



Stuck in my head: Musical obsessions & psychological flexibility

Lillian Reuman, Ryan J. Jacoby, Laura Fabricant, Kathryn Harnsberger, Susan Pizzolato, Jonathan S. Abramowitz
University of North Carolina at Chapel Hill

Introduction

- Earworms, also known as musical obsessions or intrusive musical imagery (IMI), refer to tunes that run repeatedly through a person’s mind, as if stuck in “playback mode.”
- Conceptualized as an OCD-like intrusion, IMI is included as a miscellaneous obsession in the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) symptom checklist.
- IMI may respond to cognitive-behavioral and pharmacologic (e.g., clomipramine) treatments for OCD.
- The current study examined IMI in the context of related anxiety and obsessive-compulsive (OC) symptoms.

Method

Participants

- 240 undergraduate volunteers (212 eligible)
 - 74.6% female
 - 74.1% Caucasian
 - *M* age = 18.8 yrs

Self-Report Measures

- Earworm Questionnaire
 - Developed & pilot-tested for this study
 - Assessed frequency, associated distress, interference, resistance/control, importance, content, and triggers
- Anxiety Sensitivity Index – 3 (ASI-3)
- Acceptance and Action Questionnaire-II (AAQ-II)
- Obsessive-Compulsive Inventory-Revised (OCI-R)
- Not Just Right Experiences (NJRE) Questionnaire
- Obsessive Beliefs Questionnaire (OBQ-44)
- Depression Anxiety and Stress Scale (DASS)

Results

Group mean scores on study measures

Measure	<i>M</i> (<i>SD</i>)
Earworm – Distress	1.73 (.77)
Earworm – Interference	1.77 (.84)
Earworm – Resistance	2.72 (1.16)
ASI-3	34.12 (11.24)
AAQ-II	38.61 (7.10)
OCI-R	32.75 (10.66)
NJRE	64.13 (2.60)
OBQ-44	
Responsibility/Threat	57.00 (14.00)
Perfectionism/Certainty	61.10 (16.94)
Importance/Control Thoughts	30.43 (11.57)
DASS	
Depression	11.85 (4.18)
Anxiety	10.31 (3.13)
Stress	13.20 (4.03)

Earworm Characteristics

- 97.2% of participants reported experiencing IMI
- 21.7% experienced IMI > once per day

Qualitative data:

- *Worst part about experiencing IMI*
 - “An earworm can distract me from thinking about other things like school or studying.”
 - “I can’t get rid of it even if I try really hard.”
 - “It is annoying to get out of your head and it is frustrating not to be able to “play” the next line or words of the song in your mind.”
 - “Sometimes I sing the lyrics out loud and I am not a very good singer so this can be embarrassing.”
- *Triggers of IMI*
 - “Certain catchy songs”
 - “Listening to a song”
 - “Hearing someone else hum the song”
 - “Sometimes they feel completely random”
 - “Something reminds me of a situation in the song”
- *Common strategies to get rid of IMI*
 - Distraction
 - Listening to another song
 - Talking with someone

Results

Zero-order Pearson correlations

Measure	[1]	[2]	[3]
Earworm – Distress [1]	-	.22**	.31**
Earworm – Interference [2]	-	-	.47**
Earworm – Resistance [3]	-	-	-
ASI-3	.18*	.17*	.10*
AAQ-II	-.23**	-.30**	-.03
OCI-R	.16*	.17*	.15*
NJRE	.14*	.13	.04
OBQ-44			
Responsibility/Threat	.17*	.11	.03
Perfectionism/Certainty	.09	.09	.10
Importance/Control Thoughts	.15*	.13	-.02
DASS			
Depression	.15*	.20*	.08
Anxiety	.14*	.13	.03
Stress	.12	.12	.01

***p* < .01, **p* < .05

Figure 1. IMI by Genre

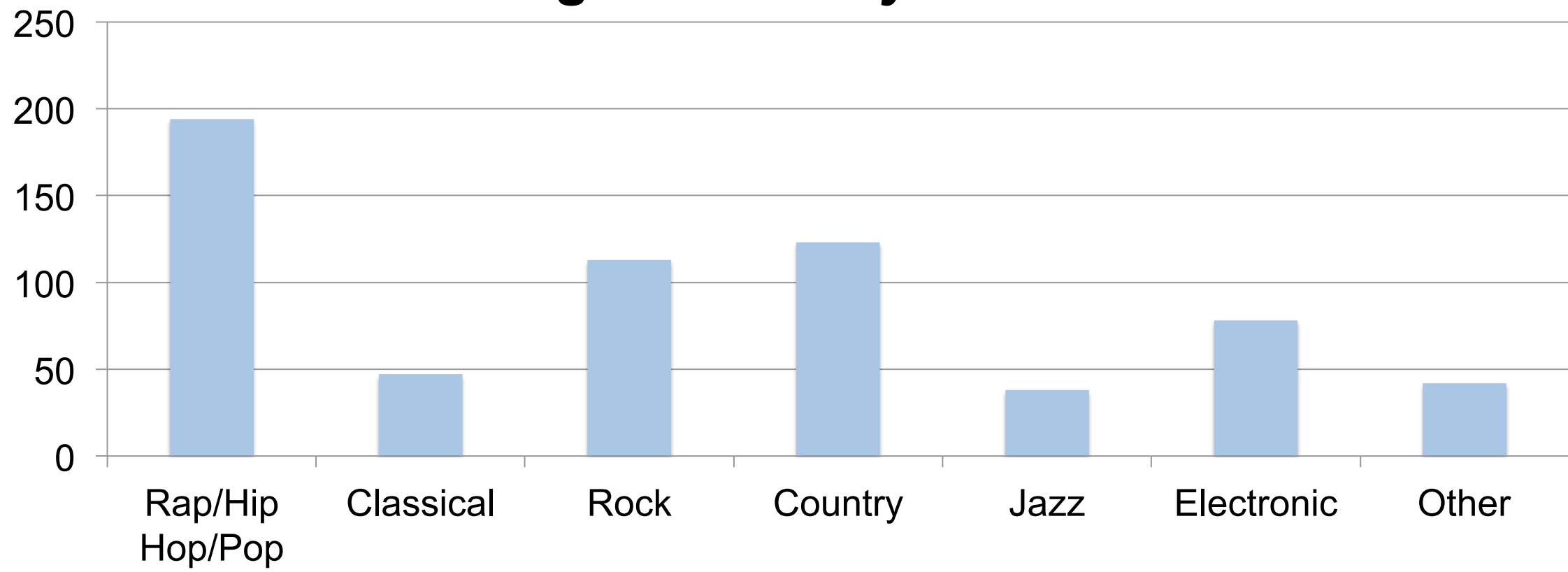
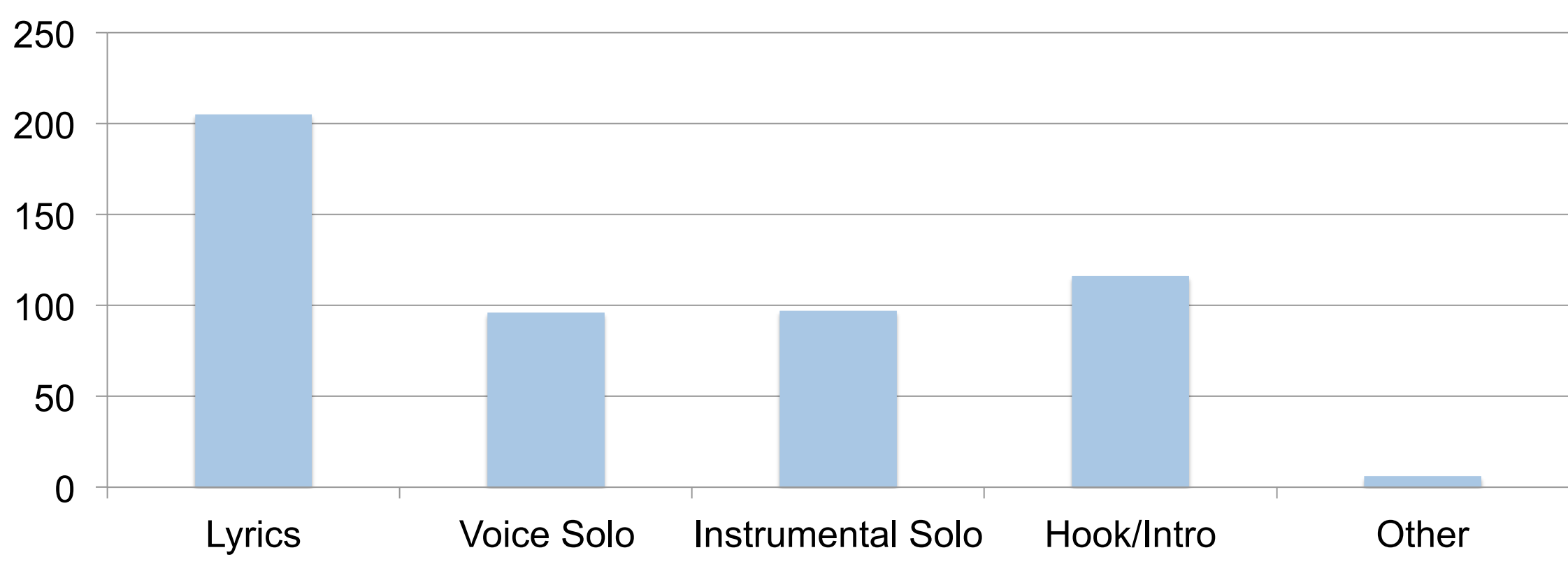


Figure 2. IMI by Part of Song



Discussion

- Increased distress and interference due to IMI was associated with decreased psychological flexibility.
- Results suggest that interference and distress due to earworms may be related to attempts to suppress them.
- Future research should examine these relationships in clinical samples to better inform theory and possible treatment options.