Beyond the University Sample: Using Crowdsourcing to Explore Verbal Irony Use across Age and Gender

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Background

Sarcasm use is quite common, but its use is influenced by situational factors (e.g., relationship with partner) and individual characteristics (e.g., gender).

- Only one previous study examined age, and found worse *comprehension* performance for older adults[1]. However, no prior work has examined sarcasm *production* across age.

Gender differences in sarcasm *production* have been found, though they vary depending on the measure used (e.g., self-report vs. free response).

- Gibbs[2] found that males used sarcasm more, while Dress et al.[3] found that males reported using sarcasm more frequently, in alignment with Ivanko et al.[4], though they did not differ significantly on other production tasks.

Dress et al.[3] also examined regional differences in sarcasm use between a Northern sample (Oswego, NY) and a Southern sample (Memphis, TN).

- Northern participants provided more sarcastic completions, self-reported using sarcasm more often, and defined sarcasm as being humorous more often than Southern participants.

The current study initially sought to extend the findings of Dress et al. by using a more age-diverse sample, as well as by drawing from two linguistically distinct cities in PN. As city differences were not observed, this will not be discussed further, however.

Predictions

- Males will use and report using sarcasm more often than Females.
- Younger participants will use and report using sarcasm more than other age groups.
- Males and Younger participants will define sarcasm as more humorous, and less negative.

Method

A total of 129 participants (70 Female) were recruited through Amazon Mechanical Turk and completed a survey through Qualtrics.

- Participants' age ranged from 20-70 ($M = 37.79$, $SD = 12.73$). This was collapsed into *Younger* (<35), *Middle* (35-43), and *Older* (>43) age groups of approximately equal size for analyses.

Participants completed three measures of sarcasm use (see *Materials*) and provided definitions of sarcasm and irony. Free response data were coded by two raters with 94% agreement. Definitional data were coded for six characteristics with high agreement (95%). All disagreements were resolved through discussion.

Materials

Sarcastic Completions
Provide Completions to 16 Scenarios (8 Intended to Elicit Sarcasm)

Example
John and Steve were walking together to their morning class. As they entered the lecture hall, Steve said, "I'll bet this is going to be a great lecture." The professor proceeded to give a dry and boring presentation of the material. As they left the lecture hall, John said to Steve:

Sample Subject Responses
You sure know how to call 'em, Steve.
You were right. That was GREAT… (rolls eyes)
"Great" lecture indeed, man.
that was real great.

Sarcastic Selections
"Select the comment that you would be most likely to make in these situations"
(8 Multiple-Choice Questions)

You and your best friend, Sharon, attended a research conference. The main speaker had just finished a presentation and the audience applauded weakly. Her ideas were contradictory to most research in the area. Afterwards, you comment:

- That didn't go over well — (Literal/Indirect)
- She is an exceptional presenter — (Sarcastic/Direct)
- That went over well — (Sarcastic/Indirect)
- She is a lousy presenter — (Literal/Direct)

Sarcasm Self-Report Scale (SSS)
Scale from Ivanko et al.[4] to Assess Participants' Sarcasm Use across Different Situations

Examples

What is the likelihood that you would use sarcasm with someone you just met?

1   2   3   4   5   6   7
Not Likely   **Very Likely**

How sarcastic do you think you are?

1   2   3   4   5   6   7
Not at all   **Very**

Figures

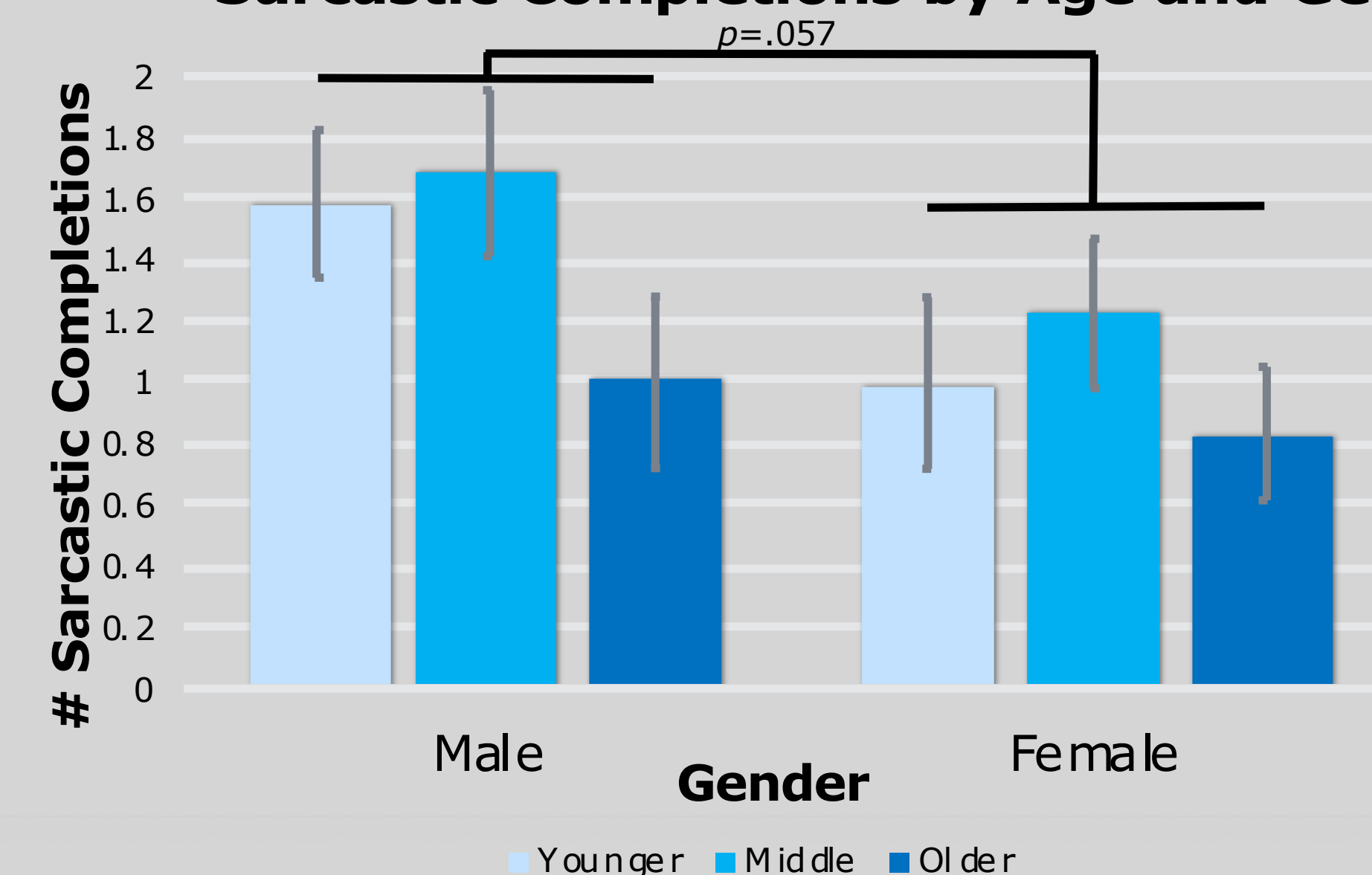### Sarcastic Completions by Age and Gender

Figure 1. Estimated marginal means for sarcastic completions.

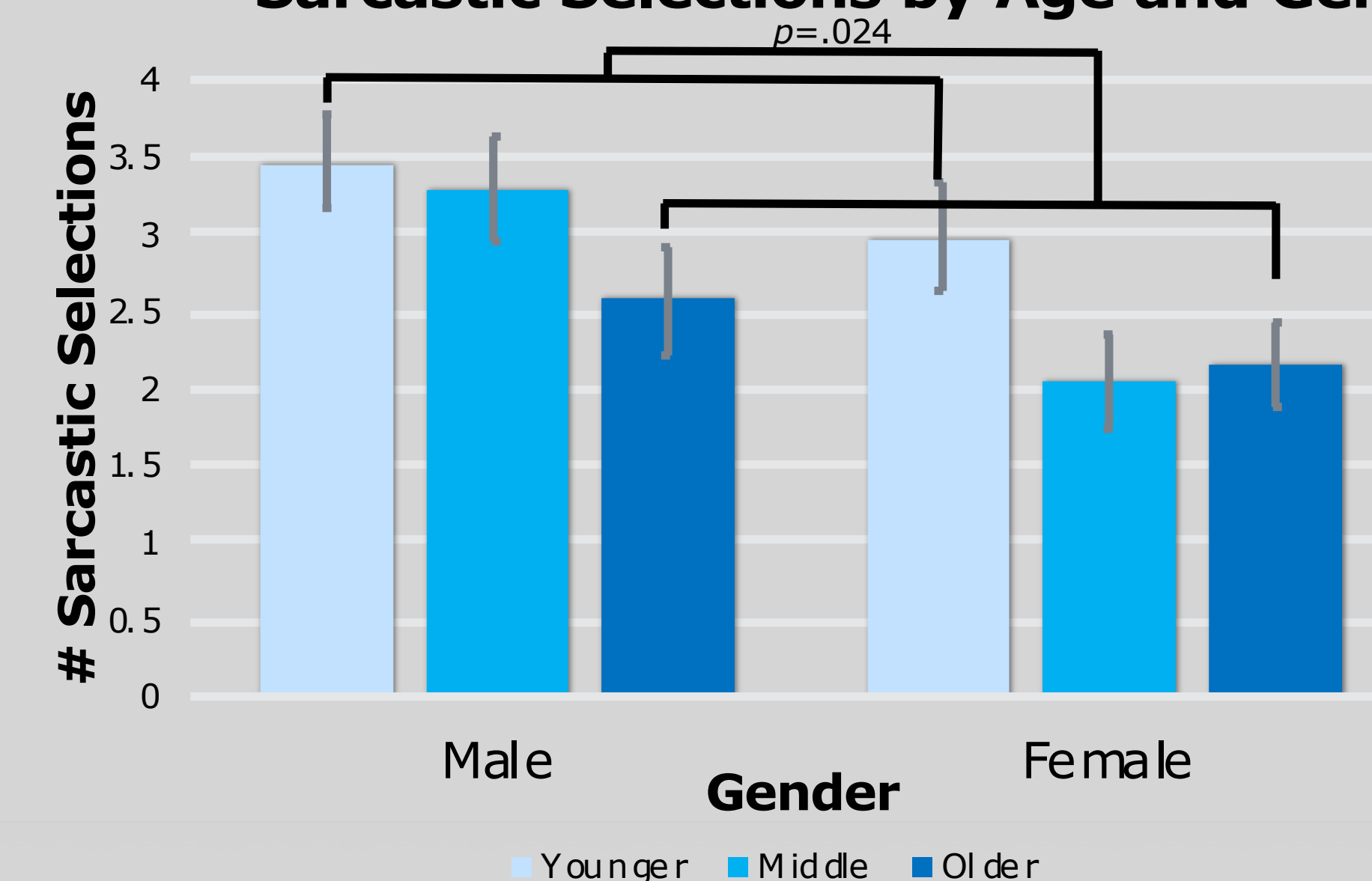### Sarcastic Selections by Age and Gender

Figure 2. Estimated marginal means for sarcastic selections.
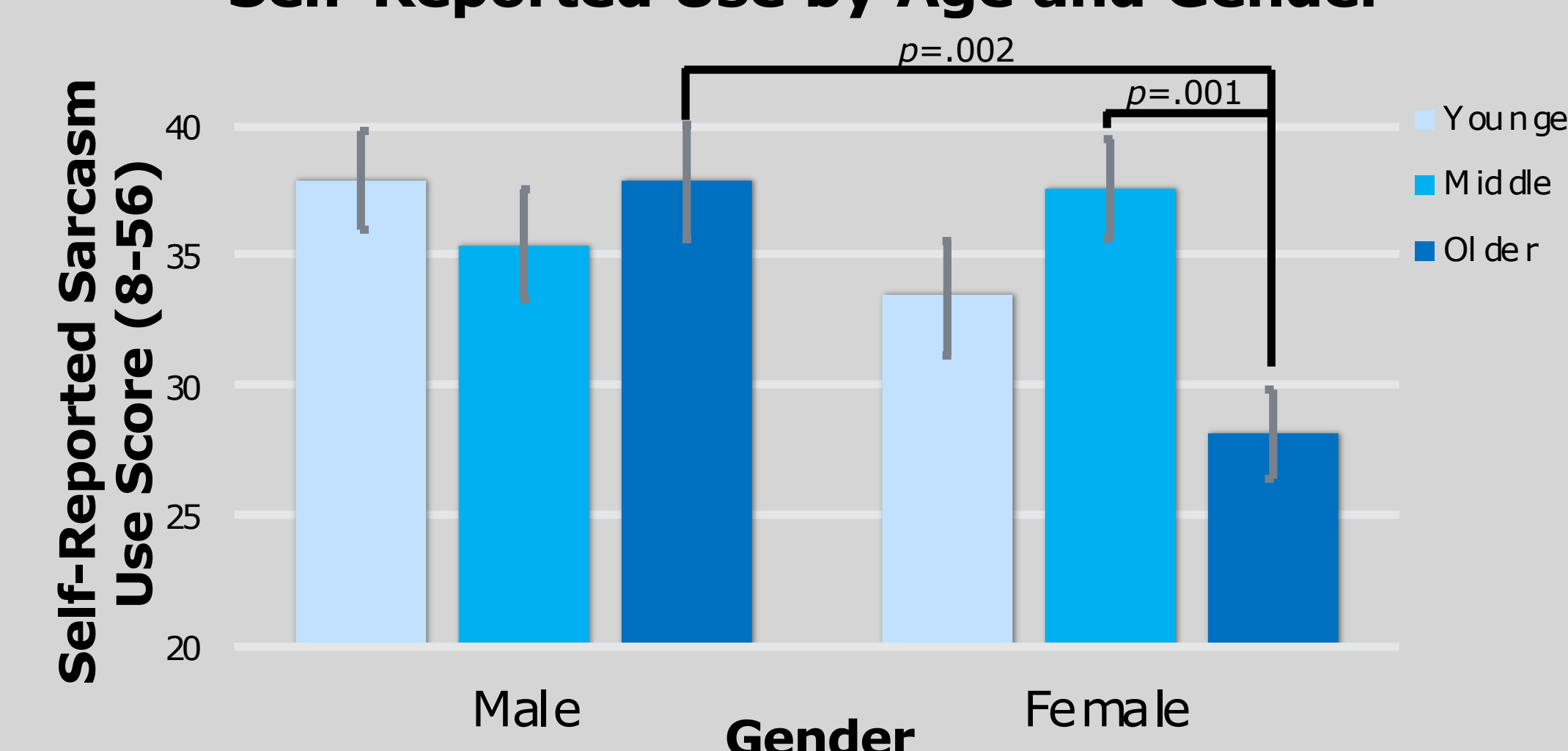
Self-Reported Use by Age and Gender

Figure 3. Estimated marginal means for self-reported sarcasm use.

Table 1
Characteristics of Sarcasm in Participant Definitions, by Gender and Age Group (in Percent Present)

	Gender		Age		
	Male	Female	Younger	Middle	Higher
Verbal	73	70	83	66	65
Counterfactual	44	43	50	39	41
Tone of Voice	9	9	14	7	4
Negative	34*	54*	31*	47*	57*
Humorous	32	26	24	42	22
Unexpected	0	0	0	0	0

* Denotes significant Chi-Square ($p < .05$)

Results

A three-way between-subjects MANOVA was conducted with *Completions*, *Selections*, and *Self-Report* serving as the dependent variables and *Gender*, *Age*, and *Urban* serving as independent variables (*as Urban was not-significant, it is not discussed, though it was included in analyses*). Following significant Wilks' Λ Multivariate Tests for *Gender*, *Age*, and a marginal interaction, between-subjects effects were examined (**Table 2**).

- Males made more sarcastic selections, reported using sarcasm more, and provided marginally more sarcastic completions than Females.
- There was a significant effect of Age on selections, with the Younger group selecting more sarcastic responses than the Older group.
- There was a marginal effect of Age on completions, though post-hoc tests were n.s.
- There was also a significant Age*Gender interaction for self-report, with Older Females reporting using sarcasm less often than Middle Females or Older Males.

For definitions of sarcasm, Females defined sarcasm as negative more often than Males. Additionally, sarcasm was defined as negative least often by the Younger group, followed by Middle, and the Older group defined it as negative most often (Table 1). No other effects were significant.

Table 2
*Summary of univariate effects of Age, Gender, and Age*Gender on sarcasm use across measures*

	Completions		Selections		Self-Report	
Source	F	p	F	p	F	p
Age	2.36	.099	3.73	.027	1.70	.191
Gender	3.71	.057	7.42	.008	5.974	.016
Age*Gender	.355	.702	1.03	.359	4.388	.015

Conclusions

Gender differences in sarcasm use were found, in line with prior research, with the largest differences in self-reported use. Sarcasm use also tended to decrease with age, with the largest differences in self-reported use particularly among Females.

Both Females and the Older group—those who use it the least—defined sarcasm as negative more often, suggesting a possible influence of the social desirability of sarcasm use. These results highlight the complex and changing pragmatic influences that affect how sarcasm is perceived and used.

References

1. Phillips, L. H., Allen, R., Bull, R., Hering, A., Kliegel, M., & Channon, S. (2015). Older adults have difficulty in decoding sarcasm. *Developmental Psychology, 51*(12), 1840–1852.
2. Gibbs, R. W. (2000). Irony in talk among friends. *Metaphor and Symbol, 15*(1–2), 5–27.
3. Dress, M. L., Kreuz, R. J., Link, K. E., & Caucci, G. M. (2008). Regional variation in the use of sarcasm. *Journal of Language and Social Psychology, 27*, 71–85.
4. Ivanko, S. L., Pexman, P. M., & Olineck, K. M. (2004). How sarcastic are you? Individual differences and verbal irony. *Journal of Language and Social Psychology, 23*, 244–271.