	Healthy dimension = 0.78 Unhealthy dimension = 0.83	CFI = .908; RMSEA = .075
Music Engagement Questionnaire (MusEQ)	0.92	-
Motives for Listening to Music Questionnaire (MLMQ)	Enhancement dimensions = 0.61 Coping dimensions = 0.86 Social dimensions = 0.82, Conformity dimensions = 0.83	CFI = .953; RMSEA = .064; SRMR = .049
Adaptive Functions of Music Listening (AFML)	0.80 – 0.90	CFI = .94; RMSEA = .042
Eudaimonic Functions of Music Listening	0.85	CFI = .99; SRMR = .026; RMSEA = .051

Based on Table 3, it can be seen that out of the nine studies, only seven measured psychometric characteristics to assess internal consistency and structural validity. To assess the reliability of each instrument, internal consistency was used. However, this narrative review shows that all studies have carried out tests to measure internal consistency and obtained good results. However, at least one dimension of one of the instruments was found to have internal consistency or a Cronbach's alpha coefficient lower than 0.70, namely, the Motives Listening to Music Questionnaire (MLMQ). This small Cronbach's alpha coefficient can be ascribed to items with poor item association or heterogeneous constructs. Therefore, the presence of a low Cronbach's alpha coefficient indicates that the instrument needs to revise or discard some items (Tian et al., 2019).In addition, regarding validity assessment, based on this narrative review, it can be seen that not all studies carry out validity assessments. For structural validity, only seven assessed the structural validity of the instrument. According to Mokkink et al. (2017), structural validity is considered positive when the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), or a comparable measure has a value greater than 0.95, or it can also be seen from the Root Mean Square Error of Approximation (RMSEA), which has a value of less than 0.06, or Standardized Root Mean Residuals (SRMR), which has a value of less than 0.08 (Tian et al., 2019). For structural validity, it can be seen that three instruments have good structural validity (CFI or TLI or comparable measure > 0.95 OR RMSEA < 0.06 OR SRMR < 0.08), such as the Adaptive Functions of Music Listening (AFML) Scale, Eudaimonic Functions of Music Listening Scale, and Barcelona Music Reward Questionnaire (BMRQ).

5 CONCLUSIONS

This narrative review has attempted to explain the concept of FML and the psychometric characteristics of the instrument used to measure it. Therefore, it can help provide a better explanation of the concept of FML and recommend the most appropriate measurement tools for future research needs. However, this narrative review is not without its limitations, one of which is that it has not followed standard manuals for systematic reviews, such as COSMIN (Mokkink, et al., 2017). In addition, this narrative review uses fewer scientific articles that explain the concepts of FML; thus, the information provided may still be incomplete.

REFERENCES

Anggraini, E. (2017). *Spotify: Orang Indonesia Dengarkan Musik 3 Jam Sehari*. CNN Indonesia. Retrieved May 31, 2022, from https://www.cnnindonesia.com/teknologi/20170510150652-185-213843/spotify-orang-indonesia-dengarkan-musik-3-jam-sehari

Chin, T., & Rickard, N. S. (2012). The Music USE (MUSE) Questionnaire: An Instrument to Measure Engagement in Music. *Music Perception*, *29*(4), 429–446. https://doi.org/10.1525/mp.2012.29.4.429

Garrido, S., & Schubert, E. (2013). Adaptive and maladaptive attraction to negative emotions in music. *Musicae Scientiae*, *17*(2). https://doi.org/10.1177%2F1029864913478305

Greb, F., Schlotz, W., & Steffens, J. (2018). Personal and situational influences on the functions of music listening. Psychology of Music, 46(6), 763–794. https://doi.org/10.1177/0305735617724883

Groarke, J. M., & Hogan, M. J. (2018). Development and Psychometric Evaluation of the Adaptive Functions of Music Listening Scale. *Frontiers in Psychology*, *9*(516). https://doi.org/10.3389/fpsyg.2018.00516

Groarke, J. M., & Hogan, M. J. (2020). The Eudaimonic Functions of Music Listening Scale: An Instrument to Measure Transcendence, Flow and Peak Experience in Music. *Frontiers in Psychology*, *11*, *566296*. https://doi.org/10.3389/fpsyg.2020.566296

Kuntsche, E., Le Mevel, L., & Berson, I. (2016). Development of the four-dimensional Motives for Listening to Music Questionnaire (MLMQ) and associations with health and social issues among adolescents. *Psychology of Music*, *44*(2), 219-233. https://doi.org/10.1177/0305735614562635

Mas-Herrero, E., Marco-Pallares, J., Lorenzo-Seva, U., Zatorre, R. J., & Rodriguez-Fornells, A. (2013). Individual differences in music reward experiences. *APA PsycTests*. https://psycnet.apa.org/doi/10.1037/t31533-000

Meriam, A. (1964). *The Anthropology of Music*, Northwestern University Press. Evanston, 1st edition.

Saarikallio, S. (2012). Development and Validation of the Brief Music in Mood Regulation Scale (B-MMR). *Music Perception*, *30*(1), 97- 105. https://doi.org/10.1525/mp.2012.30.1.97

Saarikallio, S., Gold, C., & McFerran, K. (2015). Development and validation of the Healthy-Unhealthy Music Scale. *Child and Adolescent Mental Health*, *20*(4), 210-217. https://doi.org/10.1111/camh.12109

Schäfer, T., Sedlmeier, P., Städtler, C., & Huron, D. (2013). The psychological functions of music listening. *Frontiers in Psychology*, *4*(511). https://doi.org/10.3389/fpsyg.2013.00511

Shaleha, R. R. A. (2019). Do Re Mi: Psikologi, Musik, dan Budaya. *Buletin Psikologi*, *27*(1), 43-51. DOI: 10.22146/buletinpsikologi.37152

Tian, L., Cao, X., & Feng, X. (2019). Evaluation of psychometric properties of needs assessment tools in cancer patients: A systematic literature review. *PLoS ONE*, *14*(1), e0210242. https://doi.org/10.1371/journal.pone.0210242

Vanstone, A. D., Wolf, M., Poon, T., & Cuddy, L. L. (2015). Measuring engagement with music: development of an informant-report questionnaire. *Aging & Mental Health*, *20*(5), 474-484. https://doi.org/10.1080/13607863.2015.1021750