

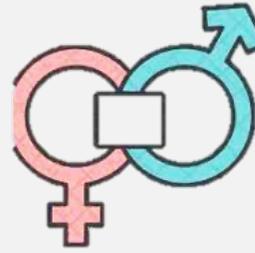


Adapting and validating the G-NORM (Gender Norms Scale), in Nepal: An examination of how gender norms are associated with agency and reproductive health outcomes

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What are Gender Norms?



- ❖ Gender norms describe how people of a particular gender are expected to behave, in a social context
- ❖ Inequitable gender norms result in women having fewer educational and professional opportunities and less autonomy regarding sex, marriage, and decision making
- ❖ Deeply-rooted but not immutable

Gaps in Gender Norms Measurement



- ❖ Oftentimes, only measuring individual attitudes and beliefs and missing a referent group
- ❖ Failure to differentiate between descriptive norms (perceptions about what people in our community are doing) and injunctive norms (perceptions of what people think we *should* be doing)



The Gender Norm (G-NORM) Scale

- The G-NORM is a novel scale that measures perceptions of community-level gender norms
- Originally, our team developed and validated the scale in rural Odisha, India.
- Builds upon current scales by including missing theoretical components
- In this paper we test its external validity by showing how we adapted and validated the G-NORM in rural & urban areas in the Nawalparasi district of Nepal.

Methods



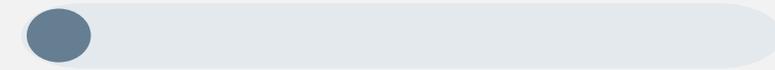
Study Population & Location

- Study data came from a nutrition and gender empowerment study among newly married women in Nawalparasi, Nepal.
- Study location: Nawalparasi district – southern region of Nepal. More socially disadvantaged and the status of women is lower than Nepal as a whole.
- Study participants: 187 newly married women between 18-25 years old.



Methods

Phase I. Scale Adaptation



Cognitive
Interviews
(n=14)

2

Questionnaire
Administration
(n=187)

3

Qualitative Analysis
(n=60) & Expert
Input

1

Exploratory
Factor Analysis

4

Confirmatory
Factor Analysis

5

Construct
Validity

6

Phase 2. Scale Validation





Results



Description of the Sample (N=187)

- Most women (68%) completed grades 6-12
- Most were Hindu (86%)
- Over 70% had an arranged marriage
- 80% had one or two children
- Most (64%) had ever used contraception
- 14% were currently pregnant
- Over 80% owned their own phone

Hypothesis 1: Final Nepali G-NORM Scale (20 items total – ten items in each sub-scale)

Sub-Scale: Descriptive Norms (Cronbach's alpha: 0.92)	Factor Loading
*In most families you know women's parents pay a dowry when their daughter gets married	0.52
In most families you know women obey their husbands in all matters	0.65
In most families you know only men make decisions about household income and expenses	0.69
In most families you know women ask permission from their husband or mother-in-law to leave the house	0.58
In most families you know husbands make the decision about buying major household items	0.72
*In most families you know husbands make the final decision about when to have their first child	0.82
*In most families you know husbands make the final decisions about the total number of children they want	0.85
*In most families you know men make decisions about whether their wife can use family planning methods	0.85
*In most families you know parents make the decision about who their daughter will marry	0.75
In most families you know women eat whatever is left over after the rest of their family has finished eating	0.71

*All response options are on a 5-point likert scale *Nepali specific items have an asterik.

Final Nepali G-NORM Scale (20 items total – ten items in each sub-scale)

Sub-Scale: Injunctive Norms (Cronbach's alpha: 0.89)	Factor Loading
*Most families you know believe that women's parents should pay a dowry when their daughter gets married	0.65
Most families you know believe that women should obey their husbands in all matters	0.60
Most families you know believe that only men should be responsible for household income & expenses	0.66
Most families you know believe that women should ask permission from her husband or mother-in-law to leave the house	0.66
Most families you know believe that husbands should make the decision about buying major household items	0.72
*Most families you know believe that husbands should have the final say about when to start trying to have their first child	0.66
*Most families you know believe that husbands should make the final decision about the total number of children they want	0.72
*Most families you know believe that men should make the decision about whether their wife uses family planning methods	0.55
*Most families you know believe that parents should decide who their daughter will marry	0.80
Most families you know believe that women should eat whatever is left over after the rest of their family has eaten	0.49

*All response options are on a 5-point likert scale *Nepali specific items have an asterik.

Hypothesis 2. Mean and Standard Deviation by Caste and Education Level

**Higher G-NORM score indicates more equitable gender norms – Mean & (Confidence Interval: CI)*

- Women from higher castes (Brahmins) reported more equitable gender norms than women from lower castes (Dalits)
- Women who were more educated reported more equitable gender norms compared to less educated women

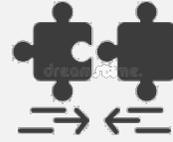
	Total G-Norm (Gender Norms) Scale
Caste	Mean (95% CI)
1. Brahmin/Chheetri	2.24 (2.05, 2.43)
2. Janajati	2.06 (1.97, 2.15)
3. Dalit Muslim/Other	2.03 (1.94, 2.13)
Education	Mean (95% CI)
1. None	1.92 (1.82, 2.02)
2. Class 1 to 5	1.89 (1.78, 2.00)
3. Class 6 to 12	2.14 (2.04, 2.24)
4. More than Class 12	2.49 (2.28, 2.71)

Hypothesis: Association between the Gender Norms Scale, Reproductive Decision-Making, and Attitudes (n=187)

	Joint Decision-Making	Intend to use family planning in the future (Odds ratio)	Disagree that it is wrong to use family planning	Ideal gap between marriage and first birth	Ideal age at marriage
G-NORM (Gender Norms Scale)	0.098*	1.75\$	0.13**	0.017	0.26*

Controlling for: Woman's Education, Caste, Arranged Marriage versus love marriage, religion, husband's education, & wealth quintile

*** p<0.001, ** p<0.01, * p<0.05, \$p<0.1



Study Implications

By including community-level gender norms and differentiating two social norms concepts (descriptive norms and injunctive norms) this scale improves on existing measures

This parsimonious new scale can be useful to interventionists working in Nepal on gender norms or any behaviors associated with gender norms

Currently, adapting the G-NORM to Nigeria and Uganda

Thank you!



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Appendices

Study Limitations

- Narrow, small sample (recently married women aged 18-25, n=187)
- However, we conducted cognitive interviews with all women of reproductive age regardless of marital status.
- Translated the items from English to Nepali, but some of the cognitive interviews were conducted in the local language so had to translate in real time.

Study Strengths

- Mixed-methods, theoretically grounded approach to adapt the gender norms scale.
- Women were randomly sampled to participate. We also conducted cognitive testing with immediate feedback and real time item revisions to improve and re-test the items.
- The same two factor structure clearly held together with high Cronbach's alphas for each sub scale.

Description of the Sample (N=187)

Age	Mean (SD)
Education (%)	
No school	8 (4.0%)
Completed up to grade 5	25 (12.5%)
Completed grade 6 to 12	137 (68.5%)
Completed more than grade 12	30 (15.0%)
Religion	
Hindu	172 (86%)
Non-Hindu	28 (14.0%)
Caste/ethnicity	
Brahmin/Chheetri	41 (20.50%)
Janajati(indigenous)	106 (53.00%)
Dalit/Muslim/Other	53 (26.50%)
Type of marriage	
Love	59 (29.50%)
Arranged	141 (70.5%)
Number of Children	
None	31 (20.95%)
One or two	111 (79.05%)
Ever used contraception	
Yes	121 (64.71%)
No	66 (35.29%)
Currently Pregnant	
Yes	21 (14.19%)
No	127 (85.81%)
Owns a Mobile Phone	
Owns a phone	151 (80.75%)
Shares with husband	22 (11.76%)

Model Fit Statistics from Three Confirmatory Factor Analysis Models (*n=187*)

Factor Structure	Two Factor (Descriptive and Injunctive) Model		
	Model 1	Model 2	Model 3
Correlated Errors	None	Analogous Pairs	Pairs plus 9/10, 9/11 10/11, 23/24, 14/28
Fit Statistics			
RMSEA	0.115	0.125	0.085
CFI	0.804	0.749	0.902
TLI	0.780	0.710	0.880
SRMR	0.100	0.136	0.090
Chi-squared	585.648 model vs. saturated 2316.443 baseline vs. saturated	934.492 model vs. saturated 3043.240 baseline vs. saturated	2316.443 baseline vs. saturated 364.034 model vs. saturated
AIC	9458.603	11501.604	9264.990
BIC	9655.701	11776.248	9507.323

Model Fit Statistics – Final Confirmatory Factor Analysis Model (n=187)

Factor Structure	Final two Factor Model (Descriptive and Injunctive norms subscales)
Correlated Errors	Pairs plus 9/10, 9/11 10/11, 23/24, 14/28
Fit Statistics	
RMSEA	0.085
CFI	0.902
TLI	0.880
SRMR	0.090
Chi-squared	2316.443 baseline vs. saturated 364.034 model vs. saturated
AIC	9264.990
BIC	9507.323

Original three gender norms scale domains

Gender roles - the values, behaviors, and beliefs that a society considers appropriate for men and women

Power and control - an imbalance of advantage or an inequality of resources used over another person

Household decision making - who makes decisions about important aspects of the home such as large household purchases and visits from family and friends

Other oriented - the socialization of women to put others first at the expense of their own health, needs, and desires