

The Psychological Impact of Misogynistic Music Lyrics on Women Exercisers

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Music can have a powerful influence on exercise experiences, but lyrics—particularly misogynistic lyrics—may shape emotional and motivational responses in ways that are not yet fully understood. Misogynistic lyrics in music include derogatory statements and implications about women that could result in an adverse exercise experience. The purpose of the study was to examine the effect of misogynistic lyrics in rap music on self-reported negative affect, attentional focus, and intrinsic motivation during an exercise bout. In a counterbalanced order, active women ($N = 30$, $M_{\text{age}} = 27.6$ years) completed two separate exercise bouts while listening to music, one with misogynistic lyrics and another with non-misogynistic lyrics. Post-exercise questionnaires measuring affect, attentional focus, and intrinsic motivation were completed. Attitudes about violent and misogynistic content in rap music were also measured and used to divide participants into two groups (positive and negative violent misogynistic attitudes). A series of 2 (group) $\times$ 2 (condition) mixed factorial ANOVAs were used for the statistical analyses. There was a significant main effect of lyric condition for negative affect, with both groups reporting more negative affect in the misogynistic lyrics condition. In addition, there was a significant interaction effect for the intrinsic motivation components of interest/enjoyment and effort. Participants with a negative, violent, misogynistic attitude experienced less interest/enjoyment while exercising to music with misogynistic lyrics, and those with a positive, violent, misogynistic attitude reported more effort in the misogynistic lyrics condition. Findings highlight how important it is for exercisers and fitness professionals to consider the effects misogynistic lyrics in music can have on women and make informed decisions about music selections during exercise.

Keywords: listening environment, affective response, self-perception, misogyny

Music is commonly utilized in exercise settings and can significantly enhance the exercise experience. For example, research shows that music can enhance enjoyment, increase positive affect, and reduce perceived exertion across a variety of exercise settings and populations (Terry et al., 2020). This is important from a health promotion perspective, given that more pleasant exercise experiences are associated with greater exercise adherence and persistence (Marques et al., 2025). However, each exerciser is unique, and music can have varying effects on individuals. A listener's perception of music is important to consider because it plays a powerful role in how music influences an individual

during exercise (Karageorghis et al., 2021). Various musical elements (e.g., tempo, intensity) and listener characteristics (e.g., preference, attentional style) can influence how music affects an exerciser (Terry et al., 2020), but limited attention has been given to the role of lyrics.

Lyrics in music provide semantic meaning that can influence cognitive and emotional responses to music (Ali & Peynircioğlu, 2006). Within the context of exercise performance, lyrics can offer positive affirmations, task-specific verbal cues, and may distract performers from feelings of exertion (Hutchinson & Karageorghis, 2013; Sanchez et al., 2014). Lyrics have also been suggested to play a role in enhancing performance, particularly when they are perceived as motivational (Priest & Karageorghis, 2008). Relatively few studies have empirically tested the role of music lyrics during exercise. Sanchez and colleagues (2014) reported a performance benefit (i.e.,

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increased pedal cadence) during cycling when there were lyrics present compared to music without lyrics. However, other variables, including heart rate, ratings of perceived exertion, and positive and negative affect, were unaffected by the presence of lyrics (Sanchez et al., 2014).

Although motivational and uplifting lyrics are thought to have a positive impact on a listener's psychological state during exercise (Hutchinson & Jones, 2020), not all lyrical content is positive in nature. Misogynistic themes are commonly found in popular music lyrics and are significantly more prevalent in the genre of rap music compared to other genres (Frisby & Behm-Morawitz, 2019). Misogynistic lyrics are those that demean women through name-calling, sexual objectification, and legitimizing violence against women (Weitzer & Kubrin, 2009). Other common themes of misogyny in rap music include claims that women are inferior to men, easily discardable, and ruin men's lives (Adams & Fuller, 2006).

Weitzer and Kubrin (2009) first explored the prevalence of misogynistic lyrics in a representative sample of 403 rap songs from platinum-level rap albums. Results revealed 22% of songs contained misogynistic lyrics, and among those songs, 67% of songs contained the theme of sexual objectification of women. A more recent analysis of hit songs by the top five rap airplay artists of 2013 and 2014 found misogynistic words and phrases in 100% of the analyzed songs (Ling & Dipolog-Ubanan, 2017). It is important to recognize the impacts that misogynistic music lyrics may have on women. Previous investigations revealed that women are both aware and unaccepting of misogynistic themes in rap music (Adams & Fuller, 2006; Tyson et al., 2019). However, all listeners have their own lived experience (e.g., based on sex, age, socioeconomic status), which leads to different attitudes and behaviors when listening to misogynistic lyrics (Kubrin & Weitzer, 2010). In particular, personal attitudes towards rap music may play a key role in shaping one's experience.

The negative depiction of women in music with misogynistic lyrics can create and perpetuate harmful stereotypes about women, and these types of lyrics may create a stereotype threat (Martiny et al., 2015). A stereotype threat occurs when an individual feels at risk of confirming negative beliefs about a group to which they belong (Steele & Aronson, 1995). Apprehension in various contexts, such as sports and exercise, can lead to poor performances and experiences (Gentile et al., 2018). For example, in a

soccer task, young girls who were informed before the task, "boys are better on this task," performed worse than a control group; an effect that persisted even in the presence of a dual cognitive task designed to mitigate the stereotype threat effect (Saemi et al., 2025). Stereotype threat can also increase negative feeling states; for example, women exposed to negative stereotypes about their running ability experienced more state anxiety for a running task than those in a control condition (Allen et al., 2024).

Findings from a meta-analysis support the negative impact of gender stereotypes on girls'/women's performance across a range of physical and sport activities, with a medium-sized effect ($d = 0.33$; Gentile et al., 2018). Nonetheless, some nuanced and contrasting findings have been reported. Stereotype threat has a stronger effect in sports considered traditionally 'masculine', such as golf and strength exercises, than in more stereotypically 'feminine' activities, such as tennis or balance activities (Gentile et al., 2018). It also appears that stereotype threat may be task-dependent, specifically, the effect is more prominent in technical sports skills (e.g., golf putting, tennis serving, soccer dribbling) than in non-technical or endurance tasks (e.g., stationary cycling). Technical skills have a higher cognitive load and often require a more internal attentional focus to execute the movement (Hutchinson & De Lucia, 2025), which could lead to a greater disruption by negative stereotypes. These findings highlight the complexity of stereotype threat and the need for further research into the mechanisms involved (Deshayes et al., 2019).

Smith and Martiny (2018) proposed three general mechanisms that underlie the effect of stereotype activation on athletic performance: emotions, attentional focus, and motivation. Negative emotions, such as anxiety, are important mechanisms underlying stereotype threat effects (Schmader et al., 2008). Anxiety is often experienced on a cognitive level (e.g., self-presentational concerns) as well as an emotional level (Schmader et al., 2008). Stereotype threat elicits negative cognitions that can lead people to appraise their experience in a biased manner (e.g., heightened uncertainty about oneself and one's abilities), resulting in negative feeling states (Schmader, 2010). Listening to music containing misogynistic lyrics could activate a stereotype threat for women during exercise by reinforcing a negative societal stereotype about their abilities. This reinforcement can increase self-awareness and fear of confirming the stereotype threat, leading to anxiety and negative attitudes

towards exercise (Symons-Downs & Hausenblas, 2005), which has negative implications for exercise adoption and adherence (Martiny et al., 2015). Perceived pressure to perform well to disprove a stereotype can also lead to increased anxiety (Laurin, 2013) and heightened sensitivity to mistakes due to increased attention to action evaluation (Schmader, 2010).

Regarding attentional focus, two prominent attentional theories/models have been proposed to explain stereotype threat (Pennington et al., 2016). One is the integrated process model of stereotype threat, which suggests that pressure to disconfirm the stereotype is a distraction, consuming cognitive resources and drawing performers' attention away from skill execution (Schmader et al., 2008). Conversely, the explicit monitoring theory posits that pressure increases monitoring of explicit processes, shifting mental processes from "automatic" to "controlled," thereby undermining performance (Worthy et al., 2009). Both approaches support the aforementioned observation that stereotype threat has a more negative impact on women's performance in technical tasks compared to non-technical or fatiguing tasks (Deshayes et al., 2020; Hively & El-Alayli, 2014).

Finally, stereotype threat can impact motivation. When an individual is motivated to disconfirm the stereotype, this "translates into a strong motivation to avoid failure" (Schmader et al., 2008, p. 343). The urge to disprove a stereotype may assist women during fatiguing tasks, such as cycling or isometric muscle contractions, by motivating them to push harder (Deshayes et al., 2019, 2020). However, as individuals experiencing a stereotype threat tend to focus excessively on their performance, they can become hyper-aware of any indicators of failure (Schmader et al., 2008). Motivation to avoid failure is considered a performance-avoidance goal. Performance-avoidance goals produce external pressure to perform well, thereby increasing anxiety and possibly diminishing intrinsic motivation (Biddle et al., 2003).

In summary, researchers have demonstrated support for the assertion that (a) music affects exercise performance and the psychological experience of exercise (Terry et al., 2020); (b) women are aware of and unaccepting of the misogyny present in modern music lyrics (Adams & Fuller, 2006; Tyson, et al., 2019); and (c) women's performance in physical tasks can be negatively affected by stereotype threat (Gentile et al., 2018). However, research exploring the

relationship between these conditions is needed. This research may be particularly valuable in an exercise setting where women may already feel uncomfortable or out of place (Coen et al., 2021) and more sensitive to appearance concerns (Håman et al., 2020). To date, the effects of music with misogynistic lyrics on women's psychological experience of exercise have not been investigated.

Aims and Hypotheses

The current study aims to explore whether the presence of misogynistic lyrics in music influences the psychological experience of exercise for women, and whether this is influenced by participants' attitudes toward rap music. The genre of rap music was chosen, as "rap stands out for the intensity and graphic nature of its lyrical objectification, exploitation, and victimization of women" when compared to other genres (Weitzer & Kubrin, 2009, p. 25). It was hypothesized that women with negative attitudes towards misogynistic lyrics in rap music will have a more negative exercise experience, driven by the three mechanisms of stereotype threat (i.e., emotion, attention, motivation). Specifically, women who have a more negative attitude toward violence and misogyny in rap music will report more negative affect, a more internal focus of attention, and decreased intrinsic motivation during exercise to music with misogynistic lyrics compared to music with non-misogynistic lyrics.

Method

Participants and Recruitment

An *a priori* power analysis was conducted using G*Power (version 3.1.9.7; Faul et al., 2007) for a 2 (group: positive vs. negative attitude) x 2 (condition: misogynistic lyrics vs. non-misogynistic lyrics) mixed-factorial ANOVA. With an effect size of $f = 0.28$ (Schuster & Martiny, 2017), an alpha-level of 0.05, a correlation among repeated measures of $r = .60$, and a non-sphericity correction of $\epsilon = 1$, results indicated that a sample size of 24 was required to obtain 80% power. To account for potential dropouts or outliers, an additional six participants were recruited ($N = 30$).

Thirty women participated in the current investigation ($M_{\text{age}} = 27.6$, $SD = 6.9$ years; $M_{\text{BMI}} = 24.3$, $SD = 4.5$ kg/m²). Most participants identified as White ($n = 27$), with the remainder identifying as Asian ($n = 1$), Black or African American ($n = 1$), and Hispanic or Latina ($n = 1$). Participants were regularly active ($M = 4.2$ days

per week, $SD = 1.2$). Participants reported always ($n = 16$) or usually ($n = 12$) using music during exercise, while only two participants reported rarely listening to music during exercise.

Participants were recruited via social media platforms and through convenience sampling from college classes. Prior to data collection, participants completed the Physical Activity Readiness-Questionnaire (PAR-Q+; Warburton et al., 2011) form to screen for contraindications to exercise. Participants also provided demographic and training history information to determine study eligibility, which required at least a 3-month immediate history of aerobic exercise (≥ 20 min on ≥ 3 days/week). All participants provided electronic informed consent before participation, and approval to conduct the study was obtained from the Springfield College Institutional Review Board (IRB).

Music Selection

An initial pool of tracks was selected from Billboard.com's Year-End Hot Rap Songs lists from 2018 and 2019 to reflect popular rap songs during the time of data collection (in 2020). This approach mirrors the method used by Weitzer and Kubrin (2009). Selected tracks were then subjected to a content analysis to quantify and categorize themes and patterns in the lyrics (Zhang & Wildemuth, 2009). The lyrics of the chosen songs were obtained from Genius.com and coded for misogynistic themes. The first author listened to each song twice while concurrently reading the lyrics, then coded for misogyny present in the lyrics (Weitzer & Kubrin, 2009). These codes were independently confirmed by the second author with 100% agreement. Coding categories were adopted from Cundiff's (2013) content analysis of rap and hip-hop music. The categories included lyrics that referenced physical violence toward women, insinuated rape or sexual assault, labeled women in derogatory ways, and portrayed sexual conquest. Songs were also evaluated on the total amount of misogyny. Following Cundiff's (2013) approach, songs with 0–2 instances of misogynistic lyrics were considered low in misogyny, songs with 3–4 instances were considered moderate in misogyny, and songs with 5+ instances of misogynistic lyrics were considered high in misogyny. Each song's length, year of release, artist, and beats per minute were also noted to match the misogynistic and non-misogynistic songs as closely as possible on these variables (see Table S1).

To rate the motivational properties of each music track, focus group participants were recruited from college graduate classes and through social media solicitation. These participants ($n = 12$) were independent from the experimental study. Still, they were similar in age ($M = 27.50$, $SD = 8.51$ years) and race (84% White, 8% Hispanic, and 8% who identified as more than one race) to the experimental participants, which are relevant factors in music preference. The focus group participants were directed to an online platform (Qualtrics, Seattle, WA, USA) where they first provided informed consent, and then listened to a randomized playlist of the songs with the highest and lowest counts of misogynistic lyrics from the content analysis. After listening to a sample (one verse and one chorus), participants rated each song's motivational properties using the Brunel Music Rating Inventory (BMRI-2; Karageorghis et al., 2006). The BMRI-2 examines music's effects in terms of rhythm response, musicality, cultural impact, and association, and is commonly used to assess music's motivational properties in an exercise setting. Based on these ratings, songs with high motivational properties were selected for use in the study. Two playlists were created: one containing songs with a high number of misogynistic lyrics, and the other containing songs with no misogynistic lyrics. The mean BMRI-2 score for the misogynistic ($M = 31.67$, $SD = 2.51$) and non-misogynistic ($M = 32.50$, $SD = 3.49$) playlists were similar, indicating comparable motivational properties (see Table S1).

Measures

Rap Attitudes and Perceptions

Attitudes toward violent and misogynistic (VM) constructs in rap music were assessed using the VM subscale of the Rap Attitudes and Perceptions (RAP) Scale (Tyson, 2005). The RAP scale utilizes a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), to rate the level of agreement with items such as “sexually explicit rap music causes males to be sexually explicit with females” and “most rap music glorifies drugs and violence.” All VM items are reverse-coded, meaning that higher scores indicate more positive attitudes and perceptions (range = 9 to 45). Participants' VM subscale scores were converted into a categorical grouping variable using a mean split. Tyson (2006) reported good internal consistency for the RAP scale and its subscales (Cronbach's alpha range = .87 to .92).

In the present study, the VM subscale showed good internal consistency (Cronbach's $\alpha = .82$).

Negative Affect

The Positive Affect and Negative Affect Scale–Short Form (I-PANAS-SF; Thompson, 2007) was used to measure participants' affective response to exercise. The I-PANAS-SF lists 10 affect-related adjectives and asks participants to indicate how they are feeling “right now” using a scale from 1 (*very slightly or not at all*) to 5 (*extremely*). The responses are clustered into two, 5-item subscales for positive affect and negative affect, with scores ranging from 5 to 25 for each subscale. The negative affect subscale reflects unpleasant emotions and includes items such as “upset,” “hostile,” and “ashamed.” For this study, only the negative affect subscale was used to assess unpleasant affective states associated with exercise. The Cronbach alpha coefficient for the negative affect subscale reported by the author is .76 (Thompson, 2007). Similarly, in the present study, the negative affect subscale of the IPANAS-SF showed acceptable internal consistency (Cronbach's $\alpha = .73$).

Attentional Focus

Attentional focus was measured using the Attentional Focus Scale (AFS; Tammien, 1996). The AFS is a single-item bipolar scale ranging from 0 (*complete internal focus*) to 100 (*complete external focus*). Participants are asked, “To what extent was your attentional focus during the task internal (i.e., related to your body) or external (i.e., related to the outside environment)?” Therefore, a higher score indicates a more external focus.

Intrinsic Motivation

Subscales of the Intrinsic Motivation Inventory (IMI; McAuley et al., 1989) were used to assess exercise-related motivation. The IMI comprises six subscales: interest/enjoyment, effort, value/usefulness, pressure/tension, relatedness, and perceived choice. The interest/enjoyment subscale is considered the direct measure of intrinsic motivation, while the other subscales assess related factors. The developers of the IMI advise that researchers decide which variables (factors) are relevant based on the theoretical question being addressed (McAuley et al., 1989). In the current study, subscales for interest/enjoyment (e.g., “I thought this activity was quite enjoyable”;

7 items), effort (e.g., “I tried very hard on this activity”, 5 items), and pressure/tension (e.g., “I felt very tense while doing this activity”; 5 items) were deemed most relevant. Pressure is inversely related to intrinsic motivation (Ryan & Deci, 2000) and was included to assess the perceived pressure to perform well that is associated with stereotype threat. Effort reflects task value and engagement and is positively related to intrinsic motivation, as people tend to invest more effort in activities they find enjoyable (Ryan & Deci, 2000). When completing the IMI, participants indicate how true each statement is for them on a 7-point Likert-type scale ranging from 1 (*not true at all*) to 7 (*very true*). Total scores are calculated for each subscale (range = 5-49 for interest/enjoyment and 5-35 for effort and pressure/tension). In this study, Cronbach's alpha coefficients for the subscales of interest/enjoyment, effort, and pressure/tension were .89, .89, and .70, respectively.

Finally, to determine what musical elements participants paid attention to during the exercise session, an attention to music item was adopted from Cundiff's (2013) questionnaire. The question asked participants, “What did you pay attention to most when listening to rap/hip-hop music during exercise?” and the response options were (a) the instrumental aspects, (b) the lyrics, or (c) both equally.

Procedures

Participants completed two exercise sessions following a standardized exercise program designed by a certified exercise professional specifically for this study. Due to restrictions imposed by COVID-19, participants completed the exercise sessions from their homes. At-home workouts are easily accessible and can help participants overcome some common physical activity barriers (e.g., limited time and lack of gym access; Newbold et al., 2021).

Before each exercise session, participants watched an instructional video explaining the workout format and proper form for each exercise. Bodyweight exercises were used to ensure participants could complete the workout program anywhere, without access to equipment or a gym facility. In the video, a certified fitness professional demonstrated how to perform each movement and gave verbal instructions (e.g., “feet about hip width apart, arms crossed in front of your body, sit your hips down and stand back up”). For the workout itself, participants listened to an audio recording that included both music (either

misogynistic or non-misogynistic) and voice-over exercise instructions. For example, while the music played, the instructions would say, “Complete jumping jacks for one minute.” This audio file was played on participants’ personal listening devices, such as a phone or laptop computer.

The workout comprised a dynamic warm-up followed by a series of bodyweight exercises (e.g., jumping jacks, squats, reverse lunges, push-ups). The same movements performed in the same order were used for each session; thus, the only difference between the sessions was the accompanying playlists – one with misogynistic lyrics and one without. Participants completed the two exercise sessions in a counterbalanced order with 48 hours between sessions. In both conditions, participants were instructed to use a private space with adequate space to exercise safely, and to set their preferred volume, which was kept the same for both sessions.

After each session, participants completed a series of questionnaires via Qualtrics that assessed negative affect, attentional focus, motivation, and attention to the music features. One day after the final exercise session, participants were sent an email with a link to the RAP scale, which was used to assess participants’ attitudes toward misogyny in rap music. To avoid potentially alerting participants to the purpose of the study, the RAP scale was sent after the last exercise session was completed.

Data Analyses

Data were first screened for missing data, outliers, and normality. Then, the primary dependent variables were analyzed using a series of 2 (condition) x 2 (group) mixed factorial ANOVAs. A 2-way chi-square test was used to assess differences in participants’ attention to the music features (instrumental, lyrics, or both) during the two exercise conditions. Statistical significance was defined by an alpha level of 0.05. All data were analyzed using SPSS version 24 (IBM, Armonk, NY, USA).

Results

This study investigated whether music with misogynistic lyrics leads to more negative affect, internally oriented attention, and lower intrinsic motivation (relative to music with non-misogynistic lyrics) in women during exercise. Attitude toward VM content in rap music (negative or positive) was included as a possible moderator of this effect. A mean split was used to divide participants into two groups: those with a negative attitude toward VM content in rap music ($M = 20.78$, $SD = 1.99$, $n = 14$) and those with a positive attitude toward VM content in rap music ($M = 28.69$, $SD = 2.68$, $n = 16$). An independent-sample t -test confirmed that the VM subscale scores for the two groups were significantly different, $t(28) = 7.64$, $p < .001$, $d = 2.79$. Descriptive statistics for all dependent variables by VM group and lyric condition are shown in Table 1.

Table 1. Descriptive Statistics for Dependent Variable Scores by VM Group and Lyric Condition

Subscale	Lyrics	VM Positive		VM Negative		Total	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Negative Affect	ML	5.50	0.82	6.64	2.41	6.03	1.81
	NML	5.31	0.70	5.43	0.65	5.37	0.67
Attention	ML	57.50	21.30	50.50	20.31	54.23	20.79
	NML	58.63	25.54	45.50	24.60	52.50	25.56
Interest/ Enjoyment	ML	38.69	6.98	33.43	7.02	36.23	7.38
	NML	33.25	8.31	36.50	4.99	34.77	7.04
Effort	ML	28.00	5.62	26.50	4.54	27.30	5.11
	NML	25.38	6.33	27.93	4.97	26.57	5.79
Pressure/ Tension	ML	9.94	3.73	12.57	4.74	11.17	4.36
	NML	9.88	3.48	9.14	4.22	9.53	3.79

Note. ML = Misogynistic lyrics, NML = Non-misogynistic lyrics, VM = Attitudes about violent, misogynistic content in rap music.

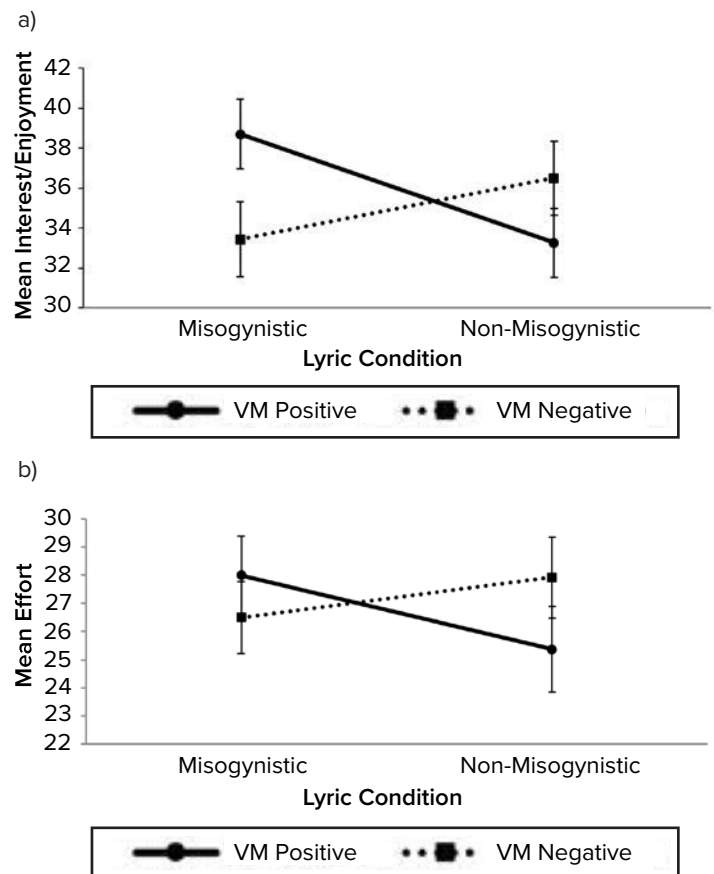
For the negative affect subscale score, there was no significant interaction between lyric condition and VM group; $F(1, 28) = 2.60, p = .118, \eta^2 = .085$. However, there was a significant main effect of lyric condition; $F(1, 28) = 4.85, p = .036, \eta^2 = .148$. Negative affect scores were significantly higher in the misogynistic lyrics condition compared to the non-misogynistic lyrics condition ($M_{diff} = 0.70, 95\% \text{ CI } [.49, 1.35], p = .036$). For attentional focus, results from the AFS showed no significant interaction between lyric condition and VM group; $F(1, 28) = 0.28, p = .600, \eta^2 = .010$, and no significant main effect of lyric condition; $F(1, 28) = 0.11, p = .739, \eta^2 = .004$.

For the IMI interest/enjoyment subscale score, there was a significant interaction between lyric condition and VM group; $F(1, 28) = 14.46, p = 0.001, \eta^2 = .341$. A simple effects test showed that in the misogynistic lyrics condition, mean interest/enjoyment was significantly lower for the VM negative group compared to the VM positive group ($M_{diff} = -5.26, 95\% \text{ CI } [-10.51, -0.01], p = 0.050$). In the non-misogynistic lyrics condition, there was no significant mean difference between groups ($M_{diff} = 3.25, 95\% \text{ CI } [-1.97, 8.47], p = 0.213$). See Figure 1a.

For the IMI effort subscale, there was a significant interaction between lyric condition and VM group; $F(1, 28) = 7.02, p = .013, \eta^2 = .201$. A simple effects test showed that, for the VM positive group only, mean effort was significantly higher in the misogynistic lyrics condition compared to the non-misogynistic lyrics condition ($M_{diff} = 2.63, 95\% \text{ CI } [0.49, 4.77], p = .018$). Though for the VM negative group, no statistically significant difference was found ($M_{diff} = -1.43, 95\% \text{ CI } [-3.72, 0.86], p = .211$). See Figure 1b.

For the IMI pressure/tension subscale, there was no significant main effect of lyric condition and no significant interaction between lyric condition and VM group. Although the condition-by-group interaction was non-significant ($F(1, 28) = 3.65, p = .066$), it was associated with a medium-to-large effect size ($\eta^2 = .115$); therefore, follow-up comparisons were examined (Betensky, 2019). The VM-negative group reported significantly higher pressure/tension scores in the misogynistic lyrics condition compared to the non-misogynistic lyrics condition ($M_{diff} = 3.43, 95\% \text{ CI } [0.79, 6.06], p = .013$). No significant difference was observed for the VM-positive group ($M_{diff} = 0.06, 95\% \text{ CI } [-2.40, 2.52], p = .959$).

Figure 1. Group by Condition Interaction for (a) Interest/Enjoyment and (b) Effort



Note. Error bars represent standard error of the mean.

A 2-way chi-square test assessed differences in participants' attention to features of the music across the two exercise conditions (i.e., whether they mostly attended to the instrumental aspects, the lyrics, or both equally). The chi-square test was not significant, $\chi^2(2, N = 30) = 5.11, p = .078$, indicating that lyric condition and musical focus are independent, or unrelated. That is, participants did not attend to one element more than the other, depending on the condition. In the misogynistic lyrics condition, participants indicated that they primarily focused on the instrumental aspects of the music (47%) or on the instruments and lyrics combined (47%), rather than on the lyrics alone (6%). Whereas, in the non-misogynistic lyrics condition, participants indicated that they primarily focused on the instrumental aspects of the music (57%), followed by the instruments and lyrics combined (26%), and the lyrics alone (17%).

Discussion

Consistent with the hypotheses, the results of this study indicated that women with a negative attitude toward VM content in rap music had a more negative experience of exercise while listening to rap music with misogynistic lyrics compared to those with non-misogynistic lyrics. These findings were anticipated because misogynistic lyrical content was theorized to create a stereotype threat among female exercisers in this setting. That is, women who encountered and were sensitive to negative depictions of women in music during exercise were expected to experience one or more of the mechanisms said to be involved in stereotype threat responses (i.e., increased negative affect, internal focus of attention, and decreased intrinsic motivation) proposed by Smith and Martiny (2018). While there was no difference in attentional focus between groups or conditions, all other dependent variables were affected by group, condition, or both.

Women who held more negative attitudes about VM content in rap music reported less interest/enjoyment and more pressure during the exercise session with a misogynistic playlist, indicating diminished intrinsic motivation for the task. Effort was also assessed as a subscale of the IMI and was expected to be lower in the VM negative group during the exercise session with a misogynistic lyrics playlist. Although this was not the case, we did find that effort was significantly higher in the misogynistic lyrics condition compared to the non-misogynistic lyrics condition in the VM positive group. That is, participants with a more positive attitude toward VM content in rap music pushed themselves harder when listening to music with misogynistic lyrics. This finding underscores the importance of considering individual differences in response to music. It is likely that women who hold more positive or accepting attitudes toward violent misogynistic rap may find such lyrics energizing or empowering in the context of exercise. This is consistent with the energizing function of aggressive music, which, when congruent with listener values, can increase approach motivation and intensity (Schäfer et al., 2013).

Regardless of attitudes about VM content in rap music, participants experienced significantly more negative affect during the exercise session with a misogynistic lyrics playlist than they did during the session with the non-misogynistic lyrics playlist.

This finding was expected only for participants in the VM negative group. Therefore, it was surprising that all participants, on average, reported more negative affect in the misogynistic lyrics condition. This reinforces the notion that exposure to misogynistic lyrical content can evoke a negative affective response during exercise, even among individuals who hold more accepting attitudes toward such content. This aligns with the integrated process model of stereotype threat, which predicts that awareness of a negative stereotype about one's group leads to negative thoughts and emotions that can disrupt performance (Schmader et al., 2008).

While this research cannot directly conclude that misogyny in rap music results in stereotype threat for women during exercise, it does suggest that it can be harmful to their psychological experience. This is problematic because of the importance of exercise for health and well-being. If some workout music can create an uncomfortable environment for women, then exercise may be perceived as a negative experience. While positive exercise experiences are predictive of future physical activity (Williams, 2008), negative and unenjoyable experiences can make it challenging to adopt and adhere to exercise. According to the affective-reflective theory (ART; Brand & Ekkekakis, 2018), individuals develop automatic affective valuations of exercise experiences, which influence their motivation to engage in future physical activity. If an exercise session is accompanied by music that evokes frustration or discomfort due to its lyrical content, it may lead to a negative affective valuation and reduced likelihood of future participation.

From a practical standpoint, professionals such as personal trainers, group fitness instructors, and gym managers should be aware that misogynistic music lyrics can negatively impact women's affective response to exercise and levels of exercise enjoyment, both of which are linked to participation (Marques et al., 2025). Of course, exercisers who have autonomy over their music (such as those working out alone or using headphones) can choose to avoid music they perceive as threatening or aversive in favor of content that supports positive affect and motivation. Conversely, women who interpret misogynistic lyrics as empowering may choose to listen and may even benefit from doing so if they feel motivated to put forth additional effort to disconfirm the negative stereotype (Schmader et al., 2008). Nevertheless, in shared environments such as group fitness classes, public

gyms, or team training sessions, individuals do not have control over the music played. In these settings, it is especially important for professionals to consider how musical choices may influence participants' affective responses and potentially impact their exercise engagement.

Strengths, Limitations, and Future Directions

This study was originally planned to take place in a lab, but due to social distancing requirements in effect at the time of the research, data were collected remotely. Unfortunately, this approach did not allow for the assessment of any corresponding physiological data, nor can we confirm that the exercise program was followed exactly by all participants or be sure that participants were not distracted during the task. It is possible that the study conditions (i.e., completing the exercises at home rather than in a controlled environment) may have contributed to the lack of significant findings regarding attentional focus. However, given the rising trend in virtual exercise (e.g., fitness apps and live-streamed workout classes), this research is both relevant and externally valid.

Although a careful music selection procedure was followed, individual music preferences were not accounted for in this study, and participants may have had mixed opinions on certain tracks or artists. This may be an important consideration given that some artists appeared more than once in the playlists. Song familiarity is an important moderator of the effects of music during exercise (Karageorghis et al., 2021), and although all songs were selected from the top 100 chart, participants may have been more familiar with some songs than others, which could have influenced their engagement with those tracks. Future research could incorporate a post-task survey to gather participants' perceptions of the music used, which could be included in the statistical analysis as a covariate.

Another study limitation is the heterogeneous makeup of the sample, which was 93% White. Rap music has been described as a form of "Black cultural expression" (Rose, 1994, p. 2) and a medium through which to convey Black and brown experiences of marginalization, brutality, and oppression (Rose, 2008). Race may therefore play an important role in women's perceptions of rap music and its relation to their exercise experience. Tyson et al. (2019) found that Black respondents (both men and women) endorsed RAP items that address positive aspects

of rap music at a significantly higher rate than White respondents (i.e., they display a more positive attitude to rap music). This is in line with other mixed-gender studies that reported Black participants rate positive RAP items more favorably than White subjects (Tyson, 2005; Tyson & Porcher, 2012). Furthermore, the sexual objectification of White women differs from the sexual objectification of Black women because Black women's sexualization can be connected to stereotypes of Black sexuality prominent in colonialism and slavery (Weitzer & Kubrin, 2009). Although women in general can be stereotyped through misogyny in rap music, it is important to recognize and acknowledge that the intersections of race and gender may affect how this is perceived and how it might translate to an exercise experience.

A strength of the present study is that it is the first to consider how misogyny in music might affect exercising women. This paves the way for other studies that might build on this important research. Future researchers should consider the effects of misogynistic lyrics with different exercise tasks, such as weightlifting and aerobic activities, and in different settings (e.g., public vs. private; mixed vs. women-only spaces). Participants in the present study were all regularly active, meaning these results cannot be extrapolated to inactive women or novice exercisers, for whom exercise settings might already be perceived as threatening or intimidating. This would be a valuable consideration in future research.

Examining the differences in women's reactions to women being sexualized in lyrics by male artists versus female artists could also provide valuable insights. Rappers such as Lil Kim, Cardi B, MC Lyte, Megan Thee Stallion, and Missy Elliot also write about women in sexual ways, but it may have a different effect. For example, misogynistic rap music from men can be viewed through the lens of hegemonic masculinity, in which men attempt to express their dominance and power over other men and women (Connell, 2005). This can be seen in music by male rap artists, which often depicts women as sexual objects (Oware, 2009). However, in rap music written and performed by women, women are depicted as sexual beings who have agency over their choices, enjoy sex, and reclaim the word "bitch," by using it to denote strong women (Oware, 2009).

Relatedly, future researchers could also explore the idea of enjoyment of sexualization and how it contributes to women's experience with misogynistic

rap music. Enjoyment of sexualization happens when women find sexualized attention from men rewarding or positive (Liss et al., 2011). This has been linked with higher self-esteem (Liss et al., 2011), so it is reasonable to assume women who enjoy being sexualized may have a more positive experience exercising with songs classified as misogynistic. Results from one study indicate that women's enjoyment of sexualization is associated with higher levels of confidence and sexual esteem (Barnett et al., 2018). Barnett and colleagues (2018) suggested that these results indicate women may be using their awareness of their own sexualization to empower themselves.

Future research should also explore the influence of misogynistic lyrics in samples with variations in other demographic factors such as age, gender, and body weight. For example, participants in the present study fall within the age range most likely to listen to rap music (i.e., 16 to 30 years; Cundiff, 2013), whereas individuals aged 40 and over have been shown to have more negative perceptions of rap music lyrics (Fried, 1999). Sexual orientation may also be of interest given the predominantly negative attitudes toward homosexuality in rap culture (Hill, 2009). The particularly tough, aggressive, and violent form of masculinity projected in rap music (Rose, 2008) is rooted in heteronormative ideology. Consequently, rap music frequently contains homophobic lyrics (Oware, 2011), which may impact the exercise experience of lesbian, gay, bisexual, transgender, queer (or questioning), and other diverse gender and sexual identities (LGBTQ+) individuals in similar ways to women in the present study. Adopting a different approach, future research might also explore how the more empowering aspects of rap music, such as resilience, esteem, community, and change, are experienced and might be leveraged in an exercise context.

Conclusion

The present research indicates that misogyny in rap music can result in a negative experience of exercise. Specifically, women reported more negative affect, negative attitude and perceptions, and less enjoyment when listening to music containing misogynistic lyrics. Though women with a positive attitude towards rap music reported greater effort in the misogynistic lyrics condition, while those with negative attitudes reported the opposite experience. Based on the findings from the current study, it is important to consider personal listening preferences

when assessing the effects of misogynistic lyrics on exercisers, specifically for women, as it can impact their exercise experience. When preferences are unknown, music with misogynistic themes should be avoided.

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Supplemental Material

Table S1. Content Analysis for Misogynistic and Non-misogynistic Lyric Playlists

Exercise Phase	Song Title	Artist	Length	BMRI score	BPM	Misogyny count (n)
ML Playlist						
Warm Up	Pure Water	Mustard ft. Migos	3:12	32.50	102	23
Workout	Mercy	Kanye West ft. Big Sean, Pusha T, & 2 Chainz	5:29	32.75	140	35
Workout	GOOBA	6ix9ine	2:12	30.83	90	15
Workout	Bezerk	Big Sean ft. A\$AP Ferg	2:31	31.42	92	25
Cooldown	Dennis Rodman	Mansionz ft. Dennis Rodman	3:18	30.83	82	39
Total/M			16:42	31.67	101	137
NML Playlist						
Warm Up	Headlines	Drake	3:55	34.45	76	0
Workout	Love Lockdown	Kayne West	4:30	32.23	120	0
Workout	Fade	Kayne West	3:13	34.80	107	2
Workout	I Don't Get Tired	Kevin Gates ft. August Alsina	3:29	30.25	70	0
Cooldown	Sunflower	Post Malone and Swae Lee	2:38	30.67	90	1
Total/M			17:45	32.50	97	3

Note. BMRI = Brunel Music Rating Inventory (score range = 6–42), BPM = beats per minute; ft. = featuring.; ML = Misogynistic Lyrics; NML = Non-Misogynistic Lyrics.