

Exploring Engagement with Music in Everyday Life using Experience Sampling Methodology

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ABSTRACT

Recent qualitative research has shown that less musically engaged listeners are less aware of the ways in which they use music than highly engaged listeners (Greasley & Lamont, 2006). Experience Sampling Methodology (ESM) is a valuable tool for studying music in everyday contexts, and has been shown to increase people's conscious awareness of the role of music in their lives (Sloboda et al., 2001). Using ESM, the present study explored differences in awareness by recruiting three different types of listener: those identified as having a low, moderate and high engagement with music. Quantitative data was collected on what participants were doing whilst hearing music alongside qualitative data on other factors that contributed to each experience. Post-study interviews then generated retrospective accounts about specific musical experiences. Analysis revealed two broad types of listener: the less engaged, who listened for fewer hours a week, were less likely to be hearing self-chosen music, and were more likely to listen to hear music to pass time; and highly engaged, who listened to music for up to 40 hours a week; were more likely to be hearing self-chosen music; and were more likely to use music to evoke specific moods. The study confirmed the usefulness of ESM for investigating the complex (and interacting) factors involved in people's daily musical choices, and highlighted ways in which music can fulfill different functions concurrently.

I. INTRODUCTION

Music has been shown to fulfil a wide range of different functions for people in everyday life (Batt-Rawden & DeNora, 2005; Behne, 1997; DeNora, 2000; Hargreaves & North, 1999; Juslin & Laukka, 2004; Juslin et al., 2008; Laukka, 2007; North et al., 2004; Roe, 1985; Schramm, 2006; Sloboda, 1999; Sloboda et al., 2001; Tarrant et al., 2000). From both psychological and sociological perspectives evidence is converging to highlight that people actively use music in a range of ways in pursuit of self-regulation in everyday life. For example, adolescents' main reasons for engaging in music listening are to fulfil self-actualising needs (e.g. to help get through difficult times, to express feelings), emotional needs (e.g. to relieve stress, for enjoyment) and social needs (e.g. to please friends, to be popular with others), as well as enjoyment (North et al., 2000; Tarrant et al., 2000). This highlights how young people use music for mood-regulation and identity purposes. Research with older age groups (i.e. young adults through to elderly people) has found that the most frequently reported functions of music are reminiscence, mood-regulation and catharsis (Sloboda, 1999; Sloboda & O'Neill, 2001); and enjoyment, relaxation, mood-regulation and company (Lamont & Webb, 2010; Laukka, 2007). Studies converge in showing that 'enjoyment' is the most commonly cited reason for

choosing to hear music (Lamont & Webb, 2010; North et al., 2004).

The functions and effects of listening to music need to be understood in terms of the listening context and in relation to the concurrent activities that might be taking place (DeNora, 1999; Hargreaves et al., 2006; Konečni, 1982; North & Hargreaves, 2000; North et al., 2004). Context affects the frequency and the effects of music listening. Research has typically explored this using Experience Sampling Methodology (ESM), which enables 'slices' of everyday life to be captured in a naturalistic setting and allows researchers to characterise the totality of listening experiences. From this data, many music listening episodes have been found to occur at home, in transportation, and in public places (Sloboda et al., 2001; North et al., 2004); and people are typically engaged in personal maintenance (e.g. getting dressed), travelling, and active leisure pursuits (e.g. socialising) whilst hearing music (Sloboda et al., 2001). Very little research has explored music's ability to fulfil different functions concurrently, although Sloboda et al. (2001) began to unravel some of the complexities by focusing on patterns of mood-change. They showed that listeners can sometimes experience an increase in one mood state whilst simultaneously experiencing a decrease in another. For example, listeners reported experiencing increases in positivity (e.g. relaxing) together with decreases in arousal and present-mindedness (e.g. disengaging with surroundings).

In addition, research shows that music is rarely the primary focus of people's attention as they go about their daily lives (Juslin & Laukka, 2004; Sloboda et al., 2001; Sloboda, 1999). North et al. (2004) found other popular reasons for listening included to pass time, out of habit, and to create an atmosphere, and they argue that participants in their study exhibited a somewhat 'passive' attitude towards their engagement with music. However, even in such passive listening conditions music still has effects. Sloboda et al. (2001) found that it was unusual for people to state they had experienced no change in mood as a result of hearing music, while Juslin et al. (2008) note mood change in 64% of listening episodes. In addition, North et al. (2004) found that it was rare for people to state music had no effect on them, even in those episodes when they had no choice over the music. In their study, the most frequently cited effects of music listening were because it created an atmosphere and because it was enjoyable.

The level of personal choice people have over music is a key factor influencing and shaping responses to music, as the more choice people have over their music listening, the more likely it is to be liked and to be associated with positive valued

outcomes (North et al., 2004; Sloboda et al., 2001). Choice is also affected by context. Listeners were more likely to have choice over hearing music when at home and driving and less likely to have choice in social settings such as the gym or shops; and more likely to have choice when they were alone rather than with other people (North et al., 2004; Sloboda et al., 2001).

There is contradictory evidence on the frequency of listening to music alone or with others. Sloboda et al. (2001) found that people were mainly alone during music episodes, whilst North et al. (2004) found that nearly 75% of music listening episodes took place in the presence of others; similarly, retrospective estimates of listening alone range from 10% to 05% (Juslin & Laukka, 2004). While people reported higher liking for music listening alone (North et al., 2004), research has not yet examined in detail the role of others in determining people's musical choices and responses to music.

In terms of the music being listened to, much of the existing research on everyday listening has employed a relatively short list of predetermined musical categories (Bailes, 2007; North et al. 2004; Sloboda et al., 2001). North et al. (2004) reported frequencies with which specific styles were heard in music episodes. For example, their participants were hearing chart pop most frequently (38% of music episodes), and hearing classical music much less frequently (3% of episodes). However, although this is not highlighted by North et al., the 7th most frequent response (out of 16) was 'Other', which indicates that the style of music heard was not covered in the 15 style categories they provided. In general, this body of work has thus provided little information on the musical styles being heard. In addition, we have found that people express difficulties with defining music in terms of simple style categories (Greasley & Lamont, 2006). These findings suggest that future enquiry into people's everyday musical choices should use more open-ended response formats.

All the research reported on everyday experiences of music to date has treated its participants as a homogenous sample: the existing ESM studies have focused on exploring music listening habits in young adult populations (Sloboda et al., 2001; North et al., 2004; Juslin et al., 2008) without considering any differences due to musical interest or experience. However, qualitative evidence suggests that not everyone responds to music in the same way (Greasley & Lamont, 2006). In particular, differences have been found between more and less engaged music listeners (defined by self ratings of the importance of music in participants' lives, the extent to which they enjoyed music listening, and the amount of music owned). Those who were highly engaged listened to as much music as possible in their day-to-day lives, whilst less engaged participants were less concerned with listening regularly. More engaged participants were involved in a greater number of music-related activities (e.g. performing, mixing), and had a more detailed knowledge of different styles of music. Highly engaged participants also expressed a sense of urgency about hearing self-chosen music in daily life, whilst less engaged participants typically listened to the radio rather than specific styles. In addition, less engaged participants reported using music for reminiscence and to keep them company more frequently than highly engaged participants, who were more

likely to emphasise mood-regulation and the importance of lyrics when listening to music.

In summary, previous research studies exploring music in everyday life have highlighted a number of areas ripe for further research. Responses to music have been shown to be determined by the listening context and concurrent activities, yet more research is needed which focuses on the role of others in shaping these interactions with music, and on accurately mapping the wide range of musical styles people are listening to. Previous studies have also shown that the level of choice people have over music they are hearing can affect psychological outcomes, yet little is known about the actual process of choice (e.g. when someone starts listening to one album, and then turns it off to listen to another), and more research is needed which examines the way in which music can fulfil different functions simultaneously. Lastly, we have shown that people differ markedly in their levels of engagement with music in everyday life and we have begun to map characteristics of people's engagement with music (Greasley & Lamont, 2006) that need further exploration.

Given that music is heard in almost all contexts in everyday life (especially in the light of recent technological advances), it is important to use a research methodology that reflects this. Experience Sampling Methodology (ESM) is a useful tool for capturing daily musical experiences in the real-life contexts in which they naturally occur (e.g. Juslin et al., 2008; North et al., 2004; Sloboda et al., 2001). However, this methodology has not yet been used to explore differences between listeners. We have already found that more engaged participants are consciously aware of the ways in which they use music in everyday life in comparison with less engaged participants, and use music purposefully to achieve specific goals (Greasley & Lamont, 2006). Further research is needed to explore these engagement types and explore whether they map onto differences in real-time listening. ESM is particularly useful as it has been shown to increase people's conscious awareness of how they use music in everyday life (Sloboda et al., 2001).

The Current Study

Using ESM, the current study addresses all of the above lines of further enquiry through careful design of method, and by recruiting three different types of listener (those defined as having a high, moderate or low level of engagement with music). A number of predictions, based on previous literature and our own earlier findings (Greasley & Lamont, 2006) have been built into the method and guide the analysis. These fall into four broad areas, namely contextual information, psychological outcomes, level of choice, and level of engagement.

In relation to *contextual information*, studies converge to show that a higher frequency of music episodes occur at home, in transportation, shops and places of entertainment (North et al., 2004; Sloboda et al., 2001). A similar pattern of results was expected in the current study. Previous studies (e.g. Juslin & Laukka, 2004; Sloboda et al., 2001) have also found that a higher frequency of music episodes occurred whilst people were engaging in personal-maintenance (e.g. getting dressed), travelling (e.g. driving) and active leisure pursuits (e.g. socialising), and thus it was predicted that a high frequency of

music episodes would occur when participants were engaged in these activities. Furthermore, given that studies converge in showing people are rarely engaged in attentive music listening (Juslin & Laukka, 2004; Sloboda et al., 2001), it was predicted there would be a low prevalence of listening to music as a main activity. Research has demonstrated considerable individual differences in the extent to which people are listening to music in the presence of others, so no specific prediction was made in relation to this.

In relation to *psychological outcomes*, previous studies converge in showing that people listen to music in everyday life for pleasure, to regulate emotion and moods, and to help them relax (e.g. Juslin & Laukka, 2004; Lamont & Webb, in press; Sloboda, 1999; Sloboda & O'Neill, 2001). It was therefore predicted that there would be a high frequency of music episodes in which participants had chosen to hear music for enjoyment, mood-regulation and to help them relax. In line with the findings of North et al.'s (2004) large-scale ESM study on uses of music, it was also predicted that there would be a high incidence of episodes in which participants had chosen music to pass the time, out of habit and to create an atmosphere.

In relation to *level of choice*, in line with previous research (e.g. North et al., 2004; Sloboda et al., 2001), it was predicted that music would have more beneficial effects when participants had chosen music themselves; that participants would have more choice over music they were hearing when at home, when travelling; and when alone; and that the higher the level of choice, the more specific participants would be in their descriptions of music.

In relation to *level of engagement*, based on the findings of our qualitative study (Greasley & Lamont, 2006) it was predicted that there would be a positive relationship between participants' level of engagement and the total amount of time spent hearing music, both within episodes and across the week. A positive relationship was also expected between the average level of choice participants have over music and their level of engagement, given that level of choice was shown to be a key indicator of level of engagement in our previous study.

A number of further predictions were based on the results. It was predicted that those in the more engaged group would be involved in a greater number of music-related activities during the week, and would be more specific in their descriptions of music than the moderately and less engaged groups. Given patterns of reported listening behaviour, a key prediction was that more engaged participants would predominantly use music for active reasons (e.g. to regulate mood, to help carry out activities) whilst less engaged participants would mainly use music for passive reasons (e.g. to pass the time, out of habit).

In addition, given that less engaged participants in our earlier study (Greasley & Lamont, 2006) reported using music for reminiscence, and to keep them company more frequently than highly engaged participants, it was predicted that less engaged participants would more frequently choose to hear music to bring back memories and help them feel less alone. Conversely, given that more engaged participants were more likely to emphasise the importance of lyrics when listening to music, it was predicted that more engaged participants would choose to

hear music to listen to the lyrics more frequently than participants in the other two groups.

ESM facilitates an exploration of all these predictions simultaneously, and the method employed here represents a new and comprehensive exploration of everyday musical behaviour.

II. METHOD

The current ESM study was designed according to the fundamental principles of experience sampling methodology (Csikszentmihalyi & Lefevre, 1989), and drew on advice provided in Hektner, Schmidt and Csikszentmihalyi (2007) for carrying out ESM research. The response form combined quantitative data on what the participants were doing whilst hearing music (e.g. where they were, what activities they were engaged in, who they were with, the length of time they were listening for, the technology used, the level of choice they had over the music, their reasons for engaging with music), with qualitative data on other factors that contributed to each music episode (e.g. other reasons that influenced their choice, whether they had considered other music first). Post-study interviews then generated further information about specific music episodes in the form of retrospective accounts which were used in conjunction with the response booklets to explore participants' thoughts and feelings at the time of hearing music.

One of the major limitations of the ESM study by Sloboda et al. (2001) was that the pagers used were costly and participants missed a number of signals throughout the week because they had not been heard. The study by North et al. (2004) used mobile phones and therefore circumvented these issues. However, a limitation of the ESM study by North et al. (2004) was that participants were sent only one text a day for two weeks. In a questionnaire-based study into everyday music listening, 64% of respondents reported that they listened to music "several times a day", and only 18% reported that they listened "once a day" (Juslin & Laukka, 2004). Furthermore, previous ESM studies suggest there is an approximately 35-45% chance that people would be hearing music when they were signalled during the day (Bailes, 2007; Juslin et al., 2008; Sloboda et al., 2001). These statistics show that people experience music many times a day, and the number of signals they receive needs to reflect this. Participants in the current study were thus sent five signals per day for 7 days.

A pilot study was carried out to ensure that the response form and procedure were viable. Some minor changes were made to the response form as a result of the pilot. In general, the pilot study showed the method was feasible; participants understood what was being asked of them; and a wide range of musical experiences were captured during the week.

A. Participants

The study consisted of 25 participants, 21 women, 4 men, age range 18-29 years old (mean age=20.4yrs; SD=2.96) who had filled out a 'profile' questionnaire we designed to identify individuals with differing levels of engagement with music. This short profile questionnaire contained six questions using interviewees' own words, representing the six main dimensions

of musical engagement found in Greasley & Lamont (2006). Specifically, these were dimensions on which participants differed the most. For example, there were marked differences in participants' preferred level of control over music listening, amount of music owned, ways in which they organised music, knowledge of music in their collection, sense of urgency about buying new music, and importance of lyrics. The questionnaire was designed so that individuals would obtain high engagement scores if they reported they usually had full control over the music they were hearing, owned a great deal of music, organised their music, and so on. Conversely, less engaged individuals would obtain a low score on the same items, for example, those who tended to listen to other people's music, owned very few CDs, and so on (for more detail see Greasley, 2008). Participants were asked to circle statement(s) that best described them.

The final sample consisted of 12 'more'; 7 'moderately'; and 6 'less' engaged participants (of which 21 were women, 4 men). All participants are referred to here by pseudonyms to preserve their anonymity. The gender imbalance was arguably related to the generally higher numbers of women enrolled on Psychology courses in the UK currently. It may also have resulted from general trends which highlight differences between men and women in their willingness to participate in ESM studies. Previous research found that women were more likely to volunteer, and more likely to respond to a greater number of signals, than men (Hektner et al., 2007).

B. Materials: The response form

The ESM response form was a combination of forced-choice questions, rating scales and open-ended questions which were designed to be analysed in conjunction with each other to explore musical behaviour. Forced-choice responses consisted of straightforward categorical responses to questions (e.g. location: home, shops, etc.) and were included so that the form could be completed quickly (as in North et al., 2004). However, our previous findings (Greasley & Lamont, 2006) showed how varied people's responses to music and musical preferences were, thus highlighting the need to employ open-ended questions to explore participants' thoughts and feelings at the time of hearing music in more detail (as in Sloboda et al., 2001).

Each time participants were sent a text message, they were required to fill out the response form. The first six questions asked participants to note the date; the time they received the text; the time they filled out the response form; whether they were hearing any music at the time they received the text; if no, whether they had heard any music in the last three hours, and the time at which they were hearing the music. If the participant was not hearing music at the time they received the text, and had not heard music in the last three hours, they were instructed to complete Section A. If participants were hearing music, or had heard music in the previous three hours, they were instructed to complete Sections A-D (i.e. all sections of the form).

To examine the role of the listening context and concurrent activities in shaping participants' musical choices and responses to music, it was necessary to identify where people were, what they were doing, and their reasons for engaging in

activity. Section A asked for this information irrespective of whether music was being heard, to enable comparisons between frequencies of music episodes and non-music episodes occurring in different contexts and accompanying different activities. The categories for location (e.g. home, workplace) covered the range of contexts in which individuals would be expected to be hearing music.

Section B also covered contextual information but was completed for music episodes only. Participants were asked who they were with (e.g. alone, partner, friends, work colleagues); the mode of delivery (e.g. live, recorded, broadcast); and the technology (if any) used in the music episode (e.g. radio, TV, phone, Walkman, computer, vinyl/CD decks). They were then asked to describe the music they were hearing using an open-ended response format, given the problems raised earlier with closed categorical responses. This also facilitated an exploration of differences in the level of specificity with which participants described music.

Section C asked questions about the degree of choice participants had over music; their reasons for choosing the music, and/or the effects the music had on them; whether there were any other reasons that influenced their choice; and whether they had considered other music. Choice was reported on an 11 point Likert scale, which ranged from 'none at all' to 'completely own choice' to cover situations such as radio listening where some degree of choice has been exercised (cf. Sloboda, 1999). The choice measure used here goes beyond earlier research in providing participants with an opportunity to report on the moment of choice in more detail, and was followed by an open-ended question which asked them if applicable whether they considered other music before settling on what they were hearing.

Participants were then asked to report reasons for choosing to hear music and the effects of hearing music (going beyond earlier studies which had only looked at reasons for choosing and effects of non-chosen music; North et al., 2004 and exploring earlier findings that predicted and actual effects of music are not always the same; Greasley & Lamont, 2006). The list of reasons/effects were based on previous research findings, and participants were asked to tick as many as applied. For example, "to help me concentrate/think" was included as North et al. (2004) found this was the most frequently reported reason for listening to music when people were carrying out an intellectually demanding task; and DeNora (1999) showed that people use music to create environments that afford concentration and help them to focus. "To distract me" and "to help me carry out the activity I was doing" were included as many of the participants in our qualitative study reported that they used music to distract from routine tasks (Greasley & Lamont, 2006). "To help pass the time", "out of habit" and "to help me create the right atmosphere" were included as these were the second, third and fourth most frequently cited reasons for choosing to hear music (North et al., 2004). In addition, an open-ended response encouraged participants to reflect on any other reasons influencing their musical choices.

Participants had an opportunity to describe the effects of hearing music in more detail in Section D, which contained two

open-ended questions asking participants to note any additional information about what was happening and how they were feeling when hearing music.

C. Post-study interviews

Post-study interviews were carried out with 23 of the 25 participants. The interview schedule drew largely on the interview protocol used by Sloboda et al. (2001), and was designed to investigate participants' experiences of participating in the study and to obtain retrospective accounts of specific music episodes during the week. Participants were encouraged to talk about whether the week had been typical in terms of daily activities and the amount of music they were exposed to; whether they had been more consciously aware of music than usual; and whether they had learnt anything new about themselves or about music in general.

The participants were then asked whether they had consciously changed their music habits, or the way they thought about music as a result of participating in the study. The key motivation for asking this question, and collecting retrospective data from as many participants as possible, was to explore reactivity, which is a methodological confound that occurs when participants respond accurately, but change their behaviour as a result of taking part in the study (Hektner et al., 2007). Whilst there is little evidence that reactivity poses a threat to the validity of self-report methods (Bolger et al., 2003), it is important to consider its occurrence nevertheless.

The response booklets were read before the interviews, and participants were asked to elaborate on five music episodes that had occurred during the week. Unlike the method employed by Sloboda et al. (2001), in which music episodes were chosen at random, episodes in the current study were purposefully chosen to represent a range of situations. For example, as an aim of the research was to explore ways in which the presence/absence of others may influence response to music, participants were asked to provide a retrospective account of one episode in which they were hearing music alone and one in the presence of others. Another aim was to explore the role of choice in people's experiences with music, and they were thus asked to elaborate on one episode in which they had chosen the music and one episode in which they had no choice in hearing music. Further to these criteria, episodes were chosen that represented a range of different contexts (e.g. home, transportation) to explore the differences due to context. Prompts were used in each episode to encourage participants to recall the experience, and describe the relative importance of various contextual factors (e.g. musical style, concurrent activity).

D. Procedure

Participants were selected based on their responses to the profile questionnaire. Those who agreed to take part were given further information on what the study entailed; asked to provide their contact details and an indication of their normal waking hours; and informed about the post-study interviews. Participants were told that they would be provided with a mobile phone if they did not own one, however all participants did. This is not surprising given that the average age of participants was around 20 years old, and recent UK research

has shown that levels of mobile phone ownership for people in the 16-24 and 25-34 age groups were 96% and 95% respectively (Hoare, 2007).

Text messages were sent to participants' phones via a mobile phone, which acted as an immediate channel through which participants could contact the researcher if they had any queries or needed to withdraw from the study. When the necessary information had been gathered, grids were constructed to keep a log of the participants' waking hours, and record the time at which text messages had been sent.

Participants were sent a text message five times a day, for seven consecutive days (a total of 35). The text messages were spread out across participants' waking hours to capture the whole day; and care was taken to avoid sending texts at the same time on different days. Having constructed a grid to keep a log of the times at which the texts were sent, response booklets were prepared and sent off ready for the start of the study. Participants were then called to check they had received the booklet, and that they knew what was required of them. The instructions on the front of the response booklet asked participants to have their response booklet (and a pen) with them at all times, and to complete all 35 response forms. The participants were asked to fill out a form as soon as they received a text. In cases where this was not possible (e.g. attending a seminar, driving a car), they were asked to fill in the response form at the next convenient moment.

Participants were encouraged to write on the response form if the categories provided did not cover what was actually happening, and instructions emphasised that there were no correct or wrong answers, nor any 'hidden agenda', and reminded participants that their answers were confidential. At the end of the week, participants were asked to return the response booklets as soon as possible. They were contacted via email and asked whether they would be willing to take part in a post-study interview. After completion of the post-study interviews, all participants were given a debrief sheet to denote the end of the study, and thanked for their time.

III. RESULTS

This section combines quantitative data generated by the response forms with qualitative data collected in the post-study interviews. The results explore compliance rates, response delays and prevalence of music episodes; contextual factors related to and influencing musical choices; the functions/effects of hearing music; the level of choice participants had over music; and differences in participants' levels of engagement.

In the following, an episode represents a time at which a participant was sent a text and responded; a music episode was a time when a participant responded and was hearing, or had been hearing music. The length of a music episode was defined by the participants themselves (e.g. a music episode could be 5mins or 2hrs).

A. Compliance Rates, Responses Delays and the Prevalence of Music

In total, 872 text messages were sent to the 25 participants (with 3 instances of researcher error). From these 872 messages, 866 response forms were completed. 21 participants completed all of their forms; one completed 34 out of 35 forms; and three participants completed 33 out of 35 forms. The average compliance rate was 99.2%, and thus the procedure elicited very high levels of compliance. Most participants who took part in the post-study interviews reported they had enjoyed taking part and found it interesting, which may explain this.

Participants noted the time they received the text message and filled in the form in over 99% of episodes. 541 (63.1%) responses were made within 10 minutes of the text message being received (given that the form took several minutes to complete, this was considered a fairly immediate response). 100 (11.6%) responses were made within 30 minutes, and a further 87 (10.1%) responses were made within one hour. In contrast, only 33 (3.8%) of the responses involved long delays (i.e. more than four hours). There were discernible differences between participants in the speed with which they responded to the texts. The most efficient participant responded immediately in 91.4% of episodes, whilst the least efficient participant responded immediately in only 24.2% of episodes. These differences did not appear to be related to age, gender, or level of engagement. Overall, given that shorter delays indicate higher reliability, the finding that 75% of the responses were made within 30 minutes of receiving the text was indicative of the motivation and commitment participants showed during the course of the study.

Participants were asked to report whether they were hearing music at the time of the text; and, if not, whether they had heard music in the last three hours. Out of 866 episodes, music was being heard at the time of text in 302 (35%) episodes, and had been heard in the last three hours in 152 (18%) episodes. In total, music was being heard or had been heard since the previous signal in 454 (53%) of the 866 episodes – over half the time.

B. Contextual Information

Whilst an approximately equal number of music and non-music episodes occurred when participants were at home, at someone else's house, and in social settings (e.g. shops, gym), as predicted, participants were less likely to hear music in the workplace and more likely to hear music when travelling and in a place of entertainment (participants heard music in 88% of episodes in an entertainment location), and these differences were significant ($\chi^2(6)=843.87, p<0.001$).

Data also support the prediction that a high frequency of music episodes would occur when participants were engaged in personal-maintenance activities, travelling, and active leisure pursuits (e.g. socialising), as whilst a roughly equal number of music and non-music episodes occurred whilst participants were engaged in personal maintenance (e.g. getting dressed) and self-directed work (e.g. writing/typing), participants were less likely to be hearing music when engaged in passive leisure activities (e.g. watching TV), and more likely to be hearing music whilst engaging in active leisure (e.g. socialising, playing computer games) ($\chi^2(8)=316.94, p<0.001$).

In general, participants varied greatly in the types of activities they were engaging in when hearing music, for example, Jed (M: 19yrs) was predominantly engaged in leisure activities (59%) when hearing music, whereas Leanne (F: 19yrs) was mainly engaged in self-directed work (71%). There were individual differences between participants in their use of music whilst working. Some reported they did not work with music on, for example, Anna (F: 18yrs) emphasised that: "when I revise, I have to have silence"; Rachel (F: 19yrs) reported that: "if I've really gotta concentrate, like revision and that, I can't have music on". Conversely, others reported that they could not work without music on. For example, Lucy (F: 20yrs) reported that she always worked with music, and explained why:

"if it's complete quiet I'll get distracted and like, wander off into daydreaming or start walking round the room, but if I've got music there, then it kind of, it kind of distracts me from my work, but kind of helps me concentrate by making me sit there and do the work, 'cause there's something else on in the background"

Overall, participants' responses to (and retrospective accounts of) music episodes in which they were engaged in self-directed work suggest that music is an essential tool in facilitating mental concentration and focus. Through a mechanism of distraction, and in many cases, avoidance of silence, participants reported that listening to music disposed of unwanted thoughts and helped them to maintain focus. These examples of uses of music while engaged in work activities also highlighted the use of specific styles of music to accompany specific activities.

Participants reported engaging with music as a main activity in only 2.3% of all episodes. This supports the prediction that there would be a low incidence of listening to music as a main activity, and provides further evidence that individuals typically listen to music as an accompaniment to other activities, rather than an activity in itself.

In the post-study interviews, we asked participants how important the music was to the activity they were engaged in at the time. Music was not always integral, even when participants had reported that the music had fulfilled a number of different functions. For example, in one episode, Anna (F: 18yrs) was at work (working on a checkout in a superstore) and reported that the music helped her carry out her duties and helped pass the time. In her interview, when we asked how important music was to the activity in hand, she reported that it was more salient at certain times than others: "it's nice to listen to something and have something in the background...but erm, when we're busy you don't tend to notice it I have to say, 'cause, erm, I have to like, focus on other things".

However, in many other music episodes, participants felt that the music was integral to the activity they were engaged in. For example, Naomi (F: 26yrs) was at home exercising on her stepper for an hour during one episode. She had chosen various rock/metal tracks (e.g. Meatloaf, Whitesnake) to help her exercise, to create a mood, to change an existing mood, and for enjoyment. In turn, she reported the music had these effects on her. On the response form, she wrote that she exercised daily, and had chosen the music to motivate her and get her adrenaline

pumping. In her interview, we asked her to elaborate on this music episode, and describe some of the characteristics of music she felt ‘helped’ whilst engaged in this activity. She explained that her regular painkillers made her tired; that the music had helped her to feel energetic; and that the lively and rhythmic beat had assisted with stamina levels, taken her mind off exhaustion and kept her motivated.

Overall, the highest frequency of music episodes (54.9%) occurred when participants were alone; 42.6% occurred when participants were with people they knew; and only 2.5% of episodes occurred when the participant was with people he/she knew and did not know. However, there was considerable variation between participants. Some heard music more frequently in the presence of others, whilst others were mainly alone when hearing music. For example, Naomi (F: 26yrs) experienced 20 music episodes, and was with her partner or with her partner and family members in 72% of these, and alone in far fewer episodes (28%). In contrast, Ally (F: 19yrs), who experienced 19 music episodes, was alone in 16 of these (84%) and with people she knew in only 3 music episodes (16%). Results show how musical choices are often ‘negotiated’ with others present in the listening context, and there were a number of episodes in which participants had purposefully chosen music because they thought the person(s) they were with would like it. Furthermore, participants reported that they would have left certain situations because they disliked the music if they had not been with others at the time. Thus the presence/absence of others can play a fundamental role in determining people’s responses to music.

Participants were listening to a wide variety of musical styles during the course of the study (some listened to more than others), from African to Vietnamese music. In order of highest frequency, the ten most frequently reported styles are shown in Table 1 (as a proportion of those episodes in which participants had reported musical style).

Table 1. Top 10 reported musical styles.

Style	Episodes	Percentage
Pop	46	19.2%
Soundtrack	22	9.2%
Rock	15	6.3%
Indie	13	5.4%
Drum ‘n’ Bass	13	5.4%
RnB	12	5%
Classical	10	4.2%
Dance	8	3.3%
Pop/Rock	7	2.9%
Rock/Indie	7	2.9%

Participants reported that they were listening to more than one style in 25% of episodes (19% to 2 styles, 5% to 3, and 1% to more than 3). There were three main reasons for this. Firstly the music they were hearing might be a cross-over in musical styles; secondly because it was a mixture of styles (e.g. on radio); and thirdly because they had purposefully chosen to listen to different styles in the same listening episode.

C. Psychological Outcomes: Functions/effects of music

The most frequently cited reasons for choosing to hear music were ‘because I really like listening to it’ (cited in 167 episodes; 20.4%), followed by the use of music ‘to help me relax’ (113 episodes; 13.8%). The current findings thus support the prediction that there would be a high frequency of music episodes in which participants had chosen to hear music for enjoyment and relaxation. However, music was less frequently chosen to create/accentuate/change specific moods than expected. Other common reasons for choosing music were ‘to help carry out/enhance the activity I was doing’ (77 episodes, 9.4%); ‘to help pass the time’ (74 episodes, 9.0%) and ‘to help me create the right atmosphere’ (61 episodes, 7.5%). Other frequently cited reasons were ‘to help me concentrate/think’ (55 episodes, 6.7%) and ‘out of habit’ (51 episodes, 6.2%). This supports the second prediction that there would be a high incidence of episodes in which participants had chosen music to pass the time, out of habit and to create an atmosphere.

Participants had chosen to listen to music ‘to help them concentrate/think’ in 55 episodes; of these 55, participants were engaged in self-directed work (e.g. revising) in 38 (69.1%), and other-directed work (e.g. paid work) in 6 (10.9%). Thus participants were mainly choosing music ‘to help them concentrate/think’ when engaged in self-directed work activities. Other frequently selected reasons when carrying out self-directed work (as well as ‘to help me concentrate/think’) were ‘to help me carry out/enhance the activity I was doing’, ‘to help me relax’ and ‘to help me pass the time’.

Overall, participants had chosen to hear music for three or more reasons in 58.2% of episodes, and the most frequent number of reasons selected per episode was three. In addition, around 7% of music episodes involved participants ticking five or more reasons for choosing to hear music. Thus participants were not just choosing to hear music for one or two reasons; they were predominantly choosing music to fulfil a number of different functions at the same time.

A key finding was the number of reported effects in comparison to the number of reasons. In total, participants provided 818 reasons for choosing to hear music across episodes, yet they reported 1134 effects of hearing music.

The most frequently cited effect was ‘because I really liked listening to it’ (254 episodes, 22.4%); and the second was ‘it helped me relax’ (137 episodes, 12.1%). Thus listening to music for enjoyment/pleasure and to relax were the most frequently reported functions and effects of hearing music. Other common effects of hearing music were that ‘it helped pass time’ (110, 9.7%); that ‘it helped carry out/enhance an activity’ (99, 8.7%); ‘it created the right atmosphere’ (88, 7.7%); and because ‘the person(s) I was with liked it’ (85, 7.5%). Participants reported that music they were hearing ‘had little or no effect’ in only 2.5% of music episodes and that music had ‘annoyed/irritated’ them in only 2.2% of episodes.

How did reasons for choosing music map onto the effects the music had? In many episodes music had the intended effects (i.e. the effects matched the reasons for choosing), while in others the effects did not match the reasons for choosing. When

effects did not match reasons for choosing music, this was typically because the participants had experienced more effects than anticipated. For example, in one episode, Chloe (F: 19yrs) had chosen the music to bring back memories, for enjoyment and because her partner liked it. In turn, the music had these effects, namely, it brought back memories, and she and her partner enjoyed listening to it. However, the music also changed an existing mood, created a different (happy) mood and helped her to relax.

D. Autonomy: Level of choice over hearing music

Overall, participants were mainly listening to self-chosen music (see Figure 1). In line with our predictions, they were significantly more likely to have choice over music at home and in the workplace and less likely to have choice over music when in public places or at someone else's house, ($\chi^2(70)=210.18$); significantly more likely to have choice over music in personal maintenance and self-directed work activities, and less likely to have high choice when engaged in active and passive leisure pursuits ($\chi^2(90)=150.48, p<0.001$); and were also more likely to have high choice over music when they were alone and low choice when they were with others, ($\chi^2(20)=121.68, p<0.001$). Furthermore, as predicted, there was a significant positive relationship between the level of choice participants had over music and the specificity with which they described that music ($r_s(389)=.396, p<0.001$).

In relation to functions/effects and level of choice, when participants had a high level of choice, they were more likely to report choosing music for enjoyment and mood-regulation; and more likely to report music had helped them concentrate/think, helped them carry out an activity, and helped to create the right atmosphere. When participants had low choice over music, they were more likely to report this was to pass the time and feel less alone; and more likely to report that music had helped pass the time, and had been distracting.

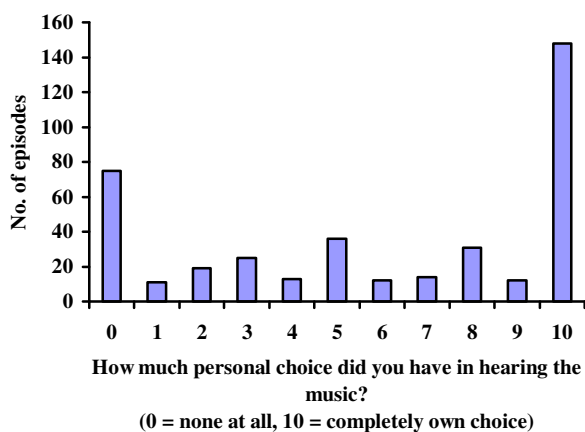


Figure 1: Level of choice participants had over music

There were more instances of music having little or no effect, and music having annoyed participants in low choice episodes compared to episodes in which they had moderate or high choice. These patterns suggest a strong positive link between level of choice over hearing music and valued outcomes, thus

supporting our prediction that participants would experience more beneficial effects from hearing self-chosen music.

E. Level of Engagement: Group Comparisons

A key aim of the study was to explore differences in the three level of engagement groups (less, moderately and more engaged participants) in relation to the amount of time spent hearing music; the specificity with which they described music; level of choice over music; and the function/effects of music.

On average, participants were hearing music for around an hour in each episode, and for approximately 17 hours a week. The maximum amount of time a participant was hearing music for across the week was 39hrs 30mins (one more engaged participant), and the minimum 2hrs 40mins (one moderately engaged participant). Nearly half of the participants (10 out of 25) heard music for more than 20 hours during the week; and of these, 4 participants heard between 30 and 40 hours.

Although more engaged participants were hearing music for longer (mean 69min per episode) than the moderately (mean 55min) or less engaged (mean 50min), there were no significant differences between these listening durations ($F(2,22)=2.03, p=0.156$). Similarly, although more engaged participants heard more music (21hrs 16 mins overall) than moderately (mean 12 hrs 26 min) or less engaged (mean 13hrs 16min), this difference was also not significant ($F(2,22)=2.43, p=0.112$). Analysis of individual responses can explain this lack of difference, as some participants in the more engaged group experienced relatively little music during the week, and some participants in the less engaged group experienced a great deal of music.

As regards level of choice, results were more conclusive. Across all music episodes, there was a positive correlation between participants' level of engagement and level of choice over hearing music ($r(440)=.239, p<.001$). A one-way ANOVA showed a significant difference between participants' level of engagement group and their average level of choice ($F(2,393)=10.87, MSe=162.62, p<0.001$). Post-hoc Tukey tests showed significant differences between the level of choice participants had over music in the low and high engagement groups ($p<.001$), and the moderate and high engagement groups ($p=.002$), but not between the moderate and low engagement groups ($p=.878$). This pattern is supported by examining the percentage of high choice episodes. Whilst more engaged participants had high choice over the music they were hearing around 60% of the time, this figure dropped to around 33% for the other two groups.

In relation to functions of music, there were discernible differences between the groups. Less engaged participants were choosing to hear music 'out of habit' more frequently (13.6%) than moderately and more engaged participants (5.3% and 4.9% respectively); and 'to pass the time' more frequently (12.7%) than moderately and more engaged participants (10.6% and 7.9% respectively). These findings provide some support for the prediction that less engaged participants would be more likely to listen to music for passive reasons. Less engaged participants also selected 'to help me feel less alone' more frequently (5.1%) than moderately or more engaged participants (2.3% and 3% respectively), as was expected.

Contrary to prediction, less engaged participants did not use music 'to bring back memories' more frequently than the other two groups. There were no episodes in which less engaged participants were using music 'to accentuate an emotion/mood, or 'to change an existing emotion/mood', although an equal proportion of less and more engaged participants chose music 'to create an emotion/mood' (4.3% and 4.4% respectively).

More engaged participants were more frequently choosing music 'to create the right atmosphere' (9.1%) than moderately and less engaged participants (3.1% and 4.3% respectively). They were also more frequently choosing music 'to listen to the lyrics' (5.6%) than moderately and less engaged participants (2.3% and 1.7% respectively), as was predicted. However, data show that moderately engaged participants were more likely than the other two groups to choose music 'to accentuate a mood', 'to create a mood', 'to help them concentrate/think', 'to help carry out/enhance an activity' and 'to bring back certain memories'. Arguably, these are active reasons for choosing music, and thus the prediction that participants in the more engaged group would be listening to music for active reasons most frequently than the other groups was not consistently supported throughout the results.

Further group differences were found in relation to the effects of hearing music. Less engaged participants reported that music had helped them to pass time more frequently (13.8%) than moderately and more engaged participants (10.4% and 8.1% respectively); and reported that music had made them feel less alone more frequently (5.5%) than moderately and more engaged participants (2.9% for both). More engaged participants reported that music had changed a specific mood (2.4%) more frequently than moderately and less engaged participants (0.8% and 0% respectively). More engaged participants also reported music had helped create the 'right' atmosphere more frequently (9.7%) than moderately and less engaged participants (4.6% and 5.1%), who were more likely to report that the person(s) they were with liked the music as an effect of hearing music than more engaged participants.

Nearly all participants reported that they had been more consciously aware of music during the week, which shows how ESM encourages reflection on mundane events occurring in everyday life. Data from more engaged participants suggests that it only confirmed what they already knew about their engagement (i.e. in terms of their uses of music), whilst data from less engaged participants was mixed. For some less engaged participants, the study served to highlight functions of music in their lives, whilst for others, even though they had been more consciously aware of music, it had not affected the way they thought about music.

The main findings in terms of engagement were that although occasionally there were subtle differences between all three groups, and sometimes two groups clustered together (the most commonly occurring pattern in the data was similarities between less and moderately engaged groups, with differences between these groups and the more engaged group). In general the results support two broad categories of listener type: the more and the less engaged.

IV. DISCUSSION

The purpose of this study has been to explore everyday musical behaviour in detail, addressing specific research questions derived from previous literature and our own research findings. Data confirm existing findings regarding the contexts and activities in which people frequently hear music (North et al., 2004; Sloboda et al., 2001). Our results also show that music is mainly an accompaniment to other activities rather than a focused activity, which supports previous studies on everyday music listening (e.g. Juslin & Laukka, 2004; Sloboda, 1999).

Through its use of open-ended responses, the current study highlights ways in which the presence/absence of others can influence people's uses of and responses to music (particularly disliked music); and brings to light the wide range of styles people are listening to as they go about their daily lives (see Greasley, 2008). A key finding is that people are listening to more than one style in nearly a third of music episodes. This suggests that studies which employ predetermined tick-box categories to explore music in everyday life (e.g. North et al., 2004) are unlikely to take into account all the styles that people are typically hearing. Future research must adopt open-ended responses to explore musical preferences.

Our results show that people are predominantly listening to music they have chosen themselves, and in line with previous findings, are more likely to have choice over music whilst engaged in personal maintenance and active leisure pursuits, when at home or when travelling, and when they are alone (Juslin & Laukka, 2004; North et al., 2004; Sloboda et al., 2001). People are also mainly listening to music for enjoyment and to relax (cf. Lamont & Webb, 2010; Laukka, 2007).

A major finding is that people choose to listen to music to fulfil different functions simultaneously (music is chosen for an average of three reasons per episode). While music typically fulfils these goals, in many cases additional (unanticipated) effects are experienced. Thus even when people have low choice over hearing music, it generally has positive effects on them. These findings have implications for health psychology; listening to music is one way in which people can actively improve their psychological well-being and health (cf. Batt-Rawden & DeNora, 2005).

The current study builds on our previous findings relating to people's levels of engagement in everyday life (Greasley & Lamont, 2006). Results show that those who are more highly engaged with music are more likely to use music for active reasons; and that those who are more engaged listen to a far greater amount of music in any given week, and are significantly more likely to be listening to self-chosen music.

Finally, our findings highlight an issue which is central to the study of everyday uses of music, namely, that musical choices are often linked to (or are a result of) previous musical choices made, whether these are made the day before, during that week, or over longer time periods. In other words, it is not necessarily just situational factors that influence responses to music, and ESM, as versatile as it is, cannot account for the participants' previous experiences which may influence and shape what they

are listening to and why. Future research could use ESM to explore people's engagement with music over longer time periods (e.g. weeks, months, years) in order to capture some of the gradual processes occurring when people engage with music (both new and preferred).

V. CONCLUSION

This study has exemplified an in-depth and open-ended approach to the exploration of music's role in people's everyday lives using both quantitative and qualitative research methods. It has consolidated previous research findings in relation to uses of music in everyday contexts, and furthered our understanding of similarities/differences in the musical behaviours of people with differing levels of engagement with music in everyday life.

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