

Quantitative proxies for social norms:

Interrogating clustering,
reference groups, and validity

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INTRODUCTION

- Large, quantitative datasets with information on IPV behaviors and attitudes
 - DHS, VACS, IMAGES, MICS, etc.
- Growing number of studies aggregate measure of attitudes at some group level
 - Used as a proxy for social norms in that groups
- For example, examine relationship between:
 - Classroom-level score of teen dating violence and a student's likelihood of violence victimization and perpetration (Beckmann et al., 2019)
 - % of women in village who agree IPV is acceptable and women's risk of IPV (Mogford & Lyons, 2014)

-Beckmann, L., Bergmann, M. C., Krieg, Y., & Kliem, S. (2019). Associations Between Classroom Normative Climate and the Perpetration of Teen Dating Violence Among Secondary School Students. *Journal of Interpersonal Violence*, 088626051988820.
-Mogford, E., & Lyons, C. J. (2014). Village tolerance of abuse, women's status, and the ecology of intimate partner violence in rural Uttar Pradesh, India. *Sociological Quarterly*, 55(4), 705–731. Scopus. <https://doi.org/10.1111/tsq.12067>

GAPS IN METHODOLOGY

- However, there is a lack of consistency in how these measures are constructed and interrogated
 - Namely, is the norm proxy a valid representation of a construct that is under normative influence

Researchers should be asking:

- Is the norm proxy clustered within groups?
- Are there other more appropriate/valid configurations of groups for that norm proxy?
- Does the analysis account for endogeneity/allow for assertions about causality?

DATA

- 2016 IMAGES data from Tanzania
 - 1,008 men and 1,008 women ages 15-49 years old
 - Data is unique because it includes attitude, descriptive norms, and injunctive norms questions
 - And a few key variables to test out different group-level aggregates
- Attitude score- six items on IPV and male control in a relationship (score of 1 to 6)
 - Similar items for descriptive and injunctive norms scores
 - For example:

Attitudes	Descriptive norms	Injunctive norms
I believe that a woman should tolerate violence to keep her family together.	Women in my community tolerate violence to keep their family together	Most people in my community think women should tolerate violence to keep their families together.

INTRACLASS CORRELATION COEFFICIENT (ICC)

- Statistic that provides information about how much units *within* groups resemble each other compared to how much units *across* groups are similar
- Assumes a value from 0 to 1
- Higher \rightarrow units within groups tend to look more similar
- Examples:
 - Looking at religion across communities in Nigeria- high ICC
 - Looking at gender across communities in Nigeria- low ICC

ICC ACROSS GROUPS CONFIGURATIONS

Table 3. ICCs, attitude score

	ICC	Number of groups	Avg. obs/group	Minimum obs/group
Attitude score				
Village	0.166	56	36	36
Village for females only	0.162	56	18	18
Village for males only	0.229	56	18	18
Ethnicity	0.112	13	155	36
Ethnicity for females only	0.108	13	78	16
Ethnicity for males only	0.129	13	78	19
Age and sex	0.005	14	144	62
Village and marital status	0.167	112	18	9
Village and marital status for female only	0.150	112	9	1
Village and marital status for male only	0.236	112	9	2

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EXAMINING GROUP SIZE AND NUMBER

- Ensure sufficient number and size of groups

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ASSOCIATIONS WITH ACTUAL NORMS QUESTIONS

- Do the group-level proxies predict actual perceived norms?
 - Helps to answer the questions:
 - When a woman answers norms questions, whose behavior/attitudes is she thinking about?
 - Same for men

ASSOCIATIONS WITH ACTUAL NORMS QUESTIONS

- Find that women's norms questions are not positively associated with group-level aggregates for any groups
- Men's norms are most associated with men's attitudes in the community and community/marital status
 - And slightly stronger association with injunctive norms as opposed to descriptive norms
 - Points to importance of collecting and using data from men

TAKEAWAYS AND LIMITATIONS

- Importance of collecting and using data from men
- Outline a set of steps that can and should be taken when including norm proxies in analysis
- Further research needed to identify ICC threshold

THANK YOU!

1. Is the norm proxy clustered within groups?



- Assess with intraclass correlation coefficient (ICC)
- No minimum threshold, but higher is better

2. Is there a more appropriate/valid configuration of groups with which to construct the norm proxies?



- Use the ICC to also assess clustering across other logical configurations of groups; no minimum threshold, but higher is better
- Consider number of groups and observations/group; minimum ten observations/group

3. Is there a large enough range of norm proxy values across groups?



- Plot the distributions of group-level proxies to confirm

4. Does the analysis account for endogeneity/allow for assertions around causality?



- If not, note as limitation

Table 4. Predicting individual-level descriptive and injunctive norms from group-level norm proxies

	Descriptive norm β [95% CI]	Injunctive norm β [95% CI]	Sample size (n)
Norms as reported by females			
Mean attitude score at:			
Village level	-0.259** [-0.41,-0.11]	-0.025 [-0.31,0.26]	1,008
Village level, among females only	-0.143 [-0.29,0.01]	0.072 [0.17,0.32]	1,008
Village level, among males only	-0.255*** [-0.36,-0.15]	-0.092 [-0.32,0.14]	1,008
Village and marital status level	-0.212** [-0.36,-0.06]	0.010 [0.26,0.28]	981
Village and marital status level, among females only	-0.076 [-0.22,0.07]	0.076 [0.18,0.34]	605
Village and marital status level, among males only	-0.179* [-0.34,-0.02]	0.064 [0.21,0.34]	417
Norms as reported by males			
Mean attitude score at:			
Village level	0.647*** [0.48,0.81]	0.734*** [0.50,0.97]	1,008
Village level, among females only	0.385*** [0.23,0.54]	0.342** [0.10,0.59]	1,008
Village level, among males only	0.615*** [0.48,0.75]	0.772*** [0.64,0.91]	1,008
Village and marital status level	0.591*** [0.44,0.74]	0.704*** [0.50,0.91]	980
Village and marital status level, among females only	0.350** [0.13,0.57]	0.327* [0.03,0.63]	448
Village and marital status level, among males only	0.684*** [0.51,0.85]	0.831*** [0.67,0.99]	537

Note: Beta coefficients are estimated using bivariate Ordinary Least Squares regressions. Observations are weighted to be representative of the 15-49 year-old population of males and females in the five regions included in the study. Standard errors are adjusted for the complex sampling design. Beta coefficients are statistically significant at *p<0.05, **p<0.01, and ***p<0.001.