

Nominating Under Constraints

Systematic Comparison of Unlimited and Limited Peer Nomination Methodologies

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Introduction

Peer nominations is a commonly used sociometric method in peer relations research to assess positive and negative aspects of peer relationships in groups. Despite its frequent use, **an important and unsettled methodological issue of concern is whether to collect unlimited or limited nominations**. Some researchers argue that the differences in terms of reliability and (ecological) validity between the limited and the unlimited method are negligible, while other researchers claim that – for various reasons – one of both methods is superior to the other.

Goals

1. Assess statistical differences between both methods
2. Investigate the validity of both methods
3. Check common objections against one of both methods (e.g., measurement error, social expansivity, voter selectiveness)

Method

Participants

112 8-to-12 year-old elementary school children, four classes, grades 3 to 6 ($M_{age} = 9.93$; $SD = 1.25$; 52.7% boys)

Measures

- A. 6 sociometric questions (most/least liked, most/least popular, bully/victim)
- B. 12 peer reputation questions (e.g., acquaintanceship, collaboration, withdrawn, physical/relational/verbal aggression, leader)

Procedure

- 2 assessment sessions with an interval of 2 weeks
- Paper-and-pencil questionnaires
- Rosters with names & code numbers of all participants (grades 5 to 8) used to nominate peers
- 3 nominations allowed in limited method; unlimited method capped at 9.
- Z-scores within classroom & all grades calculated for nominations received

	Part A & B (unlimited)	Part A (limited)
Session 1	grades 3 and 6	grades 4 and 5
Session 2	grades 4 and 5	grades 3 and 6

Results

Goal 1

- All correlations differed significantly from a hypothetical near-perfect correlation, indicating both methods are **not interchangeable**.

Goal 2

- Correlations between part A and B measures did not differ significantly between methods, except between “liked most” and “hang around with” (unlimited: $r = .82$, $p < .001$; limited: $r = .54$, $p < .001$; $z = 4.19$, $p < .001$).
- **Additional correlational differences** were found for girls and for children in the lowest grade, in favor of the unlimited method.
- Unlimited method yielded **superior distributional properties** (more variability, less skewed, less peaked) than the limited method, especially for preference and popularity measures, except for “bully” and “victim” (boys only).
- Path analyses revealed three **significant differences in estimates** between both methods in favor of the unlimited method: “hang around with” regressed on “liked most”, “leader” regressed on “liked most”, and “leader” regressed on “liked least”, $\chi^2(21) = 16.95$, $p = .714$, RMSEA = .000 (CI: .000 - .062, $p = .904$), CFI = 1.000, SRMR = .017.

Goal 3

- Average number of nominations received were higher in the unlimited method indicating **measurement error** would occur when using the limited method.
- Only between 2% and 9% of the participants reached the maximum number of allowed nominations (except for “liked most”) indicating participants **maintained a certain degree of selectivity** when using the unlimited method.

Discussion

- It appears that girls benefit most from being able to give a **more nuanced peer evaluation**. Further, compared to older children, younger children appear to be **less selective in their nominations**, possible due to less experience/knowledge about the social behavior/reputation of their peers.
- Restricting participants in the number of nominations leads to **measurement error** and **lower construct validity**, as participants are forced to leave peers out at random resulting in a distortion of participants’ “true” evaluation.
- Unlimited nominations appear to **prevent or weaken the influence of a false perception** among participants that one should nominate as many peers as the questionnaire allows (response bias).
- Unlimited nominations may lead to **less reactance**, as constraining participants in the maximum number of nominations allowed causes frustration with the task.
- Limited method **facilitate nominations** for the “bully” and “victim” questions, especially for boys and younger children. Nominating peers on these sociometric questions is an ordeal for many children. Being allowed to name many peers for these questions may make this task more difficult than when a maximum of three nominations is allowed.

Conclusion

Unlimited nominations outperformed limited nominations in reliability, validity, and distributional properties, especially for positive sociometric questions (e.g., friendship), peer status measures (i.e., preference, popularity), and behavioral reputation questions (e.g., leader, clown). The limited method offered better results for “bully” and “victim” questions.

True insight into the social structure of a group cannot be achieved unless every group member participates spontaneously and more or less unreflectively in uncovering the dynamics of a group (see Moreno & Fox, 1987)

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