DURMS
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The Impact of Music Festivals on Attendee Wellbeing

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ABSTRACT

While existing literature on music festivals and wellbeing has identified a positive impact on social and psychological wellbeing (Ballantyne et al., 2014; O'Grady 2015a; 2015b) medical literature indicates a prevalence of wellbeing harms, with hospitalisation rates 2 to 3 times that of other large outdoor crowd events (Britten et al., 1993) and elevated risk of assault (Beltrán & Calvet, 2020; Bows et al., 2020). This study includes a literature review assessing risks to wellbeing posed by festival attendance alongside benefits. Furthermore, the validity of lab findings about music and wellbeing was investigated in a real-life festival setting. A questionnaire study was conducted at the CTM Festival in Berlin investigating festival experiences alongside measures of social, psychological and subjective wellbeing (Laiho, 2004). Self-reported increases in psychological wellbeing were found to be associated with dancing to music and a sense of adventure, however participants also reported fatigue and boredom. The influence of a male skewed sample, priming, and a voluntary sample is, however, unclear. Although this study's proposal to integrate questionnaire items about illness, injury and other harms to wellbeing was ultimately not possible to implement in a student study, it is recommended that future research continues to attempt to investigate these systematically alongside positive wellbeing impacts.

1. INTRODUCTION

Music festivals can provide memorable social music experiences significant to festivalgoers' cultural and personal identities (Goulding, Shankar, & Elliott, 2001). Social listening, dancing, live performances, set programmes, and travel make festivals radically different from practices of everyday listening, where in contrast we listen to our own musical choices (MacDonald et al., 2012), often alone and in private (DeNora, 2000). The senses of separation and adventure produced by the distinctive musical environment could potentially increase festivalgoers' wellbeing (Ballantyne et al., 2014). However, some of these same characteristics distinguishing music festivals from everyday life have been linked to increased risk of violent offence (Bows et al., 2020). Crowds and mosh pits can furthermore lead to soft tissue injuries (Britten et al., 1993, 1995; Hewitt et al., 1996) and illness can follow drug consumption (Martinus et al., 2010; Ridpath et al., 2019). All these factors result in increased pressure (up to threefold) on local emergency healthcare services (Britten et al., 1993, Nix et al., 2004). This existing literature indicates that the same festival experience, for example a sense of separation, can have both positive and negative wellbeing impacts. These positive and negative impacts have only been studied in isolation.

Existing research on the wellbeing impacts of music festivals is divided, and terms denoting positive wellbeing impacts, such as "empowerment", are often ill defined. "Music festivals" alone is a set so loose as to seriously compromise replicability, comprising a wide range of behaviours from camping outdoors for multiple days, dancing and yelling along to hits with friends, to sedentary, sober and silent listening. Martinus et al. (2010) note the involvement of "powerful commercial interests" which can bias reports towards the positive impacts of music festivals, because of "reluctance to support research that might attract negative publicity" (p. 796). Although balanced research is especially important given the significant economic impact of the music festival industry (McKay & Webster, 2016), existing research on health and wellbeing impacts of festival attendance has studied positive and negative outcomes in isolation.

Empirical study has indicated that music can positively impact wellbeing (Saarikallio, 2017; Fritz & Avsec, 2007; Croom, 2015; Sheppard & Broughton, 2020; Tarr, Launay, & Dunbar, 2016), however there is little research indicating how this might occur in the complex real-life setting of a music festival.

The present exploratory questionnaire-based study has three aims: to investigate positive and negative outcomes for health and wellbeing in the same population of festivalgoers; to develop the specificity of research on music festivals' positive wellbeing outcomes; and to explore findings from lab study of music and wellbeing in an ecological setting. To do this, it will build on work by Ballantyne et al. (2011; 2014) and deliver a questionnaire measuring festival experiences and wellbeing outcomes to attendees at the CTM Festival in Berlin. Rather than measuring overall wellbeing change, this study will investigate changes in individual aspects of wellbeing.

2. LITERATURE REVIEW

Mixed evidence about the health and wellbeing impacts of music festivals is present in literature since 1990, and these two bodies of literature will be reviewed in turn. Some social psychology and sociology research has supported the view that attendance contributes to increased wellness and wellbeing (Ballantyne et al., 2011; 2014; O'Grady, 2015). Elsewhere, medical literature has characterised festivals as "risky practice", reporting more negative wellbeing impacts such as soft tissue injuries and overconsumption of drugs and alcohol (Britten et al., 1993, 1995; Hewitt et al., 1996; Martinus et al., 2010), as well as a smaller amount of

literature linking festivals to sexual harassment and assault (Beltrán & Calvet, 2020; Bows et al., 2020).

Research on negative wellbeing outcomes is relatively specific: soft tissue injuries and overuse of alcohol are clearly defined impacts. The positive outcomes, however, are vaguer, describing "positive wellbeing effects", or a positive "festival imaginary" (O'Grady, 2015). Secondly, there is little overlap between these two bodies of research, making it difficult to form a balanced view of the wellbeing impact of music festivals.

Packer and Ballantyne (2011) explore the wellbeing effects of attending a music festival as subjectively reported by young people (aged 18-29 years), forming a positive view. They delivered a questionnaire with focus-group-derived festival experience items alongside measures of psychological and social wellbeing. In the analysis, a single factor was used to represent change in wellbeing, which was compared to festival experiences. Using this method, the most significant experiences that were found to increase general wellbeing were: "getting to know my friends on a deeper level", "feeling a personal connection with the music", and "being inspired by live music", indicating that social- and music-related experiences had the greatest impact on wellbeing. Their study makes only brief mention, however, of the negative wellbeing effects documented in festival literature, and does not integrate these into their questionnaire study.

O'Grady has used ethnographic research to characterise music festivals as "alternative playworlds" zones where adults can engage in "deep" play, an absorbing practice which aids creativity and can lead to "transcendent" experiences (2015a). Elsewhere, she characterises the separation of the festival from everyday life as "DIY ethics", in order to convey the collective, community-based knowledge production occurring in that space, contributing to festivalgoers' wellbeing through an increased sense of autonomy (O'Grady, 2015b).

Women can be empowered in the alternative space of a music festival. Outdoor festivals present an opportunity for mindful engagement with nature, improving women's self-reported wellbeing (Soulodre, 2019). The women-only, feminist setting of Michfest, for example, was found to offer attendees physical and emotional safety, as they were able to withdraw and separate from the patriarchal dominant culture. Attendees formed new "rituals" and "traditions" using music and dance, which were experienced as "empowering" and facilitating healing from trauma (Odahl-Ruan et al., 2015).

Research on positive wellbeing outcomes largely comes from sociology and the humanities, and qualitative methods predominate. While they offer a detailed picture of festivals as subjectively experienced by festivalgoers, there is limited mention of the harms to wellbeing which appear to be statistically prominent. A larger body of medical literature has focussed on classification and prevention of negative health and wellbeing outcomes associated with music festivals.

When festivals occur, they impact local health practitioners and health institutions, for example, significantly increasing workload in nearby A&E departments (Nix et al., 2004). Onsite care can be highly protective to local services (Knight & Mulry, 1996; Reddy & Cusack, 1996; Hewitt et al., 1996), though is not always adequate to mitigate the impact of the festival (Nix et al., 2004). The most frequent risks to wellbeing recorded were soft tissue injuries, collapse, and eye nose and throat (ENT) issues (Knight & Mulry, 1996). Another large study documented primarily heat related, soft tissue related, insect bites and drug misuse casualties (Reddy & Cusack, 1996).

Music festivals in particular may influence risky behaviour. At the 1995 Reading Festival, for instance, 2% of attendees needed treatment at either A&E or onsite (Knight & Mulry 1996). At the 1991 Glastonbury Festival 2.8% of the revellers sought medical aid. This is substantially higher than the 1% recorded at other large outdoor crowd events (Britten et al., 1993). Crucially, Knight, and Mulry (1996) note that the nurse rota in the medical tent warned of likely casualty rates based on what music was playing, with acts being rated from 1-10 based on the danger posed by their influence on crowd behaviour. This may indicate differences in risk-taking behaviours associated with genre and musical subculture, which affect wellbeing outcomes. This is supported by, for example, substantial differences in drug use between musical styles (American Addiction Centres, 2020).

While violence in the context of music festivals in particular is under-researched, elevated levels of an acquisitive and violent crime and gender-based violence have been observed at other live music events such as nightclubs, pubs and gigs (Bows et al., 2020). Contrary to the literature about women-only festival spaces discussed above, Bows et al. (2020) therefore question the extent to which commercial music festivals are transgressive or countercultural spaces, and suggest that the elevated risk of gendered sexual violence is likely to be similar to other live music spaces.

Sexual violence against women at festivals has in some circumstances even been understood as part of the festivity itself. In the high-profile gang rape case known as "La Manada", no prosecution was made despite video evidence, after court proceedings which saw San Fermín's festivity and sense of separation used as justification for the attack (Beltrán & Calvet, 2020). Cases such as this raise academic doubts about these features of the festival experience which have, in the music festival literature, only been identified as prompting "reflection and self-understanding" (Ballantyne et al., 2014) and "empowerment" (Odahl-Ruan et al., 2015). As court records suggest that the sense of festivity and separation from everyday life made gender-based violence both more likely and more socially acceptable, it must be considered that impacts on wellbeing may be mediated by demographic factors such as gender.

A further music festival experience, drug taking, has a complex interaction with wellbeing outcomes. Festivalgoers report motivations for drug-taking such as reducing social anxiety, enhancing enjoyment, relaxing, and connecting more with the artist (American Addiction Centers, 2020). In other

words, festival attendees use substances with the intention of increasing their social wellbeing, enjoyment of the music and connection to others. Drug use at music festivals may be particularly detrimental to wellbeing, however[1]. This is partly because polydrug use is more common at festivals, raising risk of illness. Dancing for hours, high temperatures and dehydration also contribute to the higher risk of adverse effects presented by festival drug-taking (Martinus et al., 2010; Ridpath et al., 2019).

In sum, this literature review has presented a complex picture of music festivals' impacts on wellbeing. Some sociological study has found music festivals to be socially transgressive spaces, promoting senses of play and empowerment (Odahl-Ruan et al., 2015; O'Grady, 2015a; 2015b; Soulodre, 2019). A small body of music-psychological literature indicates that music festival attendance leads to increased social, psychological and subjective wellbeing (Ballantyne et al., 2011; 2014). The very same sense of separation and festivity that leads to increased self-reports of wellbeing at festivals has, however, also been linked to increased risk of violence (Beltrán & Calvet, 2020; Bows et al., 2020). Music festivals also present an up to threefold risk of physical injury and illness compared to other large outdoor crowd events (Britten et al., 1993), a statistic which cannot be ignored.

Limitations addressed by this study. The method of deriving questionnaire items from group discussion with festival attendees (Ballantyne et al., 2011; 2014) had the advantages of both providing a clear and uniform rationale for questionnaire items, and also developing bottom-up from festivalgoers' own impressions of their experiences. It risked, however, replicating popular ideals of the music festival experience. Secondly, it rendered subsequent questionnaire study unable to expand on or contradict the findings of focus groups. The present study introduces several music festival experience items derived from empirical study on music and wellbeing, with the aim of producing a fuller account of music festival experiences than those from focus groups alone.

Lab studies have indicated several music-related experiences which positively impact wellbeing such as: development and reinforcement of identity through music listening (Saarikallio, 2017); flow state/absorption (Fritz & Avsec, 2007); participation in music making (Croom, 2015; Sheppard & Broughton, 2020); dancing to music (Sheppard & Broughton, 2020); and dancing to music with others (Tarr, Launay, & Dunbar, 2016). This questionnaire study will investigate their validity in the ecological setting of a festival.

While Packer and Ballantyne's (2011) factor analysis indicated that wellbeing should be represented as a single factor, this does not necessarily mean that wellbeing change varies monolithically, and could be due to weakness in the self-reported data. Their study was not able to indicate which aspects of wellbeing were affected by festival attendance. This study uses a shorter questionnaire to improve engagement and capture more nuance.

A proposal was also made to include questionnaire items reflecting medical study on the risks to wellbeing posed by music festivals such as: injury or illness (Knight & Mulry, 1996; Reddy & Cusack, 1996; Hewitt et al., 1996); experiences of violence, gendered violence and theft (Bows et al., 2020); and negative health and wellbeing outcomes of drug-taking or alcohol consumption (Ridpath et al., 2019). The present study aimed to indicate prevalence of these negative wellbeing outcomes alongside the positive outcomes indicated by Ballantyne et al., (2014), setting precedent for more balanced study of the impact of music festivals. This proposal was however not possible to carry out within a student study in the context of the target festival (see Methods).

Research aims. The aims of this study are:

1. to examine which festival experiences affect which facets of wellbeing change

2. to examine which festival experiences lead to increased wellbeing after festival attendance

3. to replicate conclusions from lab study of music and wellbeing in an ecological setting

4. to explore positive and negative wellbeing outcomes in the same population of festivalgoers

3. METHOD

Design. A 31-item questionnaire and 3 open-ended questions were administered, measuring festival attendees' subjective evaluation of experiences and changes to psychological and social wellbeing after attending the CTM Festival, an experimental music festival in Berlin. The full questionnaire can be requested from the author.

Our design did not include a control condition, because the aim of the study was not to measure the efficacy of festivals in improving attendee wellbeing. Rather, this study examines the relationship between various festival experiences and various wellbeing outcomes in order to indicate *how* festivals impact wellbeing.

Participants. Participants were recruited at the festival itself. They are a convenient sample, not controlled for demographic representation. 147 attendees were asked for their demographic and contact information, of whom 13 completed the post-festival questionnaire.

The low response rate to our second questionnaire delivered after the festival means that these answers are effectively a voluntary sample. Of the sample (n = 12), participants' ages ranged from 20 to 70 years (M = 37.7; SD = 14.8), 83%

[1] Data is scanty and differing definitions of drug-related death or illness are employed. However, 17 deaths and over 100 non-fatal overdoses were reported at live EDM events between May 2015 and May 2016, for example (https://www.iq-mag.net/2016/05/17-deaths-100-overdoses-year-edm/#.Xt-051NKjVo). In another case, drug misuse was the fourth most common reason for needing medical attention at a festival with 70,000 attendees (Reddy & Cusack, 1996).

identified as male and 17% identified as female. 67% had completed post-secondary or higher education, and 42% had completed postgraduate education. They were of 7 different nationalities. Festival attendance ranged from 2-4 days, and all but one participant stayed at the festival for the full duration of 4 days (M = 3.8; SD = 0.6).

Materials/stimuli. All participants were attendees at the CTM Festival. Originally "club transmediale", CTM is an annual electronic music and multimedia festival in Berlin. The musical niche ranges from EDM to contemporary sound art, with a multicultural musical programme, and formats vary from seated listening to lively club nights.

The questionnaire was a shortened version of that used by Packer and Ballantyne (2011) which measured psychological, social and subjective wellbeing outcomes (Keyes, 1998; Keyes et al., 2002; Laiho, 2004; Ryff & Keyes, 1995), as well as wellbeing outcomes based on Laiho's (2004) four functions of music. The questionnaire contained a 31 item, divided into 13 festival experience statements and 18 psychological and social wellbeing statements. It also contained three open-ended questions on festival experience and wellbeing, and demographic information.

Procedure. Participants were approached inside the concert venue and asked to complete a paper form asking for their contact details and demographic information. A week after the festival ended, these 147 participants were emailed an online link to a questionnaire (available to complete for a two-week window) regarding their festival experience and wellbeing. 12 completed questionnaires could be used for analysis. These data were collected as part of a broader study conducted at CTM (Hampshire et al., 2020).

4. RESULTS

1. To examine which festival experiences affect which facets of wellbeing change. A cross-tabulation was performed on questionnaire responses and Pearson correlations were measured between individual festival experience items and individual wellbeing outcome items. Table 1 shows the correlations between individual items that were significant (p < .01), ranked by their significance levels.

Table 1. Most Significant Correlations (<.01) between Individual Festival Experiences and Self-Reported Wellbeing Outcomes, Ranked by Significance

Rank	Festival Experience	Wellbeing Measure	Correlation
1	escape	positive about other people	**0.83***
2	adventure	accept myself	**0.77***
3	dance w/others	can make a contribution to the world	**0.76***
4	enjoyed music	more positive about life	**0.76***
5	adventure	developed as a person	**0.74***
6	adventure	greater understanding of myself	**0.73***

2. To examine which festival experiences lead to increased wellbeing after festival attendance; 3. to replicate conclusions from lab study of music and wellbeing in an ecological setting. Table 2 shows an analysis performed using the same method as Ballantyne et al. (2014), averaging wellbeing responses into a single "wellbeing change" factor for each participant. The two items at the top reached significance to .05: "I enjoyed moving to the music with others", and "It has felt like being on an adventure".

Table 2. Festival Experiences Ranked by Correlation with General "Wellbeing Change" Factor

Festival Experience	Correlation with wellbeing
I enjoyed moving to the music with others	**0.67***
It has felt like being on an adventure	**0.62***
I have enjoyed being around people with similar interests	0.55
There were moments when I totally got lost in the music	0.52
It has been good to be able to get away from my everyday environment	0.51
This music is a part of who I am	0.49
I have felt more open to meeting different people	0.48
I felt connected to the people I was with	0.44
The festival experience has been different from anything you would find elsewhere	0.44
I have enjoyed seeing live performances	0.29
I like listening to this kind of music	0.18
I have enjoyed moving to the music	0.04
I have participated in music making during my time at the festival	-0.13

Table 3 shows festival experiences represented as a single factor, in order to find the wellbeing outcomes most likely to result from participation in the festival. On the right they are categorised by the aspect of wellbeing they are measuring, and also colour coded for overarching wellbeing measure: blue for psychological wellbeing, and orange for social wellbeing. The top six items in Table 3 reached significance.

Table 3. Wellbeing Impacts Ranked by Correlation with a General "Festival Experience" Factor

Correlation with festival experience	Survey Item	Measuring
0.75*	I feel more positive about my life	life satisfaction
0.71*	I feel I have grown/developed as a person	personal growth
0.67*	I feel better able to cope with stresses in my life	emotional field
0.64*	I am more able to accept myself for who I am	self-acceptance
0.63*	I have a greater understanding of who I am	identity
0.60*	I feel inspired to do something new or creative	agency
0.53	I feel a greater sense of purpose in my life	purpose in life
0.53	feel I can make a contribution to the world	social contribution
0.52	I feel more positive about other people	social acceptance
0.48	I feel I have more things in common with others	social integration
0.46	I feel a greater sense of confidence/control over my life	autonomy
0.36	I feel more hopeful about the way things are in the world	social actualisation
0.32	I feel a sense of happiness	happiness
0.27	I feel a greater sense of belonging within my group	interpersonal relationships
0.25	I have a greater understanding of my emotions	emotional field
0.24	I feel better able to deal with the demands and responsibilities in my life	mastery
0.23	I feel more able to make sense of what's happening in the world	social coherence
-0.14	I feel I have a better relationship with others	interpersonal relationships

4. To explore positive and negative wellbeing outcomes in the same population of festivalgoers. Table 4 shows quotes from answers to the open-ended questions, categorised by themes which emerged from the responses.

Table 4. Themes in Open-Ended Responses

Queuing and crowds
"Too crowded, long queues... too many people/visitors. was quite stressful this year :/"
"Long queues, sold-out events"
Late nights
"Events until deep in the morning"
"Rather not.... sleep deprivation (had to work the days afterwards)."
Illness
"I got sick"

5. DISCUSSION

This study indicates that for attendees at the CTM Festival, dancing with others and a sense of adventure were the experiences most positively influential on wellbeing. Minimal harms to wellbeing were experienced, caused by crowds and fatigue. Though we weren't able to conduct systematic study of negative wellbeing impacts, open-ended responses did suggest these (Table 4). Participants mentioned feeling fatigued by late nights (n=2), bored by queues (n=2), and contracting an illness after attending a large crowd event (n=1), supporting earlier findings (Earl et al., 2004).

Building on the findings of Ballantyne and Packer (2011), this study was also able to indicate individual relationships between experiences and aspects of wellbeing (Table 1), though further research is necessary to establish a causal link. Contrasting patterns emerged in these individual correlations, where the item "it has felt like being on an adventure" correlated with higher scores on wellbeing items related to the self, as opposed to contrasting wellbeing items about the world, life, or others. Enjoying the music correlated strongly with a reported sense of general positivity and optimism. The festival experience of dancing with others had a strong relationship with reported increased social wellbeing, "I feel I can make a contribution to the world". We can also note the large difference between the observed effect of moving to music, and moving to music with others (Table 2). The difference found between social listening and listening alone (Egermann, 2011) was therefore observed in the festival setting.

Notably the new item about dancing with others was the most significant correlation with wellbeing, lending ecological support to the conclusion from lab study that dancing to music

with others can improve overall wellbeing (Launay & Dunbar, 2016).

A larger pattern also emerged where festival attendance positively influenced individual psychological wellbeing outcomes, such as life satisfaction and self-acceptance, more than it did social wellbeing outcomes, such as relationships with others. Surprisingly, the top six wellbeing items which were impacted by the festival measured psychological wellbeing, whereas social wellbeing did not have a significant relationship with festival attendance in general. This contrasts the results of Ballantyne and Packer's studies of young people (2011; 2014), and supports their conclusion that wellbeing impacts of festival attendance are mediated by age.

Limitations. Limiting data collection to a single festival curtails the range of participant experiences available for analysis. Administering the same questionnaire at a variety of different festivals would allow for effective comparison of different music genres and live music experiences. Furthermore, CTM's unique selling point is its focus on outstanding contemporary 'adventurous, experimental and electronic music and audiovisual performance'. Results from this festival may be difficult to generalise to other music festivals, therefore, as familiarity with music has the potential to influence wellbeing, both through mere exposure and hedonic pleasure (Madison & Schiölde, 2017) and the experience of music-evoked autobiographical memories (Cuddy et al., 2017). A more effective study might therefore include data from festivals where familiar or older music is performed.

Our data was unable to replicate the finding from Ballantyne et al. (2011; 2014) that wellbeing benefits are associated with length of attendance, as all participants but one attended for the full duration.

A wide range of nationalities were represented at the CTM Festival, and only 40% of attendees were living in Berlin. Geographical separation is far from the only factor which builds a sense of "separation from everyday life", and a comparison with local music festivals would allow for isolating the effects of physical removal from cultural and social signifiers of separation.

Priming effects, lack of a control condition and a time delay mean that these results are limited to showing the relative impact of different festival experiences on psychological wellbeing, and cannot show whether the overall positive impact is significant. Wellbeing items were all phrased positively, for instance "I feel more able to deal with stresses in my life". They were also placed after 12 items listing positive festival experience such as "I enjoyed listening to the music", together priming participants to report positively.

The duration of time between the end of the festival and administering the questionnaire also exacerbated the limiting factor of memory biases, including telescoping, selective memory, attribution, and exaggeration (Schacter et al., 2003).

The priming effects, single-group design and time delay do not compromise the significance of correlations between questionnaire items. It does however limit the questionnaire to evidencing how, not whether, the music festival may have impacted wellbeing.

Execution was limited by a very small post-concert questionnaire sample size. The small number of respondents mean this group is effectively a voluntary sample, meaning it may be biased towards individuals who are more trusting, cooperative, or opinionated. They are as such unlikely to be a representative sample of the population attending music festivals (Salkind, 2010; Oswald et al., 2013).

Directions for future study. Future studies may seek to investigate whether the findings that music festivals have a higher impact on psychological than social wellbeing, and that dancing with others in the ecological setting of a music festival is related to increases in wellbeing, can be replicated in a larger participant pool.

Future study should also investigate whether these findings are replicable outside CTM or electronic music in general, as our small sample was highly educated, middle-aged and male-skewed, not representative of all festivalgoers. This study should be replicated at other kinds of music festival which will present both differing festival experiences and demographics of attendees. This will help to investigate whether the impact on psychological wellbeing is specific to music festival attendance, or rather to the demographic groups involved in this study.

We did not find any negative correlations, in other words any experiences which had a significant negative impact on wellbeing, despite crowding and exhaustion being reported in the open-ended responses, even in such a small study as this. This is likely because the questionnaire primed participants to report positive impacts of music festivals. This is a disadvantage, and future studies should integrate negative festival experiences and wellbeing decreases into questionnaire items.

This data analysis so far has reduced festival experience to individual behaviours with independent effects, and future study should analyse for pairs and sets of festival experiences with different wellbeing items. We could imagine, for example, that attending alone and answering "I danced with others" would have a different impact than attending with friends and answering "I danced with others".

It is however important to be skeptical of touting the wellbeing impacts of music festivals. "Along with this heightened interest in music, health, and wellbeing there is significant spurious postulating about the benefits of music" (MacDonald, Kreuz, & Mitchell, 2012). It must be acknowledged that the wellbeing effects of music festivals are limited to hedonic, distraction, resilience and identity forming practices, as psychological wellbeing is significantly modulated by other core factors, like stable income, family relationships and housing (Heinrich & Herzbach, 2000).

It is hoped that future controlled research will contextualise findings of the wellbeing impact of the music festival relative to other activities such as domestic music listening, or other outdoor social activities.

6. CONCLUSION

This study is set against the backdrop of two conflicting bodies of literature. In existing literature on music festivals and wellbeing, the prevalence of soft tissue injury, ENT, heat and drug-related illness has been ignored. This weakness has unfortunately been replicated here after limitations placed on the study by festival organisers.

This study integrated music experience items derived from lab study into the festival experience questionnaire. One of these, dancing to music with others, was found to have a significant impact on wellbeing. Patterns emerged linking festival experiences to specific wellbeing improvements as defined by Ryff and Keyes (1995) and Keyes et al. (1998; 2000). These included the strong correlations between enjoying the music and increased positivity, and between a sense of adventure and self- acceptance.

While it was not possible in this study to research those more serious negative wellbeing impacts such as overconsumption of drugs, injury and assault, open-ended inquiry did find evidence for wellbeing harms caused by overcrowding and late nights. Future study should integrate the possibility of harm into research on wellbeing, building the possibility of negative impacts into the questionnaire study to allow for a more complete picture when presenting findings on wellbeing.

Research produced with these principles will result in more detailed and balanced information, better placed to recommend festival design features which maximise the wellbeing and the safety of festivalgoers.

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