

Dreams about music – Analyzing the dream series of Madeline

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Summary. Music in dreams is an interesting topic for research as it plays an important role in our daily life. In this study, we analyzed a dream series (N=926) of a female participant (pseudonym: Madeline) regarding its musical content. In summary, 10.5% dreams of the participant were music-related. This was higher compared to an unselected sample of psychology students and reflects – in line with the continuity hypothesis – the musical interests of the dreamer. While listening to music in the dream was related more often to positive emotions, playing music and singing in the dream were more negatively toned, reflecting her fear of public singing in waking life. Future in-depth studies might focus on music dreams of musicians.

Keywords: Dreams, music, continuity hypothesis

1. Introduction

Music has been and still is a universal phenomenon across all cultures throughout the entirety of human history (Bohman, 2013). Social aspects like fostering group cohesion, sexual selection, and infant-caregiver bond-formation through rhythmic movement and vocalization were important for evolution of human beings (Jan, 2022). The continuity hypothesis of dreaming states that our daily life experiences are reflected in dreams (Schredl, 2003). Overall, this hypothesis was supported by empirical research (for an overview see: Schredl, 2018). Two studies (Erlacher & Schredl, 2004; Schredl & Erlacher, 2008), for example, showed that sport students dream more about sport than psychology students.

As music is an important part of waking life (Hallam et al., 2016), it was expected – in line with the continuity hypothesis (Schredl, 2003) – that music dreams are quite frequent. For analyzing dreams, several categories of music dreams have been used in empirical research: listening to music, playing an instrument/singing, talking/thinking about music and creative music dreams (Olbrich & Schredl, 2019). Creative music dreams include some form of music that is not known to the dreamer from his or her waking-life (Olbrich & Schredl, 2019).

The online study of Schredl et al. (2015) included 2929 participants with a wide age range of 16 to 92 years and yielded a percentage of music dreams of about 6%. A diary study, with 425 participants, mostly psychology students, showed a slightly higher percentage of music-related

dreams: 8.13% (König et al., 2018). Uga et al. (2006) reported that musicians experience a higher frequency of music-related dreams (40%) than non-musicians (18%). The relatively high percentage of 18% music dreams in non-musicians reported by Uga et al. (2006) have to be viewed with caution as the research group explicitly advertised their investigation as a music dream study, thus attracted persons who have music-related dreams. Furthermore, the participants were asked after every dream reported in the diary whether music-related topic occur; this might result in focusing on the topic of music in dreams and this, in turn, can result in an increase in music dream frequency (see: Olbrich & Schredl, 2019). Markert and Schredl (2023) studied a dream series of person who was very much engaged in music; 58% of her dreams were music-related. On the other hand, Schredl (2015) reported 5.41% music-related dreams in a person who plays guitar as a hobby (advanced beginner's level) and 5.58% music-related dreams in a nun who sings often as part of her religious practice but never played an instrument (Schredl, 2022). Thus, persons who are not professionally involved in music do not dream about music as often as musicians or music students. (König et al., 2018; Uga et al., 2006; Vogelsang et al., 2016). In addition, Vogelsang et al. (2016) and König et al. (2018) found that daily involvement with music, either by playing an instrument, singing, or listening to music actively, correlates with music dream frequency. This offers further support for the continuity hypothesis of dreaming (Schredl, 2003).

Music can be used to regulate emotional states and acts as entertainment and aesthetical enjoyment (Hallam et al., 2016). Through music, people can discover their identity, create social groups and therefore, manage relationships between self and others (Hallam et al., 2016). In line with these ideas, the participants rated their music dreams as being more positively-toned than negatively toned (Kern et al., 2014; König & Schredl, 2021; Schredl et al., 2015). However, Markert and Schredl (2023) reported more negative emotions for dreams associated to listening to music, and making music, except for singing. This might reflect problems associated with music listening and making music (for example, with the electronic equipment) as this dreamer

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was highly reliant on her auditory sense (being visually impaired) (Markert & Schredl, 2023). Vogelsang et al. (2016) who found also negatively-toned music dreams in music students, speculating that this might reflect pressure and anxiety related to musical activities in waking life, like exams or performing in front of an audience.

In summary, music-related activities during the day leads to more music-related dreams at night (Olbrich & Schredl, 2019). On the other hand, dreams can also affect waking-life musical activities (Barrett, 2001). From Beethoven and Wagner to the Beatles, composers and artists were inspired by their dreams to create music (Barrett, 2001; Webb, 2017).

The aim of this study is to analyze a dream series (N = 926 dreams) of a person who is playing an instrument as one of her hobbies. Therefore, we expect to see more music-related dreams compared to unselected student sample (König & Schredl, 2021). In addition, music dreams were analyzed regarding the emotions that are related to the musical activity within the dream.

2. Method

2.1. Participant

The female participant, Madeline (pseudonym) wrote down her dreams over a time period of eight years, from late adolescence up to early adulthood with only a few occasional interruptions. In addition, she reported 30 childhood dreams which were recorded retrospectively; but these dreams were not included in the analysis.

Madeline's dream series consisted of four periods with a total of 926 dreams from 1997 to 2004, starting from her high school years up to after college. The average word count was 128.79 ± 135.20 . The lowest average word count was found in her "Off-Campus" period (98.45 ± 104.37 words) while the highest average word count was seen in her "After College" period (165.46 ± 165.85 words).

The following information was taken from the dreambank.net website. The researchers uploaded a summary of an interview they conducted with the dreamer (assessed on Dec 13, 2023). In 2000, she graduated high school and went to college, where she graduated in 2003. In the same year she moved in with her boyfriend Jeremy (pseudonym). Her hobbies are reading, playing computer games, doing logic puzzles, listening to music and re-learning how to play the violin. Madeline studied violin and dance in high school, but gave up the violin before junior high and only recently picked it up again.

2.2. Dream Content analysis

A music dream was coded if one of the five following topics were presents in the dream: the dreamer is listening to music, music themes, the dreamer is playing music, the dreamer is singing, and music-related celebrities (Markert & Schredl, 2023). The dream was categorized into "music themes" if something related to music occurred in the dream, e.g., talking about music, but did not include any musical activity like listening to music, playing music, or singing. Inter-rater reliabilities, as reported in König and Schredl (2021), for the scales of listening to/hearing music was $\kappa = 0.84$, for making music $\kappa = 0.80$, for singing $\kappa = 0.73$, and for musical themes $\kappa = 0.98$.

If listening to music occurred in the dream, genre and/or title and/or artist were coded and grouped. After the

analysis, the music themes were categorized into 12 topics, e.g., talking about music/songs. For the dreams that included playing music, the instruments that were played by the dreamer were elicited. If singing occurred in the dream, genre and/or title and/or artist were also recorded. For musical activities, listening to music, playing music, and singing, the emotional quality of this activity was coded: -1 = negative, 0 = neutral or not specified, and 1 = positive.

2.3. Procedure

The dreamer, Madeline, a young woman in her 20s, gave G. William Domhoff her dreams a year or two after she graduated from college. The dreams and information about the dreamer can be found on the dreambank.net website created by G. William Domhoff.

In the first step, specific keywords were used to find dreams containing music related topics. The keywords were: "music, choir, violin, singing, playing, cello, guitar, piano, flute, organ, keyboard, tuba, dance, notes, soprano, tenor, concert, festival, lyrics, musician, song, jazz, rap, clarinet, classic, bass, drum, horn, saxophone, trumpet, sitar, banjo, harp". For some words, e.g., rap, it was checked whether these words were indeed music-related. In order to make sure, no music dream was overlooked, the first author read all the dreams of the series. A few new music related topics were found, e.g.: "melody, sound, play, humming, strings, tuner, band, Tuvan, radio".

After identifying all dreams related to music, the scales described in the dream content analysis section were applied. For descriptive statistics, Excel (Microsoft) and IBM SPSS Statistics were used. Effect sizes based on differences in percentages were computed along the formula provided by Cohen (1988). This analysis method has been applied within dream research by Domhoff (1996).

3. Results

Around 10.5% of all dreams were related to music (see Table 1). The frequency of music-related dreams increased over the years till 2003 and decreased in the "After college" period (see Table 1).

Looking at the five categories which were applied to analyze Madeline's dreams, music themes was the most often dreamed category with about 5% (see Table 2). Listening to music, singing, playing music occurred in about 1 to 3% of the dreams; the least frequent topic was music-related celebrities. For comparison, the data of König and Schredl (2021) were included in Table 2. Although effect sizes were small, the percentages of music dreams, the dreams with music themes, the dreams with playing an instrument, and

Table 1. Frequency of music dreams over the course of the dream series.

Dream Series	Years	Dreams in total	Dreams with music
High School	1997 – 2000	98	7.1%
College Dorms	2000 – 2001	186	6.5%
Off-Campus	2001 – 2003	348	13.8%
After College	2003 – 2004	294	10.2%
Total	1997 – 2004	926	10.5%

Table 2. Comparison of music topic frequencies in the Madeline series to the unselected student sample by König and Schredl (2021).

Topics	Madeline (N = 926)	Student sample ¹ (N = 1612)	Differences between Madeline and the student sample		
			Effect size	z =	p =
Listening to music	3.3%	4.53%	-0.064	-1.5	.9385 ²
Music themes	5.1%	2.67%	0.127	3.1	.0010 ²
Playing music	1.0%	0.43%	0.069	1.7	.0469 ²
Singing	2.6%	0.62%	0.166	4.0	<.0001 ²
Celebrities	0.5%	---	---		
Music dreams (total)	10.5%	8.13%	0.082	1.7	.0415 ²

Note: ¹König and Schredl (2021), ²one-tailed

the singing dreams were slightly higher compared to the student sample. Interestingly, the students reported dreams with listening to music more often than Madeline.

Dreams in which the participant listened to music were further investigated in regard to the genre of the music. The 19 genres mentioned within the dream were: Pop (N = 9), e.g., “Unpretty” by TLC or “White flag” by Dido, Rock (N = 2), Tuvan/Russian music (N = 2), Movie soundtrack (N = 2), e.g., “Quantum leap”, New-Age (N = 1), Country (N = 1), with two snippets of song text that could not be categorized. Music themes in the participant dreams were divided into 12 categories. Two of them, “people from choir/reminding her of choir” and “music/songs (talking to or with someone about it)” were dreamed more often than the others (see Table 3). She most often played the guitar in her dreams (N = 4). Other instruments were didgeridoo (N = 1), flute (N = 1), violin (N = 1) or an unspecified instrument (N = 2).

The participant mostly dreamt of signing Tuvan music (traditional music of a Russian region called Tuva) (N = 7). Songs of Linkin Park (N = 1), TLC (“T-Boz”, “Left Eye”, “Chilli”) (N = 1) or Smashing Pumpkins (N = 1) were also sung. Well known songs like “Forever Young” (N = 1), “Happy Birthday” (N = 1) or “Can’t help falling in love” (N = 1) were also part of her singing activity in her dreams. In three dreams it was not mentioned what she was singing.

Table 3. Specific music themes of music dreams.

Specific Music Themes	counts
Violin teacher (meeting/seeing/mentioning)	2
Tuvan teacher (meeting/seeing/mentioning)	5
Music teacher (meeting/seeing/mentioning)	1
Radio station (being at/talking about)	3
Searching a song	2
Choir (people from/reminding of)	7
Music/songs (talk about to someone)	7
Musical instruments	5
CDs/disks/stereo	5
Written music	2
Musical/Show	2
Other themes	6

Note: One dream included two categories

In most music dreams, emotions related to musical activities were not explicitly mentioned (see Table 4). There were only 10 dreams with positively toned musical activities, whereas negative emotions occurred in 15 dreams. Whereas positive emotions were more often associated with listening to music compared to negative emotions, for singing and playing an instrument, the opposite was the case (see Table 4)

Celebrities were found in five of the participant’s dreams. They were: Backstreet Boys (N = 1), Whoopi Goldberg (N = 1), Paul McCartney (N = 1), Aerosmith (N = 1), and Dolly Parton (N = 1).

Dream examples

1. Negative emotions associated to singing

“A performance. I was playing the flute without knowing how, trying to wing it. I was followed by someone who did know how to play – there were a lot of us. It wasn’t good, but we had to entertain. I broke out into the splits and singing Tuvan. It didn’t work well. “

2. Positive emotions associated to listening

“...There was a clock with the Chancellor’s face making faint noise. I held it to my ear, and it was wonderful music...”

3. Negative emotions associated with playing

“...I got a part-time gig helping at parties, playing guitar in a band. I was nervous because I didn’t know how to play anything. Then they put on a song I’d been listening to a lot lately, and I thought maybe through the repetition I could learn it. I listened closely to pick out the notes, but I didn’t know fully how to emulate them. My left arm got tired so I switched and started strumming with it...”

Table 4. Emotions related to musical activities.

Emotions	Listening	Playing	Singing	Total
Positive	8	0	2	10
Neutral/unspecific	19	4	16	39
Negative	4	5	6	15

4. Discussion

The percentage of 10.5% music-related dreams was – as expected – slightly higher compared to the unselected student sample studied by König and Schredl (2021). This reflects the participant's waking-life interest in music, for example, singing of an unusual genre of music (Tuvan). The dreamer reported more positive emotions related to listening to music, whereas playing music and singing were more often associated with negatively-toned emotions.

From a methodological viewpoint, only little information about the participant's interest in music could be found on the dreambank.net website. We only knew that she likes listening to music and that she relearns how to play the violin. Based on the findings, one might assume that she was more engaged with music, e.g., singing, compared to the average student (cf. König & Schredl, 2021). More information about her involvement with Tuvan, a very unusual music genre would have helped to put the present findings into perspective.

It was an advantage of our study that the dreamer – at the time the dreams were recorded – did not know that her dreams were analyzed for their musical content. The aforementioned study of Uga et al. (2006) was advertised as a study on music and dreams and, thus, might be biased to higher music percentages (Olbrich & Schredl, 2019). This kind of bias was not present in our study and, thus, allowed a methodological sound comparison with the diary dream sample of König and Schredl (2021) as these students were also unaware of the rationale of analyzing music dreams at the time they kept the dream diaries. Also on the positive side is the fact that the rating scales were reliable, as demonstrated in previous studies (König & Schredl, 2021; Markert & Schredl, 2023).

In comparison to the student sample of König and Schredl (2021) and the two dream series of persons who are not that strongly involved in music (Schredl, 2015, 2022), Madeline showed a higher frequency of music-related dreams (10.5%), especially singing dreams, reflecting her involvement with music in her waking life. Compared to the Jasmine dream series (Markert & Schredl, 2023), Madeline had a lower frequency of music dreams. This was expected, as Jasmine was very enthusiastic about music and – being vision-impaired – strongly relied on her auditory senses (Markert & Schredl, 2023).

In the "Off-Campus" period, the participant had more music-related dreams than in the other periods. She may have had more time for musical activities in her waking life being off-campus, than while living in college dorms. This could be due to very small living spaces in college and therefore being limited to playing or listening to music loudly, or due to little free time because of college duties. Furthermore, she did not have a TV off-campus, which could also be a reason for more musical activities in this period.

Music themes were the most frequently dreamed category. The participant, for example, dreamed a lot of people from choir, either by doing something with them or a person reminding her of someone from choir. She seems to participate in a choir in waking life (unfortunately, this information was not included in Madeline's interview with Bill Domhoff).

In comparison to the Jasmine dream series (Markert & Schredl, 2023), the participant did not dream of many music-related celebrities: $N = 5$ compared to $N = 71$ dreams with music-related celebrities in the Jasmine series. This might reflect that the enthusiasm regarding music in gen-

eral music was not as pronounced as in Jasmine (Markert & Schredl, 2023).

Compared to the unselected student sample (König & Schredl, 2021), we found that Madeline had a higher frequency of dreams with music-related themes, singing and playing music, on the other hand, Madeline reported dreams with listening to music less often than the students in the König and Schredl (2021) sample. This might be explained by the fact that many persons, also people who are not being particularly interested in playing music and singing, are often listening to music in their waking lives.

In the dreams with listening to music, genres like Pop and Rock were mentioned quite often, suggesting that it might be her music taste in waking life. However, we do not have any information about her preferences in music genres.

Interestingly, the participant more often dreamed playing the guitar than playing violin, despite the information that she relearns how to play the violin and playing guitar was not mentioned in the interview. We assume that either she herself or her boyfriend plays the guitar in waking life and that she does not spend too much time playing the violin. To verify this assumption, a more detailed summary of Madeline's musical interests in her waking life would be welcome. Tuvan music was mentioned very often in the context of singing. As Tuvan music is not a very common genre, she must have had a very specific music taste; unfortunately, it was not listed in the summary of her interests available on the website.

The finding that listening to music is associated more often with positive than negative emotions fits in with previous studies (König et al., 2018; König & Schredl, 2021) indicating that music listening in dreams is as positive as in waking life. On the other hand, music-related dreams that include performing (playing an instrument and/or singing) more often featured negative emotions (see dream examples). This is in line with Vogelsang et al. (2016) and Markert and Schredl (2023), who reported, that negative music dreams may occur due to pressure and anxiety, especially in music students. As these negatively-toned music dreams were associated with performances and gigs (see dream examples), it would be interesting to have more information about the participants' worries associated with performing, e.g., stage fright. However, Madeline mentioned having fear of public singing in her waking life in the interview and, therefore, the findings support the continuity hypothesis (Schredl, 2003).

To conclude, this study showed that Madeline's musical interests are reflected in her dreams and, therefore, the findings support the continuity hypothesis. It would be very interesting to carry out more in-depth analyses of music dreams, including the emotions related to musical activities in dreams, especially in musicians; keeping in mind that a detailed description of the dreamers' musical activities and interests in waking life would be very helpful.

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