Maladaptive Music Listening: A Systematic Review, Thematic Analyses, and Meta-Analysis

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Background

- Music can make you feel good. BUT... not always!

- Recent research has begun to focus on the concept of maladaptive/unhealthy music listening and its relationship to personality.

- HOWEVER, there is inconsistency in definitions and measures of maladaptive music listening and its relationship to personality.
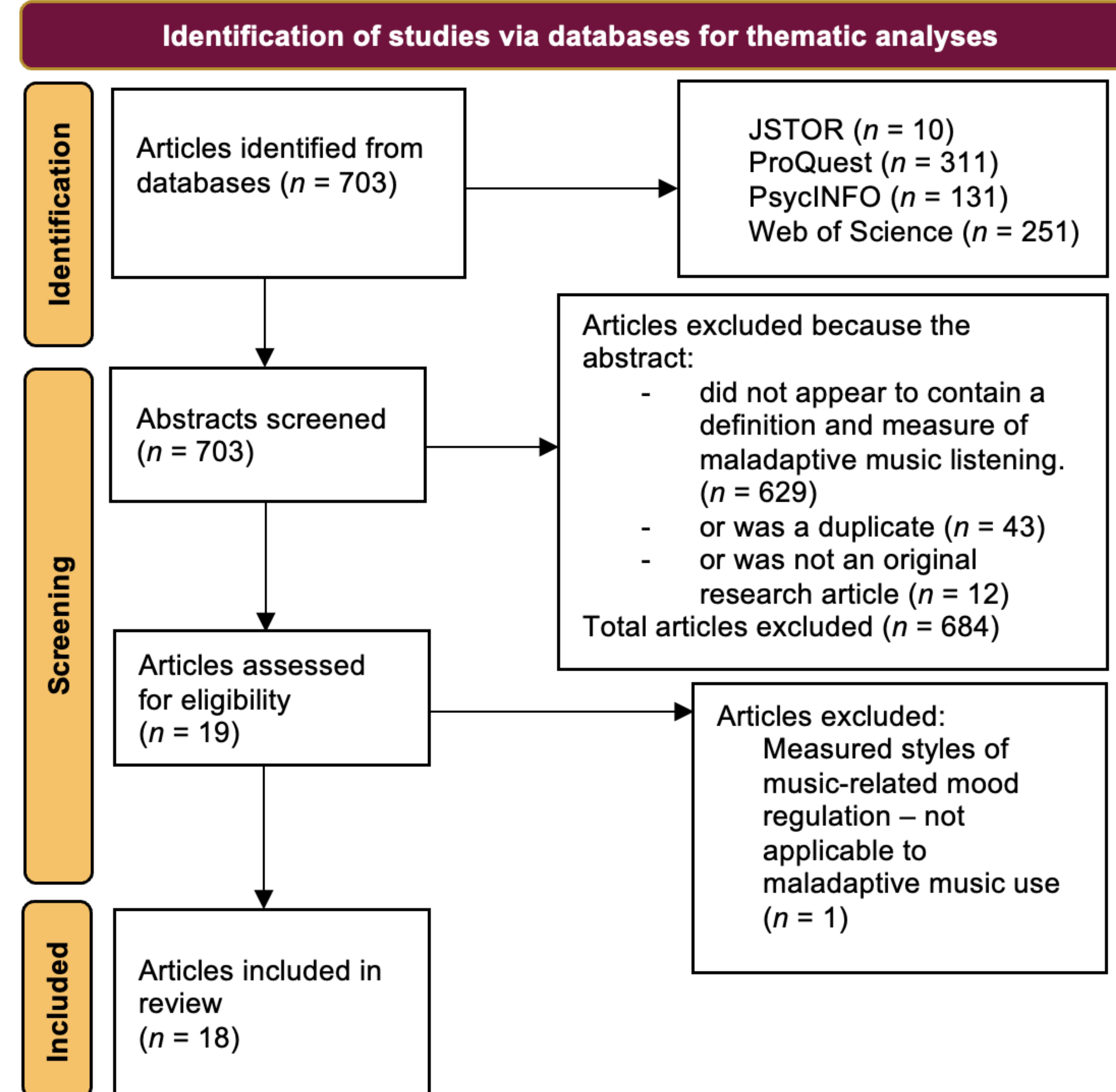
Objectives

Determine:
1. a valid **definition** of maladaptive music listening.
2. the most frequently employed **measures** of maladaptive music listening.
3. the robustness of currently proposed **associations** between maladaptive music listening and Big Five personality traits.
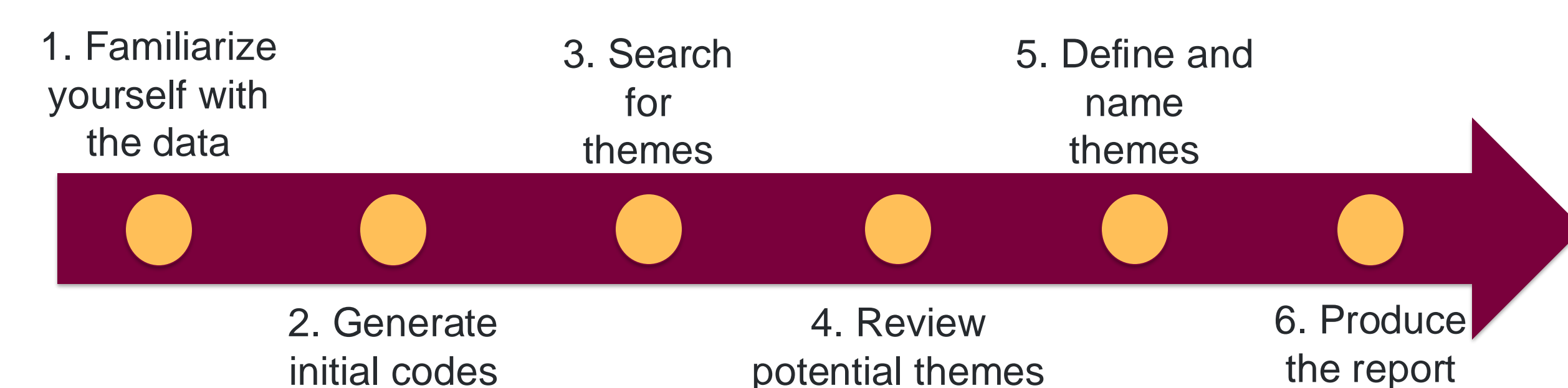
Overarching goal:
synthesize existing literature and create useful guidelines for future research.

Methods

- Guided by the standards of the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) Statement (Page et al., 2021).

Inclusion criteria
- Peer-reviewed original research, published after 2000, in English
- A definition and measure of maladaptive music listening (**thematic analyses**)
- And an effect size measure of big five personality trait(s) (**meta-analysis**)

Identification of studies via databases for thematic analyses

Identification:
Articles identified from databases (n = 703) → JSTOR (n = 10), ProQuest (n = 311), PsycINFO (n = 131), Web of Science (n = 251)

Screening:
Abstracts screened (n = 703) → Articles excluded because the abstract:
- did not appear to contain a definition and measure of maladaptive music listening. (n = 629)
- or was a duplicate (n = 43)
- or was not an original research article (n = 12)
Total articles excluded (n = 684)

Articles assessed for eligibility (n = 19) → Articles excluded: Measured styles of music-related mood regulation – not applicable to maladaptive music use (n = 1)

Included:
Articles included in review (n = 18)

Phases of thematic analyses (following Braun & Clarke, 2006)

1. Familiarize yourself with the data
2. Generate initial codes
3. Search for themes
4. Review potential themes
5. Define and name themes
6. Produce the report

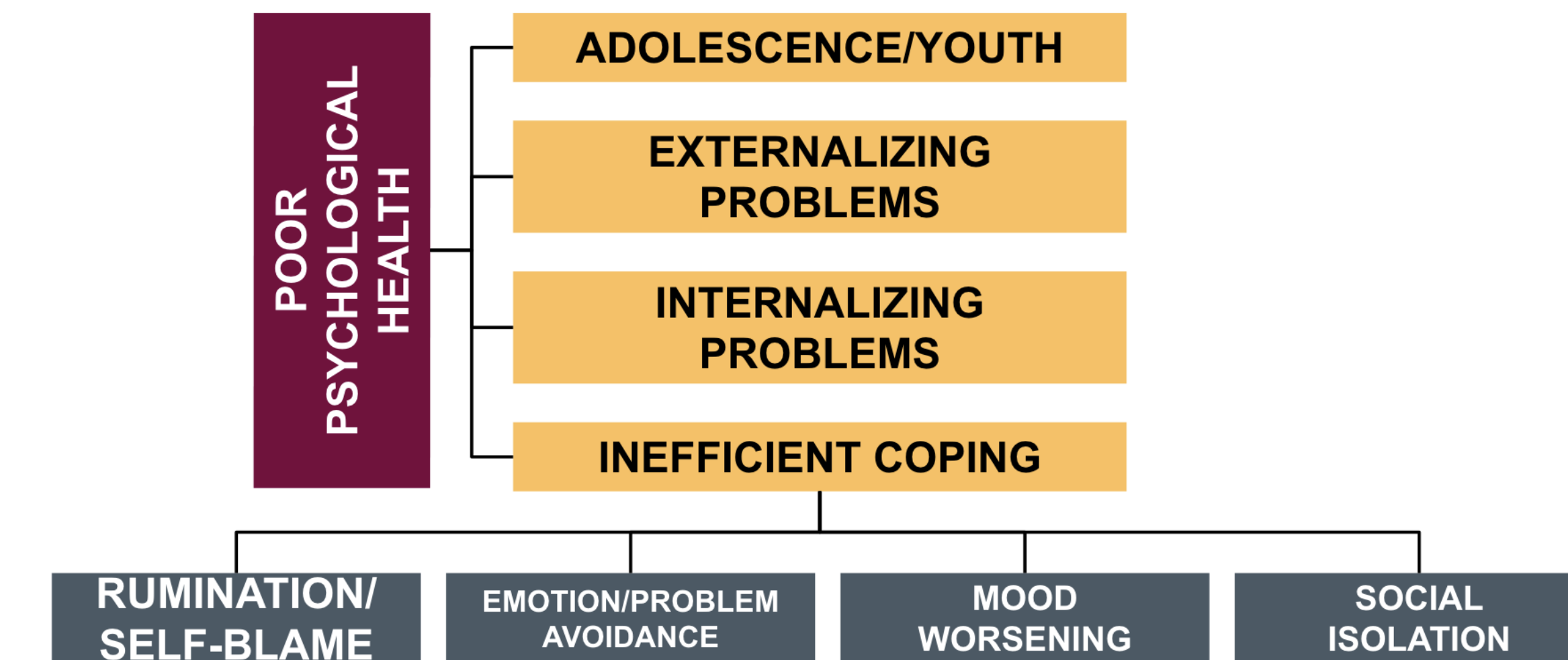### Meta-analysis: relationship between Big Five personality traits and MML

- Converted r values to Fisher's Z. Studies which included multiple correlation values related to MML were aggregated.
- Random-effects meta-analysis model (MML effect size ~ neuroticism + random effect for study) and Fisher's Z for effect measurement.
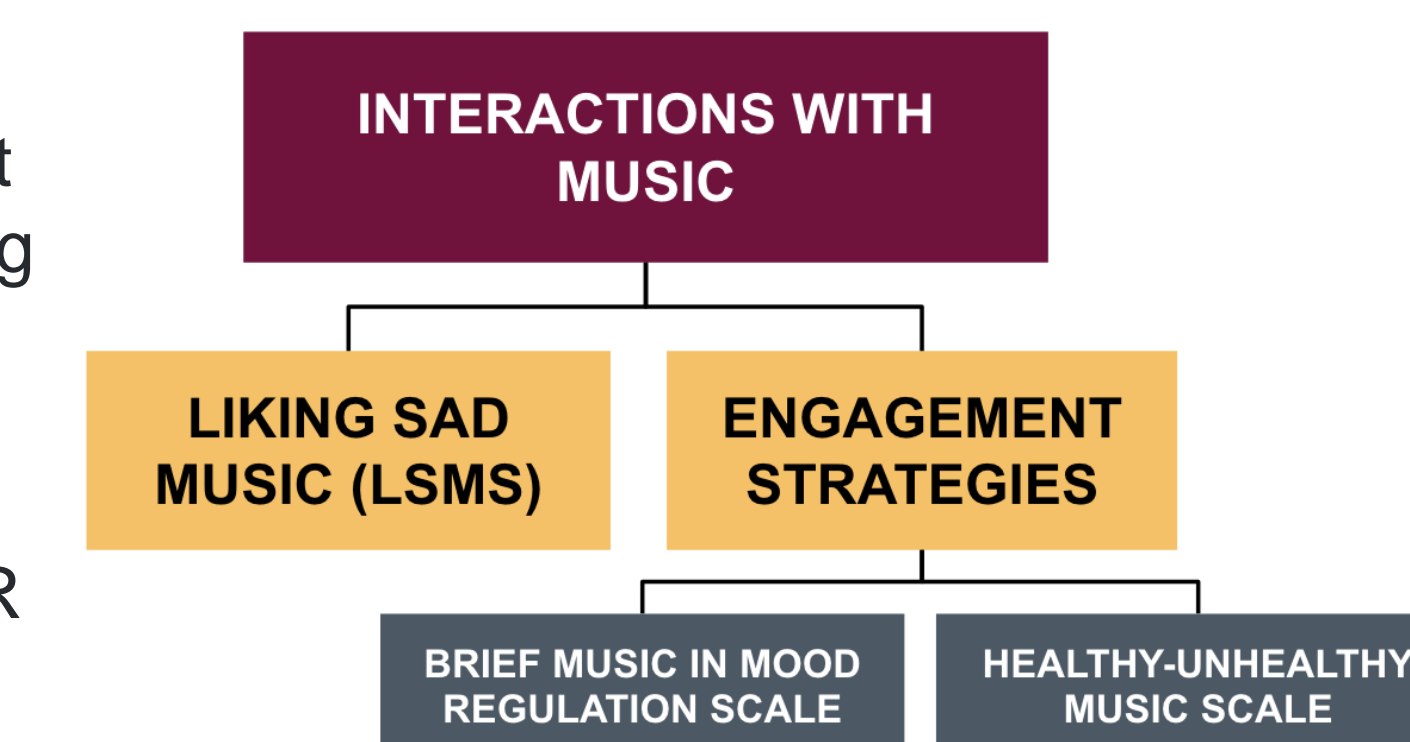
Results

1. MML definitions involve poor psychological health

POOR PSYCHOLOGICAL HEALTH:
- ADOLESCENCE/YOUTH
- EXTERNALIZING PROBLEMS
- INTERNALIZING PROBLEMS
- INEFFICIENT COPING

RUMINATION/SELF-BLAME | EMOTION/PROBLEM AVOIDANCE | MOOD WORSENING | SOCIAL ISOLATION

Fig. 1 (above). Poor psychological health and its sub-themes were commonly referenced in MML definitions. Inefficient coping sub-themes were also referenced within definitions and generally represent patterns/behaviours exhibited in MML (n = 18).
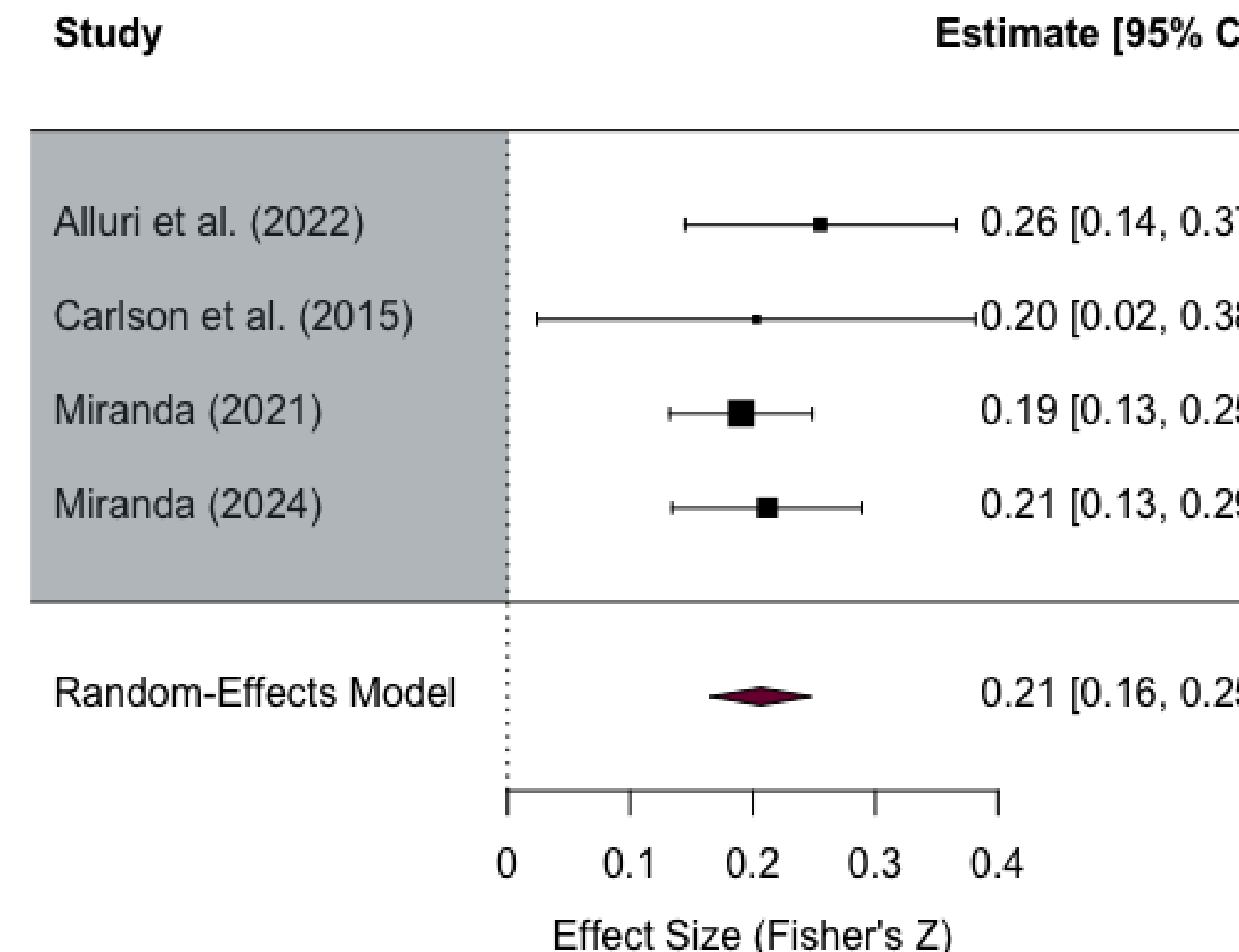
2. MML measures target interactions through liking and engagement

Fig. 2 (right). MML measures target interactions with music by measuring liking sad music and specific engagement strategies. Specific engagement strategies were generally measured with the B-MMR and HUMS scales (n = 18).


INTERACTIONS WITH MUSIC:
- LIKING SAD MUSIC (LSMS)
- ENGAGEMENT STRATEGIES → BRIEF MUSIC IN MOOD REGULATION SCALE | HEALTHY-UNHEALTHY MUSIC SCALE

3. Positive relationship between neuroticism and MML

Consistent effects found across studies

Study	Estimate [95% CI]
Alluri et al. (2022)	0.26 [0.14, 0.37]
Carlson et al. (2015)	0.20 [0.02, 0.38]
Miranda (2021)	0.19 [0.13, 0.25]
Miranda (2024)	0.21 [0.13, 0.29]
Random-Effects Model	0.21 [0.16, 0.25]

Effect Size (Fisher's Z)

Fig. 3 (left). Pooled Fisher's Z effect size = 0.21 [CI: 0.16-0.25]. No significant heterogeneity across studies (I^2= 0.00%). No significant between-study effect size variability [Q (df = 3) = 1.0636, p = 0.7859]. (n = 4).

No publication bias found within studies

Standard Error vs Effect Size (Fisher's Z)
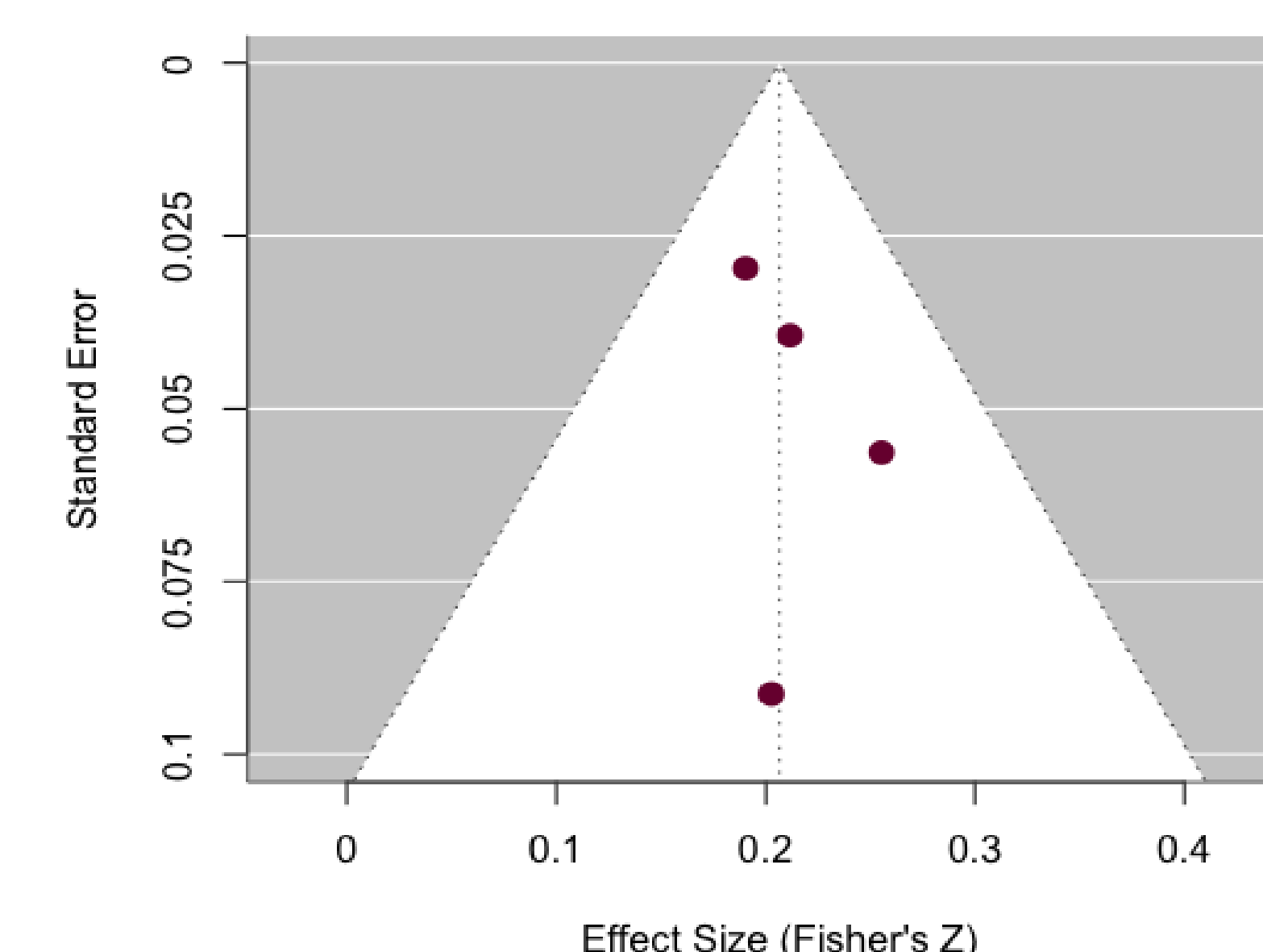
Fig. 4 (left). Publication bias was visually analyzed through plot asymmetry. Symmetry indicates no publication bias (n = 4).

Conclusions

1. A valid definition of maladaptive music listening should reference poor psychological health and its subthemes.
2. MML is most frequently measured using the Like Sad Music Scale (LSMS), Brief Music in Mood Regulation Scale (B-MMR), or Healthy-Unhealthy Music Scale (HUMS).
3. There is a consistent positive correlation between neuroticism and maladaptive music listening. Other personality traits were not well-represented in the dataset.

Future directions

- Directionality between themes is unclear.
- Adolescence/youth theme might be explained by HUMS scale development and/or ease of access.
- Future research should investigate MML in adults, other personality relationships, and the relationship between various MML scales.

References

Braun & Clarke (2006). *Qual Res in Psych.*
Garrido & Schubert (2013). *Musicae Scientiae.*
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