SCIENTIFIC CULTURE
www.sci-cult.com

SCIENTIFIC CULTURE, Vol. 12, No. 4, (2026), pp. 8908-8918
Open Access. Online & Print

DOI: 10.5281/zenodo.12426879

ALGORITHMIC MUSIC AS AN INVISIBLE EMOTIONAL REGULATOR: A NARRATIVE REVIEW OF EMOTIONAL REGULATION AND MENTAL HEALTH

Naruepon Vongjaturapat[1], Kanapan Pachatikapanya[1], Apisit Salaohom[1], Ratchaya Supalak[2], U.S. Mahadeva Rao[3], Keng Yinn Wong[4], Huiyi Tan[5], Garry Kuan[6*]

[1]Faculty of Sport Science and Human Performance, Institute of Entrepreneurial Science Ayothaya, Sathon Campus, 10120 Bangkok, Thailand
[2]School of Medicine, Walailak University, 80160 Nakhon Si Thammarat, Thailand
[3]School of Basic Medical Sciences, Faculty of Medicine, Kampus Perubatan, UniSZA, 20400 Kuala Terengganu, Malaysia.
[4]Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, 81310 Johor, Malaysia
[5]Faculty of Chemical and Energy Engineering, Universiti Teknologi Malaysia, 81310 Johor, Malaysia
[6]Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.*

Received: 16/11/2025
Accepted: 11/02/2026

Corresponding Author: Garry Kuan (garry@usm.my)

ABSTRACT

Music has long been recognised as a powerful medium for emotional expression and psychological regulation. In modern digital environments, music engagement has progressively transitioned from deliberate self-selection to passive consumption via artificial intelligence (AI)–based recommendation systems. Although algorithmic music curation is often advocated for its potential to improve user pleasure and emotional wellbeing, its wider psychological and cultural implications are inadequately explored in the mental health literature. This narrative review seeks to critically analyse the psychological effects of algorithmically curated music listening on emotional regulation and mental health. It specifically investigates whether AI-driven music systems enhance emotional health or gradually limit emotional adaptability, psychological autonomy, and attentional control. A theory-driven review method was utilised to synthesise interdisciplinary literature from psychology, music studies, digital culture, and mental health research. Searches were conducted in major academic databases using keywords related to algorithmic music, emotional regulation, AI-curated recommendation systems, digital wellbeing, and mental health. Empirical studies and conceptual frameworks published in English were included to identify emerging theoretical patterns, knowledge gaps, and cultural considerations. The review indicated that AI-curated music systems operate as unseen emotional regulators, influencing affective experiences via repeated exposure to mood-congruent musical content. Although it could aid in short-term mood regulation, prolonged dependence on algorithmic curation may reinforce current emotional states, diminish emotional flexibility, and externalise regulatory mechanisms. Concerns have been expressed about reduced psychological

autonomy, attentional fragmentation, and the risk of emotional dependency, especially in persons susceptible to anxiety, depressed, or rumination (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). At a cultural level, algorithmic standardisation may contribute to the homogenisation of emotional expression, marginalising culturally embedded musical practices associated with collective coping and resilience. Algorithmic music curation represents a significant transformation in everyday emotional regulation practices. Conceptualising algorithmic music as an unseen emotional regulator establishes an important foundation for future interdisciplinary research and ethically informed digital listening environments.

KEYWORDS: Algorithmic music; Emotional regulation; Mental health; Artificial intelligence; Digital wellbeing

1. Introduction

Music has always played a key role in human emotional life, functioning as a means of expression, regulation, and social interaction throughout diverse cultures and generations (Fernández, & Vico, 2013; Karageorghis, Kuan, & Schiphof-Godart, 2021). From early community rituals to modern individual listening habits, music has served to energise, calm, inspire, and comfort. Psychological research has consistently shown that

music can affect emotional states, physiological arousal, attention, and cognitive function, making it a potent instrument for mood regulation in both every day and practical contexts (Koelsch, 2014; Montag et al., 2019). Particularly, music is not simply a passive background input; instead, it initiates complex psychophysiological processes that influence how individuals perceive and regulate their internal emotional environments (Kuan et al., 2017; 2018).

In recent decades, the way in which individuals engage with music has experienced a profound transformation. Digital streaming services have progressively replaced intentional, self-directed music selection with algorithmically designed auditory experiences. These platforms utilise artificial intelligence (AI) and machine learning algorithms to assess listening histories, behavioural patterns, and environmental signals to suggest music that corresponds with inferred emotional preferences (Prey, 2020; Seaver, 2022). Consequently, music consumption has evolved to be more continuous, automated, and integrated into daily activities. Although these technologies are frequently presented as improving ease and user satisfaction, their impact on emotional regulation processes is yet inadequately comprehended.

Current research on music and mental health has primarily focused on music therapy, organised interventions, and intentional listening techniques designed to reduce anxiety, enhance motivation, or promote wellbeing in clinical and performance settings (Kuan, 2023; MacDonald et al., 2013). In the field of sport and exercise psychology, music has demonstrated the capacity to influence arousal, anxiety, and self-confidence, especially when individuals intentionally select or engage with musical stimuli (Kuan et al., 2017; 2018). These findings highlighted the importance of intentional engagement in harnessing music's cognitive and psychological benefits (Karageorghis et al., 2021; 2022). In contrast, minimal attention has been devoted to passive, algorithm-driven music exposure, despite its increasing prevalence in daily listening habits.

Emotion regulation, from a psychological perspective, relates to the mechanisms by which individuals modulate the onset, intensity, duration, and expression of their emotional experiences (Gross, 2015). Traditionally, music-based emotional regulation has been perceived as an intentional process, in which individuals deliberately select music to alter their emotional states. Algorithmic music systems, however, may gradually alter this connection. By consistently delivering mood-congruent or behaviourally optimised content, these systems may perpetuate existing affective states instead of fostering emotional flexibility or reflective awareness. Algorithmic music might be perceived as a "invisible emotional regulator", functioning beneath conscious awareness and influencing emotional experience.

This change prompts substantial questions over psychological autonomy and emotional self-regulation. As individuals increasingly depend on automated systems for mood management, there is a risk that emotional regulation becomes externalised, thereby decreasing confidence in one's own regulatory abilities. Applied psychology research has consistently emphasised the significance of self-regulatory skills for resilience, mental toughness, and adaptive performance across different fields (Foo et al., 2025; Terry, & Parsons-Smith, 2018). The delegation of affective regulation to algorithmic systems may thus result in unforeseen implications, especially for persons susceptible to anxiety, rumination, or emotional dependency.

In addition to personal psychology, algorithmic music curation presents wider societal implications. Recommendation algorithms sometimes favour globally popular musical genres and defined mood categories, which may lead to the homogenisation of emotional expression across many cultural contexts (Seaver, 2021; 2022). Such developments threaten to marginalise culturally established musical behaviours that historically facilitate collective coping, identity building, and social cohesion. Thus, perceiving AI-curated music merely as a technological advancement neglects its influence as a cultural entity that shapes emotional standards and daily mental health practices.

Thus, this narrative review aimed to analyse the psychological effects of algorithmically curated music listening on emotional regulation and mental health. It emphasises algorithmic music within the wider context of the human–technology–culture

interface, rather than concentrating on music therapy or clinical rehabilitation. The investigation specifically examines an essential question: Do AI-driven music systems genuinely improve emotional well-being, or do they unintentionally narrowing emotional adaptability, psychological autonomy, and reflective interaction with music? This review synthesises interdisciplinary literature to establish a theoretical foundation for conceptualising algorithmic music as both a psychological asset and a possible limitation in modern digital existence. To clarify the conceptual relationships underlying algorithmic music composition, Figure 1 presents a schematic overview of the key components discussed in this review. The figure illustrates how symbolic representations and rule-based constraints interact with creative AI techniques to shape contemporary algorithmic music systems. This framework serves as an organising reference for the subsequent sections.

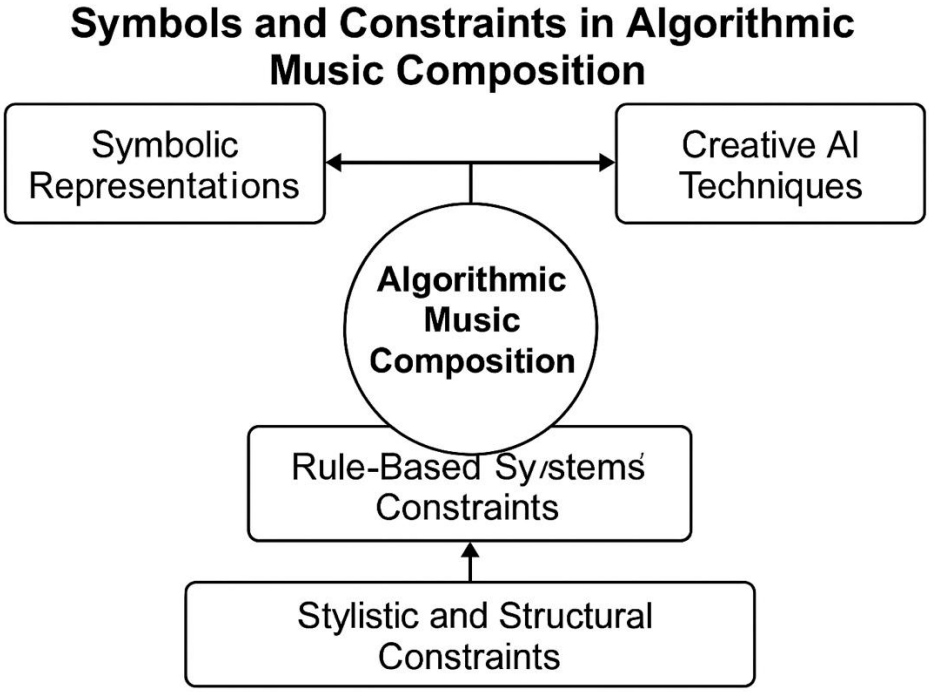

Figure 1. Conceptual schematic of algorithmic music composition.

2. Algorithmic Music Curation: From User Choice to System Control

The art of selecting music has traditionally been a reflective and intentional endeavour, closely linked with personal identity, previous experiences and emotional needs (Becker et al., 2025; Ryan & Deci, 2017). Individuals actively selected music to accompany specific activities, regulate mood, or support psychological changes, such as reducing stress or enhancing motivation (Kuan, 2023). This process positioned music listening as a form of self-directed emotional regulation, grounded in personal preferences and contextual awareness (Ryan & Deci, 2017).

In contrast, contemporary music consumption is increasingly influenced by algorithmic recommendation systems integrated into streaming platforms. These algorithms depend on users' historical listening behaviours, skipped tracks, time-of-day patterns, and engagement data to generate playlists that predict emotional preferences. As a result, decision-making transitions from the listener to the system, with music delivered seamlessly and continuously, often without conscious reflection and contemplation. While this removes the burden of choice, it also alters the nature of music engagement from an active psychological process to a largely passive experience.

This transition has significant ramifications for emotional regulation. Algorithmic curation often emphasises emotional consistency over emotional exploration, consistently presenting music that corresponds with predicted affective states such as "calm", "sad", or "focus". While such consistency may offer temporary comfort, prolonged exposure to mood-congruent music can reinforce existing emotional states instead of promoting adaptive emotional transitions. Ultimately, this may diminish possibilities for listeners to engage in active emotional regulation or to experience diverse emotional stimuli that foster flexibility and resilience.

Psychophysiological research, such as Karageorghis et al. (2021) suggested that music can either enhance or diminish arousal depending on its musical characteristics and listener's desire. Kuan, Morris, and Terry (2017) demonstrated that unfamiliar relaxing music was associated with reduced physiological arousal and anxiety during imagery tasks, highlighting the importance of intentional engagement with music. Algorithmic systems, however, rarely account for such individualised regulatory objectives, prioritising prolonged engagement rather than psychological outcomes. The outsourcing of emotional regulation to algorithmic systems also raises concerns about autonomy. When listeners consistently rely on platforms to regulate their mood and focus, confidence in self-regulatory abilities may gradually decline. This corresponds with wider dialogues around behavioural passivity in digital environments, where convenience may mistakenly hinder self-awareness and reflective decision-making.

Ultimately, algorithmic regulation of music exposure may gradually reshape listening behaviours and emotional anticipations. By narrowing exposure to familiar patterns, recommendation systems risk limiting musical diversity and emotional breadth. Understanding this transition from user autonomy to system control is therefore essential for assessing the long-term psychological and cultural consequences of AI-curated listening, particularly in relation to mental health and emotional development.

3. Emotional Regulation and Psychological Consequences

3.1 Mood Regulation and Emotional Reinforcement

Emotional regulation refers to the processes through which individuals influence how emotions arise, persist, and change over time (Gross, 2015). Music has traditionally served as a self-directed emotional resource (Quartiroli et al., 2018), allowing listeners to select pieces that either match their present feelings (e.g., seeking validation) or deliberately shift them (e.g., calming down, energising, or reframing distress). When listeners retain control over selection and timing, music can become a purposeful regulatory tool rather than a passive sensory background. Evidence from applied psychophysiological work shows that intentional engagement with music during imagery can meaningfully alter arousal and anxiety-related states, supporting the view that music can be used strategically to regulate affect (Kuan et al., 2017; Kuan et al., 2018).

In algorithmically curated listening environments, however, the regulatory role of music may change in subtle yet consequential ways. Recommendation systems commonly deliver mood-congruent selections (e.g., "calm", "sad", "focus") inferred from prior behaviour, making it easier to remain within a familiar affective lane. This convenience may offer immediate comfort, particularly during stress, but repeated exposure to emotionally aligned content can also strengthen the persistence of that state. Over time, the listener may experience fewer natural opportunities to practise transition-based regulation, using music to move from distress towards recovery, or from lethargy towards activation. For individuals already vulnerable to low mood, anxiety, or ruminative cycles, a steady stream of mood-matching music may inadvertently sustain the very emotional state the listener hopes to manage, narrowing affective range and reducing emotional flexibility.

3.2 Emotional Dependency and Reduced Autonomy

A second concern relates to the gradual externalisation of regulation. In everyday life, people often learn emotional self-management through repeated cycles of noticing feelings, choosing a coping response, and evaluating the outcome. When music selection is increasingly outsourced, regulation may drift from an intentional process ("I choose this to help me settle") to a reactive one ("the playlist keeps me settled"). This shift matters because perceived control and self-awareness are central features of effective regulation; when individuals feel that regulation is happening to them rather than through them, confidence in their own regulatory capacity may erode. In applied performance contexts, purposeful music use has been studied precisely because the listener's active role, timing, selection, and intent, shapes psychophysiological outcomes (Karageorghis et al., 2022; Kuan et al., 2017; 2018).

Emotional dependency is not necessarily dramatic or clinical; it may emerge as a subtle intolerance of silence or discomfort. Continuous reliance on curated music for mood management can foster habitual listening patterns in which quietness, emotional ambiguity, or low stimulation feels increasingly aversive (He, Wang, & Cheong, 2025). The individual may come to associate emotional stability with the presence of a particular sound environment, rather than with flexible coping skills that generalise across settings. Over time, this can reduce opportunities to build tolerance for emotional fluctuation, an

important marker of adaptive regulation, while also shaping expectations that emotions should be rapidly "smoothed out" by external cues. Such dynamics invite a more careful cultural-psychological reading of algorithmic listening: not simply as entertainment, but as a daily environment that may influence autonomy, coping confidence, and emotional self-efficacy (Kalinowski et al., 2022).

3.3 Attention, Cognitive Load, and Mental Fatigue

Algorithmically curated music is frequently consumed alongside work, study, commuting, and digital multitasking. In these contexts, music becomes a persistent attentional companion rather than a discrete, chosen activity. Purposefully selected music may support focus under certain conditions, yet the benefits are not uniform; they depend on task demands, individual differences, and the relationship between musical structure (e.g., tempo, intensity, lyrical content) and cognitive load. For example, in applied settings underscores this contingency where music can shift psychophysiological responses and behavioural outcomes depending on situational demands, which implies that "more music" or "always-on playlists" are not inherently cognitively protective.

When platforms prioritise engagement, the resulting streams may not be cognitively compatible with the listener's task. For example, faster tempos, salient lyrics, or frequent novelty can increase attentional switching and raise perceived effort, particularly during complex tasks requiring working memory and inhibition. Evidence from driving-related research shows that music parameters interact with task load in ways that affect psychological and psychophysiological outcomes, illustrating how music can either support or strain attention depending on context (Karageorghis et al., 2021; 2022). In everyday digital life, this interaction may contribute to attentional diffusion and mental fatigue, especially when listening is continuous and non-deliberate. The concern is not that curated music is inherently harmful, but that passive, prolonged exposure may reduce the listener's capacity to notice when music helps versus when it quietly adds cognitive noise, thereby undermining sustained attention and increasing fatigue across the day.

4. Cultural Homogenisation and Ethical Considerations

Beyond individual emotional regulation, the influence of algorithmically curated music extends into the cultural domain, raising concerns about homogenisation and ethical responsibility. Music has traditionally functioned as a culturally embedded practice, shaped by local traditions, collective identities, and shared emotional narratives. Through ritual, performance, and social listening, music has supported communal coping, moral reflection, and intergenerational continuity. Algorithmic curation, however, increasingly organises music into standardised affective categories, such as "calm", "sad", or "focus", that may obscure cultural nuance and reduce emotional expression to broadly marketable moods. This process of standardisation risks privileging dominant musical styles and tempo–emotion conventions, often drawn from Western commercial contexts, at the expense of culturally specific forms of musical meaning. Over time, such patterns may dilute local musical identities and reshape emotional norms, subtly redefining how emotions are expected to be felt, expressed, or managed.

Cultural psychology has long emphasised that emotional regulation is socially learned and culturally situated rather than universal. When musical environments are increasingly automated and globally standardised, culturally embedded pathways for emotion regulation may be marginalised. Ethical concerns also emerge regarding agency, transparency, and responsibility. Algorithmic music systems rarely make explicit how recommendations are generated or how emotional states are inferred. From an ethical standpoint, this opacity is problematic when music is repeatedly used to modulate mood, arousal, and attentional states. Research in applied music psychology has shown that music can exert measurable psychophysiological and behavioural effects depending on context, intensity, and listener engagement (Karageorghis et al., 2021; 2022). When such influences operate without conscious awareness, questions arise regarding informed consent and emotional autonomy.

Another ethical dimension concerns exposure versus enrichment. While algorithmic curation may broaden access to music, it can simultaneously limit diversity by reinforcing prior listening habits. Listeners may encounter fewer unfamiliar or emotionally challenging musical forms, reducing opportunities for emotional growth and cultural learning. Over time, this may foster a narrower emotional repertoire, where comfort and predictability are prioritised over reflection, transformation, or resilience. Importantly, ethical responsibility does not rest solely with technology developers but also with researchers, educators, and cultural institutions.

Scholars have argued for greater intentionality in designing music environments that respect human variability and cultural plurality rather than optimising engagement alone.

In this light, algorithmic music systems should be evaluated not only for their efficiency or convenience but also for their cultural consequences. Recognising music as both a psychological and cultural resource underscores the need for ethically informed listening environments, ones that preserve diversity, support emotional agency, and honour music's role as a shared human practice rather than a purely personalised commodity (Collins, 2026).

The cultural and ethical factors mentioned above emphasise that algorithmically curated music cannot be understood solely as a technology advancement or a personal psychological instrument. It should be perceived as an element of a broader socio-cultural framework that influences emotional norms, listening behaviours, and mental state experiences in daily life. Addressing this complexity necessitates a comprehensive methodological approach that transcends limited empirical assessment to incorporate theory, cultural analysis, and interdisciplinary discourse. This review employs a theory-driven narrative approach to integrate insights from psychology, music studies, digital culture, and mental health research, facilitating a comprehensive analysis of algorithmic music as both a psychological regulator and a cultural phenomena.

5. Methods

5.1 Review design and rationale

This study employed a theory-driven narrative review approach to explore the psychological, cultural, and ethical implications of algorithmically curated music listening. A narrative design was selected because the research topic spans multiple disciplinary traditions and includes a substantial body of conceptual, qualitative, and emerging empirical work that is not easily synthesised through meta-analytic or systematic review methods. Rather than seeking to aggregate effect sizes, the objective was to integrate diverse theoretical perspectives and identify converging themes, tensions, and knowledge gaps relevant to emotional regulation and mental health in digital listening environments.

5.2 Data sources and search strategy

Literature searches were conducted across Scopus, PsycINFO, Web of Science, and Google Scholar to capture peer-reviewed research from psychology, music and sound studies, digital culture, and mental health. Search terms were combined using Boolean operators and included algorithmic music, music recommendation systems, emotional regulation, mental health, digital wellbeing, music and culture, and AI and emotion. Reference lists of key conceptual papers were also examined to identify additional relevant sources, ensuring breadth rather than exhaustive coverage.

5.3 Inclusion criteria and scope

Both empirical studies (quantitative, qualitative, and mixed-methods) and conceptual or theoretical papers published in English were eligible for inclusion. Studies focusing exclusively on clinical music therapy or physical rehabilitation were excluded unless they offered transferable theoretical insights into emotion regulation or listening behaviour. Given the evolving nature of algorithmic music research, recent interdisciplinary contributions were prioritised alongside foundational psychological and music-based studies.

5.4 Analytical approach

Rather than statistical synthesis, the review adopted a thematic and interpretive analytical approach. Included studies were examined for the treatment of emotional regulation processes, listener agency, cultural context, and ethical implications. Particular attention was paid to how music listening was positioned, as an intentional practice, a passive exposure, or a socio-technical system. Emerging patterns were organised into higher-order themes to inform conceptual development and future research directions. To enhance transparency and conceptual mapping, Table 1 summarises representative empirical studies and conceptual contributions that informed the thematic analysis.

Table 1. Representative studies and conceptual contributions on algorithmic music, emotional regulation, and mental health

Authors	Participants / Context	Key Focus / Design	Duration / Scope	Outcome Measures / Concepts	Key Findings / Contributions
Beer (2017)	Digital media users	Conceptual analysis	Theoretical	Platform power, algorithmic governance	Argued that algorithms shape cultural

					consumption patterns beyond user awareness.
Karageorghis et al. (2021)	Applied listening contexts	Experimental & behavioural	Short-term exposure	Mood, behaviour, psychophysiology	Showed that music effects vary with context, task demand, and listener agency.
Kuan et al. (2017)	Elite performers	Experimental & applied psychology	Short-term lab-based exposure	Arousal, anxiety, emotional control	Demonstrated that music meaningfully alters emotional and physiological states when listener intent is present.
Kuan et al. (2018)	Sport and performance settings	Imagery and music integration	Multi-session intervention	Anxiety, arousal, performance-related emotion	Highlighted the importance of intentional engagement in achieving adaptive emotional regulation outcomes.
Prey (2020)	Platform-based listeners	Media and cultural critique	Conceptual	Datafication of emotion	Positioned algorithmic playlists as emotional infrastructures rather than neutral tools.
Seaver (2019)	Streaming platforms	Ethnographic & cultural analysis	Observational	Algorithmic decision-making	Emphasised the cultural logics embedded within recommendation systems.

6. Discussion

The results of this narrative review suggest that AI-curated music systems hold an intrinsically ambiguous psychological position. On the one hand, algorithmically generated playlists provide readily accessible tools for immediate emotional modulation, offering convenience and perceived emotional support in fast-paced digital environments. For many users, such systems reduce the cognitive effort associated with music selection and may assist in managing transient stress, fatigue, or low mood (Chen & Collins, 2026). On the other hand, the same mechanisms that enhance convenience may simultaneously constrain emotional adaptability by reinforcing stable affective patterns and limiting reflective engagement with music as an intentional regulatory resource. This dual role underscores the need to examine algorithmic music not merely as a technological service, but as a psychologically active environment shaping emotional experiences over time.

This review emphasises the distinction between deliberate emotional regulation and passive emotional management. Unlike music therapy or self-directed listening practices, where individuals consciously select music to meet specific regulatory

goals, algorithmic curation often operates outside users' awareness. Music becomes a background influence rather than an expressive or transformative medium. Research in applied music psychology has consistently shown that the effects of music on arousal, anxiety, and emotional states are strongly dependent on listener intent and contextual use (Kuan et al., 2017; 2018). When such intentionality is diminished, regulatory outcomes may shift from adaptive self-regulation towards passive emotional maintenance, potentially reducing opportunities for emotional learning and self-reflection.

The notion of AI-curated music as an invisible emotional regulator also raises important concerns regarding psychological autonomy. By continuously responding to inferred preferences, algorithmic systems may create an illusion of personalisation while subtly narrowing the range of emotional experiences available to the listener. Over time, users may become less accustomed to actively engaging with emotional discomfort or novelty, instead expecting music to stabilise or contain emotional fluctuations automatically. From a self-regulation perspective, perceived control is a critical component of psychological wellbeing. When regulation is increasingly outsourced to external systems, confidence in one's own emotional management capacities may gradually diminish, even if subjective comfort is maintained in the short term.

Another significant issue emerging from the review relates to emotional dependency and tolerance. Continuous reliance on algorithmically curated music may foster habits where silence, low stimulation, or emotional ambiguity become difficult to tolerate. This is not necessarily pathological, but it contrasts with adaptive regulation strategies that promote flexibility and acceptance of fluctuating emotional states. In performance and health contexts, emotional resilience is often associated with an individual's capacity to experience and recover from discomfort rather than eliminate it entirely. The risk, therefore, is that algorithmic music systems may encourage emotional smoothing rather than emotional growth, subtly altering how individuals engage with their inner experiences.

Attention and cognitive functioning represent a further layer of complexity. Algorithmically curated music is frequently consumed alongside cognitively demanding activities such as work, studying, commuting, and digital multitasking. While music can, under certain conditions, support focus and endurance, its effects are highly context-dependent. Empirical work has shown that tempo, intensity, and listener choice interact with task demands to shape cognitive and psychophysiological outcomes (Karageorghis et al., 2021; 2022; Kuan et al., 2017). When music is continuously delivered without deliberate selection, it may increase cognitive load, contribute to attentional fragmentation, or accelerate mental fatigue, particularly if engagement-oriented algorithms prioritise novelty over cognitive compatibility. These effects are likely to be subtle and cumulative rather than immediately apparent, reinforcing the need for longitudinal investigation.

Beyond individual psychology, the broader cultural implications of algorithmic music curation warrant careful consideration. Recommendation systems tend to favour globally dominant genres and standardised emotion–tempo associations, which may reduce exposure to culturally diverse musical expressions (Beer, 2017; Born, 2018). Music has historically served important communal functions in emotional coping, ritual, and social bonding. If algorithmic systems disproportionately promote uniform, productivity-oriented emotional states, such as calmness optimised for work or melancholy suited to introspection, they may marginalise culturally embedded practices that support collective resilience and emotional diversity. This raises ethical questions concerning representation, cultural sustainability, and the shaping of emotional norms in digital spaces.

Taken together, the findings of this review suggest that AI-curated music systems should not be understood as neutral tools, but as influential emotional environments with both benefits and constraints (Boateng, Boateng, & Budu, 2025). While such systems may enhance short-term emotional comfort and accessibility, they also risk narrowing emotional adaptability, reducing autonomy, and externalising regulatory processes. Future research should prioritise three key directions: first, examining individual differences in susceptibility to emotional reinforcement effects; second, investigating long-term impacts on emotional regulation skills through longitudinal designs; and third, exploring culturally sensitive and ethically informed approaches to music recommendation. Addressing these issues will help ensure that digital listening environments support emotional growth, reflective engagement, and psychological autonomy, rather than subtle emotional constraint.

7. Implications for Practice and Policy

The findings of this review carry several important implications for practice, education, and policy related to digital wellbeing and mental health. For practitioners working in psychology, education,

sport, and health promotion, greater attention should be given to how individuals engage with music in digital environments. Rather than discouraging algorithmic music use, practitioners may support individuals in developing intentional listening habits, encouraging reflective awareness of when music facilitates emotional recovery and when it merely sustains an existing affective state. Integrating brief psychoeducation on music selection, silence tolerance, and emotional flexibility may help individuals retain agency in everyday emotional regulation.

At an organisational level, educational institutions and workplaces increasingly promote music streaming as a tool for focus, stress reduction, or productivity. Policies in these settings should recognise that background music does not have uniform psychological effects. Providing guidance on task-appropriate listening, encouraging periodic disengagement from continuous audio stimulation, and legitimising quiet environments may help reduce cognitive overload and mental fatigue. Such approaches align with broader wellbeing strategies that prioritise attentional sustainability rather than constant stimulation.

From a policy and technology governance perspective, greater transparency is needed regarding how emotional labels, recommendation logics, and engagement goals are embedded within music streaming platforms. Developers and policymakers should consider how recommendation systems might support emotional diversity and adaptability, rather than optimising solely for prolonged engagement. Incorporating culturally diverse musical content and offering users clearer control over recommendation parameters may help preserve music's role as a meaningful emotional and cultural resource. These considerations are consistent with calls for ethically informed digital environments that support autonomy, wellbeing, and cultural sustainability.

Conclusion

AI-curated music represents a profound shift in how individuals engage with music for emotional regulation. While such systems may enhance short-term wellbeing by offering convenient and accessible mood support, they also carry the risk of narrowing emotional adaptability and diminishing psychological autonomy through passive, repetitive exposure. When music is increasingly experienced as an ambient presence rather than an intentional practice, opportunities for reflective engagement and emotional learning may be reduced.

Understanding algorithmic music as an invisible emotional regulator provides a valuable framework for evaluating its mental health implications. This perspective highlights that the psychological impact of music depends not only on what is heard, but also on how and why it is encountered. As digital listening environments continue to expand, interdisciplinary dialogue between psychology, cultural studies, and technology ethics is essential. Such collaboration can help ensure that music remains a resource for emotional growth, cultural expression, and self-regulation, rather than a subtle mechanism of emotional constraint embedded within everyday digital life.

References:

1. Becker, A. S., van der Valk Bouman, E. S., Schaap, J., Klimek, M., & Oude Groeniger, J. (2025). Music in healthcare: Investigating music preferences for pain management across twenty countries. *SSM-Population Health*, *29*, 101758. https://doi.org/10.1016/j.ssmph.2025.101758
2. Beer, D. (2017). The social power of algorithms. *Information, Communication & Society, 20*(1), 1–13. https://doi.org/10.1080/1369118X.2016.1216147
3. Boateng, R., Boateng, S. L., & Budu, J. (Eds.). (2025). *AI and the music industry: transforming production, platforms, and practice*. CRC Press.
4. Born, G., & Haworth, C. (2018). From microgenres to post-genre: Music, individuality, and difference in algorithmic culture. *Cultural Sociology, 12*(2), 265–282. https://doi.org/10.1177/1749975517742506
5. Chen, L., & Collins, K. C. (2026). Can AI Capture Emotion? A Study on Human Emotional Perception and Response to AI-Generated and Human-Composed Pop Music. In *International Conference on Multimedia Modeling* (pp. 158-172). Singapore: Springer Nature Singapore.
6. Collins, N. (2026). Xenomusicology. *Organised Sound*, 1-8. https://doi.org/10.1017/S1355771826101113
7. Fernández, J. D., & Vico, F. (2013). *AI methods in algorithmic composition: A comprehensive survey*. *Journal of Artificial Intelligence Research*, *48*, 513–582. https://doi.org/10.1613/jair.3908
8. Foo, K. S., Leong, K. J., Mok, H. A., Kueh, Y. C., Kumar, R., & Kuan, G. (2025). The effects of mental imagery and music on sprint swimming performance. *Asian Journal of Sport and Exercise Psychology*, *5*(1), 28-32.

9. Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry, 26*(1), 1–26. https://doi.org/10.1080/1047840X.2014.940781
10. He, W. J., Wang, I. T., & Cheong, K. (2025). Harmonizing Tradition, Algorithm, and Innovation: A Bibliometric Study on AI in Traditional Music. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *10*(6), e003437-e003437.
11. Kalinowski, P., Bugaj, O., Bojkowski, Ł., Kueh, Y. C., & Kuan, G. (2022). Application of stress coping ability as a conduit between goal orientation and play effectiveness among Polish soccer players. *International Journal of Environmental Research and Public Health*, 19(12), 7341. https://doi.org/10.3390/ijerph19127341
12. Karageorghis, C.I., Kuan, G., Mouchlianitis, E., Payre, W., Howard, L.W., Reed, N., & Parkes, A.M. (2022). Interactive effects of task load and music tempo on psychological, psychophysiological and behavioural outcomes during simulated driving. *Ergonomics*. https://doi.org/10.3390/10.1080/00140139.2021.2003872.
13. Karageorghis, C. I., Kuan, G., Payre, W., Mouchlianitis, E., Howard, L. W., Reed, N., & Parkes, A. M. (2021). Psychological and psychophysiological effects of music intensity and lyrics on simulated urban driving. *Transportation Research Part F: Traffic Psychology and Behaviour, 81*, 329–341. https://doi.org/10.1016/j.trf.2021.05.022
14. Karageorghis, C. I., Kuan, G., & Schiphof-Godart, L. (2021). Music in sport: From conceptual underpinnings to applications. *Essentials of exercise and sport psychology: An open access textbook*, 530-564. Society for Transparency, Openness, and Replication in Kinesiology. https://doi.org/10.51224/B1023
15. Koelsch, S. (2014). Brain correlates of music-evoked emotions. *Nature Reviews Neuroscience, 15*(3), 170–180. https://doi.org/10.1038/nrn3666
16. Kuan, G. (2023). The effect of music listening on athletes' anxiety, depression, and pain: A mini review. *The Asian Journal of Kinesiology*, 25(2), 19-25. https://doi.org/10.15758/ajk.2023.25.2.19
17. Kuan, G., Morris, T., & Terry, P. C. (2017). Effects of music on arousal during imagery in elite shooters: A pilot study. *PLOS ONE, 12*(3), e0175022. https://doi.org/10.1371/journal.pone.0175022
18. Kuan, G., Morris, T., Kueh, Y. C., & Terry, P. C. (2018). Effects of relaxing and arousing music during imagery training on dart-throwing performance, physiological arousal indices, and competitive state anxiety. *Frontiers in Psychology, 9*, Article 14. https://doi.org/10.3389/fpsyg.2018.00014
19. MacDonald, R. A. (2013). Music, health, and well-being: A review. *International Journal of Qualitative Studies on Health and Well-being*, *8*(1), 20635. https://doi.org/10.3402/qhw.v8i0.20635
20. Montag, C., Lachmann, B., Herrlich, M., & Zweig, K. (2019). Addictive features of social media/messenger platforms and freemium games against the background of psychological and economic theories. *International Journal of Environmental Research and Public Health, 16*(14), 2612. https://doi.org/10.3390/ijerph16142612
21. Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science, 3*(5), 400–424. https://doi.org/10.1111/j.1745-6924.2008.00088.x
22. Prey, R. (2020). Locating power in platformization: Music streaming playlists and curatorial power. *Social Media & Society*, *6*(2), 2056305120933291.
23. Quartiroli, A., Parsons-Smith, R. L., Fogarty, G. J., Kuan, G., & Terry, P. C. (2018). Cross-cultural validation of mood profile clusters in a sport and exercise context. *Frontiers in Psychology*, 9, 1-10. https://doi.org/10.3389/fpsyg.2018.01949
24. Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press. https://doi.org/10.1521/978.14625/28806
25. Seaver, N. (2019). Captivating algorithms: Recommender systems as traps. *Journal of Material Culture, 24*(4), 421–436. https://doi.org/10.1177/1359183518820366
26. Seaver, N. (2022). *Computing taste: Algorithms and the makers of music recommendation*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226822976.001.0001
27. Terry, P. C., & Parsons-Smith, R. L. (2021). Mood profiling for sustainable mental health among athletes. *Sustainability*, *13*(11), 6116. https://doi.org/10.3390/su13116116