

How (not) to Measure Social Support Networks: The Name Generator vs. the Role Relation Approach

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Abstract

The name generator approach and the role relation approach are among the most common ways to measure ego-centered social networks. The name generator approach, which first requires of a respondent to name actual persons and then usually asks several additional questions about these persons gives richer data on the respondent's social network, but is, on the other hand, relatively costly and burdensome. On the other hand the role relation approach is simpler to use and probably less burdensome for the respondent (he/she names persons in his/her networks only in terms of their roles, e.g., partner, friend), but provides less precise data on the respondent's network (e.g., network composition and size). Previous experiments which compared both approaches with regard to network composition (proportions of family, friends, neighbors and co-workers) provide incomplete evidence because the two approaches differed in several methodological aspects (e.g., question wording, limitation of the number of named alters, ranking of named alters). In this article, an experiment was designed in which all factors that were found to interact with network composition and the two approaches were controlled for. Based on previous studies, several hypotheses were formulated and tested.

Data were collected on a quota sample of 683 respondents by students at the Faculty of Social Sciences and the Faculty of Arts in Ljubljana in October and November 2008. Results show that, in general, differences in frequency distributions were not large. Provision of instrumental support is similar for both approaches, but larger differences appear in emotional, informational and work support. Differences were greater for strong ties and for the category "no one". Differences were also slightly larger for first choices. Dispersion of roles was slightly greater with the name generator approach. Results are discussed in comparison with previous findings.

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1 Introduction

In surveys social networks are measured in many different ways. The so-called affective approach asks about the most important people in a person's life. A well-known and commonly used example can be found in Antonucci (1986). Another method would be to ask about a person's more or less frequent contacts with other people – that is the interaction approach (e.g., Bernard et al., 1982). We might also be interested in persons with whom people exchange different things or services (e.g., different types of social support, as in this paper), i.e., the exchange approach (examples can be found in Burt, 1984; McCallister and Fischer, 1983; van der Poel, 1993). Compared to these approaches, a simpler way to go about measuring one's social network would be to locate network members in the form of the roles they play in the network, i.e., the role relation(ship) approach (e.g., International Social Survey Programme 1987 and 2001). Some of these approaches are frequently combined with the name generator approach for eliciting the names of network members: for instance, exchanges of social support (e.g., Burt, 1984; McCallister and Fischer, 1983) or measuring networks of important people (e.g., Antonucci, 1986).

All approaches have specific advantages and disadvantages and each may be useful and appropriate for specific research purposes. It could be argued that the name generator approach probably produces the most complete, broadly ranging and substantively rich data about one's social network. It asks a respondent directly to name actual persons in his/her network, which is often done without limitations (e.g., as to the number of people that may be named, the time frame and so on). Usually also a broad range of other information is collected about the network members thus obtained (e.g., type of relationship, strength of tie, network members' personal characteristics and so on). Therefore, relatively good estimates and interpretively rich information about network characteristics, such as network size, network composition, structure etc., are also possible. On the other hand, such network data collection may be quite burdensome for the respondents, especially in the case of rather large networks, owing to the free recall format for eliciting the names, if done in a self-administered mode (e.g., see Lozar Manfreda et al., 2004; Vehovar et al., 2008) or complex coordination between interviewer and respondent, when it is applied in personal interviews (e.g., Kogovšek et al., 2002). Additionally, on the respondent's part, it may be quite a sensitive technique, since at least some respondents may be reluctant to give names of actual persons and provide very personal data about them or relationships with them. From the point of view of a researcher, collecting network data in such a way may be too expensive and time consuming, since network items often form only a small part of larger survey questionnaires.

In contrast, there is the role relation approach, where network members are represented only as role relationships and typically, only one (e.g., European Quality of Life Survey - EQLS) or the first two important persons (e.g., International Social Survey Programme - ISSP) are obtained. An ordinary survey question is used, with the help of a showcard listing possible role relations (e.g., partner, mother, father, friend, etc.).³ This method is cheaper, simpler to administer and less burdensome for respondents. On the other hand, owing to the specific response format, less precise information on network members is obtained; therefore, estimation of different network characteristics is limited. One cannot estimate network size. With the role relation approach, unique identification of persons is impossible for most relationships, either strong (e.g., friends, children and siblings) or weak ones (e.g., neighbors, co-workers and professionals). If each possible role relation is regarded functionally, this approach poses no particular limitation. However, estimation of the network composition (or other network characteristics), a frequent practice in social network analysis, is limited, since we do not possess information about the number of children, siblings and so on. Thus, the proportion of different types of relationships (e.g., whether the personal network is primarily kin- or friend-oriented) cannot be estimated directly (e.g., Kogovšek and Hlebec, 2008). Additionally, as our experience shows, people may feel limited in being required to make only two choices or when some network members are interchangeable and hold equal positions in the respondent's network. For instance, a respondent might ask a partner and any of his/her children (the one most available in a certain situation) for a specific kind of help, but is forced to choose just one, owing to the response format. Some solve that problem by having a different child in mind for different network eliciting questions.

The name generator and the role relation approach have already been compared in a number of studies. For instance, these approaches were compared from the methodological point of view within *The Groningen Social Network, Support and Health Study* (van Groenou et al., 1990; van Sonderen et al., 1990), where exchange and affective (adapted from Antonucci, 1986) approaches in combination with name generators and the role relation approach were used. Among other results, van Sonderen et al. (1990) found that, compared to the role relation approach, exchange and affective approaches elicited most siblings and parents and almost all partners and children. The exchange approach was more likely to elicit mother-in-law and father-in-law, as well as neighbors and co-workers with whom the respondent is in frequent contact. With the exchange approach compared to the affective approach, there was a greater probability of eliciting the most important role relations, but both are equally good at eliciting relations that

³ The role relation approach as it is defined here (collecting network members only in terms of their role relationship toward ego) should not be mixed up with the name interpreter item, asking

last a long time. All partners and most children and parents were obtained by both approaches, whereas other role relations are elicited mostly by the exchange approach. Van Groenou et al. (1990) studied test-retest reliability on the same data. If the researcher is interested in a relatively large network with different types of role relations, the exchange approach seems to be the most suitable. The affective approach reliably elicits close kin, but less so other types of relationships. The role relation approach obtains specific parts of the network, but those can be measured very reliably.

The name generator and the role relation approach have also been methodologically compared in a series of more recent studies by Hlebec and Kogovšek (Kogovšek and Hlebec, 2008, 2009; Hlebec and Kogovšek, 2005). Some of the findings were as follows. Limitation to the first named person in the role relation approach gave similar estimates of network composition measures as the name generator approach. However, the percentage for partners in the network was overestimated in the role relation approach, which could be explained by respondents' tendency to name the partner as the first alter, the effect probably being heightened by the explicit limitation to naming only two persons in the question wording. There was a relatively high correspondence between social composition indicators measured by both approaches. The differences were larger for the most important relationships (especially partner and friend and to some extent parents, children and siblings).⁴ The results were similar whether the whole network was studied together or different support subnetworks (e.g., instrumental, emotional) separately. Both approaches seem to be robust enough to produce similar results in further, »secondary« analyses (e.g., typologies of social support networks obtained on the basis of network composition indicators, see Kogovšek and Hlebec, 2009).

To sum up, both approaches, the name generator and the role relation approach, are used individually or in combination in large, comparative cross-national studies (e.g., International Social Survey Programme, General Social Survey, Generations and Gender Programme and European Quality of Life Survey). This raises a number of questions about the comparability of results, biases, limitations and so on among these studies (owing to various types of differences in the measurement instrument (e.g., question wording, approaches used), sampling and so on). Additionally, there are differences between the two approaches in costs and benefits, respondent burden, measurement instrument characteristics and complexity of implementation, which are, again, important issues in large studies.

about the same information for each concrete individual person within the name generator approach.

⁴ Partner and parents tend to be overestimated in the role relation approach, but friends, children and siblings in the name generator approach.

2 The aim of the paper

In our previous studies the name generator was taken as a sort of baseline standard of comparison, a more »accurate« representation of the respondent's support network, to which role relation was compared. Nevertheless, there was always the issue of comparability among the approaches employed (e.g., question wording, limitation of the number of named network members, order of naming persons). Therefore, an experiment was designed that would control for all factors that were found to interact with network composition and the two approaches.

Only two choices were allowed for both the name generator and the role relation approach; question wording was the same, and ranking of the named alters was present in both approaches. We adapted the name generator approach to the role relation approach as much as possible by the following methods:

- using the same question wording in both cases,
- limiting the name generator approach to only two named network members,
- specifying the order for naming network members in the name generator approach (to name the most important person first and the next most important second).

Seven questions altogether, measuring four theoretically defined social support types, were measured in a split ballot experiment. Respondents were randomly assigned to either the name generator or the role relation approach.

On the basis of previous studies (e.g., Hlebec and Kogovšek 2005; Hlebec et al., 2009; Kogovšek and Hlebec, 2008, 2009), several hypotheses were formulated:

- Different cognitive mechanisms may be operating when a respondent is thinking about his/her support resources in terms of actual individual persons (the name generator approach) or in terms of abstract categories of people (the role relation approach). When naming actual persons, the respondent does probably not think about them as categories of people and therefore names persons regardless of which role they have in his/her social network. On the other hand, the role relation approach prompts him/her to think about people in the network as abstract categories. Within some of these categories (e.g., friends, siblings) several individual persons may be interchangeable. Therefore, if the category friend was used in the first choice, it may not be used again in the second choice, since all friends may be already subsumed in the first choice. Therefore, larger differences are expected for roles that are not uniquely defined in the role relation approach (e.g., friend, neighbor, co-worker vs. partner, mother, father – uniquely defined). Larger differences are also expected for strong ties (partner, close family, close friends vs. weak ties – all other ties) and more frequent ties in the name generator approach (depending on social support type) (H1).

- Differences in frequency distributions would vary across different social support types. Larger differences are expected for emotional support, since this type of support is usually provided by strong ties (e.g., Ferligoj and Hlebec, 1999; Kogovšek and Ferligoj, 2004), for which greater differences were already indicated in previous studies (e.g., Kogovšek and Hlebec, 2008). On the other hand, instrumental support is often provided by weak ties; therefore, for this type of support, smaller differences between the approaches are expected (H2).
- Larger differences were expected in the category »no one«, since this category was explicitly offered in the role relation approach but not in the name generator approach (H3).
- In the previous studies (e.g., Kogovšek and Hlebec, 2008) two different data collection properties (naming network members in terms of roles or in terms of actual individual persons and imposing the limit on the number of named persons and imposing no limit) were confounded. Therefore, it could not be established, which of the two may have been the (stronger) cause of differences in the distribution of roles, especially for the second choice. In the case of the present study, the first choice (named person) should give results similar to those from the second choice (named person). Differences should be small regardless of the approach used, since only the first two most important ties were collected in both approaches. However, when differences are in strong ties (i.e., partner), the first choice should be different in distribution. When difference pertains to roles not uniquely defined (i.e., friend), the second choice should be different in distribution (H4).
- Dispersion of roles (frequency distribution) should be higher for the role relation, since weak ties were explicitly offered to the respondent and therefore aiding his/her memory; however, the overall effect should be small as only two ties were assessed (H5).
- Since all the differences in measurement instruments from the previous studies were controlled for, only minor differences in frequency distributions of network composition were expected (H6).

3 Design and data

Data were collected on a convenience quota sample of 683 respondents by students of the Faculty of Social Sciences and the Faculty of Arts at the University of Ljubljana in October and November 2008. Each student interviewed him/herself⁵

⁵ The design of the questionnaire was appropriate for self-administration (students interviewing themselves) and for face-to-face administration (students interviewing other respondents).

and five additional respondents of his own choosing (not necessarily students).⁶ The quotas were designed so that half the respondents had to be male and half female, and within these two groups there had to be one in each of the three age groups (20-29, 30-49 and 50+ years of age). A split-ballot design was used, where respondents were randomly distributed into two groups, each being interviewed by either the name generator (n=331) or the role relation approach (n=352).⁷

Three types of social support were measured with seven network generators:

1. Some tasks in the apartment or in the garden a person cannot do by him/herself. It may happen that you need someone to hold a ladder for you or help you move the furniture. Whom would you ask for help first? Whom would you ask for help as a second choice? (instrumental support)
2. Say you have the flu and have to lie down for a few days. You would need help with various household tasks, such as shopping and similar. Whom would you ask for help first? Whom would you ask for help as a second choice? (instrumental support)
3. Now imagine you needed to borrow a larger sum of money. Whom would you ask for help first? Whom would you ask for help as a second choice? (instrumental support)
4. Say you have problems in the relationship with your husband/wife/partner – problems that you cannot solve on your own. Whom would you ask for help first? Whom would you ask for help as a second choice? Even if you are not married and do not have a partner, try to answer what you would do in such a case. (emotional support)
5. What about a case when you felt a little blue or depressed and would like to talk to someone about it. Whom would you ask for help first? Whom would you ask for help as a second choice? (emotional support)
6. Say you needed advice with regard to an important life decision, for instance getting a job or moving to another place. Whom would you ask for help first? Whom would you ask for help as a second choice? (informational support).
7. Suppose you have a problem at your job, for instance regarding a problem with a work task or a misunderstanding with a co-worker. Whom would you ask for help first? Whom would you ask for help as a second choice? (work).⁸

⁶ The total number of respondents does not add up to a multiple of six owing to data cleaning. In the tables with results the number of respondents is somewhat smaller owing to several missing values and listwise case exclusion.

⁷ In the name generator approach, after collecting the names of persons respondents were also asked the type of relationship (role) (e.g., partner, friend) toward each named person. In the role relation approach persons were named only in terms of their roles.

⁸ In the phase of formulating this name generator, we overlooked that it could measure instrumental and/or emotional support; therefore, we put this name generator in a special category

4 Method

We approached the analysis in two ways. Firstly, simple frequency distributions were analyzed, and secondly, more complex meta analyses were done by Multiple Classification Analysis (MCA), which is a reexpression of the general linear model in which effects are coded from the overall mean instead of a reference category. A more detailed description follows in the next section.

5 Results

5.1 Frequency distributions

In Table 1 frequency distributions of roles (in %) for both instruments are presented.⁹ Statistically significant differences (adjusted residual above 2 or below -2) are marked with an asterisk.

Considering the hypotheses and basic frequency distributions in more detail, one can deduce the following. There are minor differences in frequency distributions for instrumental support (H2) and considerable differences in frequency distributions for emotional, informational and work support. The first exception is the question about borrowing money, which produces very small networks, and the difference is for the second choice category “no one”, which is explicitly offered in the role relationship approach – as predicted by H3. The second exception is the question about help around the garden and apartment, where the category “partner” has the largest frequency, and it is larger for the role relation approach, where it is explicitly offered and forms a very strong tie (H1, H4). One can say that for instrumental support, where support givers are functionally interchangeable and not necessarily very close to the respondent, there are no large differences between the two approaches (H2).

When emotional and informational support are considered, the following can be observed. There are considerable differences across frequency distributions between the two approaches (H2). There are large differences for the second choice (H4) in the category “no one” (H3). The category “no one” is consistently larger for the role relation approach, where it is explicitly offered to respondents. There are also other consistent differences, e.g., the category “friend” when used in the role relation approach receives about half the choices that it would with the name generator approach (H1, H4). One possible interpretation is that respondents

of »work« support. Students who were not working were instructed to imagine a problem with regard to their study.

⁹ In the table average percentage of each role across all respondents and separately for each of the two approaches is presented. Owing to aggregation of data and rounding errors the sum of percentages of the table does not add up to exactly 100% in each row.

already checked “friends” for the first choice, and thus selected another category for the second choice (the role relation approach). Whereas for the name generator approach respondents would give two different names for two different friends. With regard to informational support, there are differences in the category “partner” for the first choice (H1), and in the category “mother”, “good friend” (H1, H4) and “no one” (H3) for the second choice. As mentioned in the question about work related problems, there are two situations described in the question which can result in either emotional or instrumental support. There are differences in the category “co-worker” for the second choice (H4) and the category “no one” (H3).

Table 1: Frequency distribution of network composition indicators (roles) (%).

				<i>Husband / wife / partner</i>	<i>Mother</i>	<i>Father</i>	<i>Daughter</i>	<i>Son</i>	<i>Sister</i>	<i>Brother</i>
<i>Help in household</i>	<i>First choice</i>	<i>NG</i>	38.7*	6.0	14.5	1.8	8.2	1.5	8.5	
		<i>RR</i>	46.9*	8.2	13.1	2.3	12.8	1.7	6.3	
	<i>Second choice</i>	<i>NG</i>	7.9	10.3	11.5	11.5	15.1	2.7	7.3	
		<i>RR</i>	6.5	8.2	12.2	10.8	13.1	4.8	10.5	
<i>Illness</i>	<i>First choice</i>	<i>NG</i>	46.5	24.2	2.4	9.4	3.0	2.4	1.2	
		<i>RR</i>	50.3	23.9	1.7	8.2	5.4	3.4	2.6	
	<i>Second choice</i>	<i>NG</i>	10.3	10.6	9.1	23.3	10.0	8.5	3.6	
		<i>RR</i>	9.7	13.1	8.2	22.2	10.8	8.2	4.5	
<i>Borrowing money</i>	<i>First choice</i>	<i>NG</i>	17.8	16.9	16.9	5.1	4.5	4.2	6.6	
		<i>RR</i>	17.3	18.2	15.3	4.3	5.4	4.0	5.4	
	<i>Second choice</i>	<i>NG</i>	4.8	11.2	11.5	4.2	4.5	6.9	11.5*	
		<i>RR</i>	5.4	13.4	10.2	3.4	4.0	7.4	5.4*	
<i>Problems with partner</i>	<i>First choice</i>	<i>NG</i>	5.1	4.5*	0.9	9.4	1.8	10.3*	3.6	
		<i>RR</i>	7.7	9.1*	0.3	9.7	2.3	5.7*	2.0	
	<i>Second choice</i>	<i>NG</i>	1.8	3.6*	1.5	6.6*	3.6	8.2	4.2	
		<i>RR</i>	1.4	12.2*	2.0	2.6*	3.7	9.1	3.7	
<i>Depression</i>	<i>First choice</i>	<i>NG</i>	37.5	2.1	0.0	6.0	1.8	6.6*	0.6	
		<i>RR</i>	40.9	4.0	0.0	4.8	1.4	2.3*	0.9	
	<i>Second choice</i>	<i>NG</i>	5.7	4.5*	0.9	10.0	2.4	6.3	3.0	
		<i>RR</i>	8.8	13.1*	2.0	6.8	3.7	8.0	2.8	
<i>Advice</i>	<i>First choice</i>	<i>NG</i>	41.7*	13.6	6.3	4.2	4.5	2.4	2.4	
		<i>RR</i>	52.0*	14.5	4.8	3.4	2.6	4.0	2.0	
	<i>Second choice</i>	<i>NG</i>	9.1*	10.3*	8.5	12.1	8.2	6.9	5.4	
		<i>RR</i>	4.0*	16.2*	7.7	9.4	10.2	5.4	2.8	
<i>Problems at work</i>	<i>First choice</i>	<i>NG</i>	18.4	1.3	1.3	1.3	0.6	1.3	1.9	
		<i>RR</i>	22.7	1.7	0.6	0.0	0.6	2.9	2.3	
	<i>Second choice</i>	<i>NG</i>	10.8*	1.9	2.5	1.9	1.3	0.6	3.2	
		<i>RR</i>	18.6*	4.7	1.7	2.9	0.6	1.7	1.2	

* p<.05

Table 1: Frequency distribution of network composition indicators (roles) (%) (continued).

			<i>Grand mother / father</i>	<i>Grand daughter / son</i>	<i>Other kin - my family</i>	<i>Other kin - partner's family</i>	<i>Good friend</i>	<i>Neigh bor</i>	<i>Co- worker</i>	<i>Other</i>	<i>No one</i>
<i>Help in household</i>	<i>First choice</i>	<i>NG</i>	0.6	1.5	3.3	0.6	7.3*	3.6*	0.0	0.3	3.6*
		<i>RR</i>	0.3	0.3	1.7	0.0	3.4*	0.9*	0.3	1.1	0.9*
	<i>Second choice</i>	<i>NG</i>	0.3	1.8	4.5	3.9*	9.1	6.3	0.6	3.0	4.2
		<i>RR</i>	0.9	4.3	3.4	1.1*	13.4	5.7	0.6	1.7	2.8
<i>Illness</i>	<i>First choice</i>	<i>NG</i>	0.3	0.3	0.6	0.0	3.3*	1.2	0.0	1.2	3.9*
		<i>RR</i>	0.3	0.6	0.3	0.0	0.9*	0.3	0.0	0.9	1.4*
	<i>Second choice</i>	<i>NG</i>	0.9	1.2	4.2	2.1	7.6	2.7	0.3	1.8	3.9
		<i>RR</i>	1.4	3.1	3.7	2.0	4.8	3.4	0.0	1.4	3.4
<i>Borrowing money</i>	<i>First choice</i>	<i>NG</i>	1.5	0.0	3.6	2.4	11.5	0.6	0.3	1.2*	6.6
		<i>RR</i>	1.7	0.0	5.4	1.7	9.7	0.3	0.3	5.1*	6.0
	<i>Second choice</i>	<i>NG</i>	1.8	0.0	9.4	4.8	18.4	1.2	1.5	1.2*	6.9*
		<i>RR</i>	3.7	0.0	7.7	2.3	15.1	0.9	2.0	3.7*	15.6*
<i>Problems with partner</i>	<i>First choice</i>	<i>NG</i>	0.0	0.3	3.0	3.3	46.5	1.8	3.0*	0.3	6.0*
		<i>RR</i>	0.0	0.0	1.7	1.1	45.2	0.3	0.6*	1.1	13.4*
	<i>Second choice</i>	<i>NG</i>	0.3	1.2	4.8	2.7	45.0*	2.1	4.8	0.9*	8.5*
		<i>RR</i>	1.1	1.1	5.7	1.7	20.2*	1.7	3.7	3.4*	26.7*
<i>Depression</i>	<i>First choice</i>	<i>NG</i>	0.0	0.3	2.7	0.9	29.6	1.8	1.2	2.7	6.0
		<i>RR</i>	0.0	1.7	3.1	0.6	31.3	0.6	0.3	0.9	7.4
	<i>Second choice</i>	<i>NG</i>	0.9	1.5	5.1	0.6	43.8*	1.8	3.0	2.1	8.2*
		<i>RR</i>	0.3	1.1	4.3	0.6	25.3*	2.3	4.0	1.1	15.9*
<i>Advice</i>	<i>First choice</i>	<i>NG</i>	0.3	0.3	2.4*	0.3	14.8	0.9	1.2	0.6	3.9
		<i>RR</i>	0.0	0.0	0.6*	0.6	10.5	0.0	0.3	0.6	4.3
	<i>Second choice</i>	<i>NG</i>	0.0	0.3	3.0	1.5	26.9	0.6	1.8	0.9	4.5*
		<i>RR</i>	0.0	0.6	6.0	1.1	22.7	0.9	2.6	2.0	8.5*
<i>Problems at work</i>	<i>First choice</i>	<i>NG</i>	0.6	0.0	0.6	0.0	13.9	0.6	51.9	1.3	5.1
		<i>RR</i>	0.0	0.0	0.0	0.0	12.2	0.6	49.4	2.9	4.1
	<i>Second choice</i>	<i>NG</i>	0.0	0.0	2.5	0.6	19.6	0.6	44.3*	4.4	5.7*
		<i>RR</i>	0.0	0.0	1.7	0.6	23.8	0.6	16.9*	9.3	15.7*

* p<.05

It can also be seen that dispersion of roles is systematically higher in the second choice, regardless of the approach used; therefore, hypothesis H5 cannot be confirmed.

5.2 Multiple Classification Analysis

Meta analysis was done by Multiple Classification Analysis (Andrews et al., 1973), which permits the study of relations between multiple independent variables (predictors) and a dependent variable. The method is equivalent to multiple regression, with the advantage of nominal measurement level variables not needing to be dichotomized.

MCA provides us with the following information:

- the overall (grand) mean and group means of the dependent variable for each combination of categories of predictors;
- tests of significance for the effects of single predictors;
- β - the strength of effect for each predictor (with other predictors held constant);
- deviations from the total mean of the dependent variable for each category of a predictor and
- R^2 : the percentage of explained variance for all predictors together.

Firstly, network composition indicators (% for partner, friends etc.) were estimated separately for each support type, for each of the two choices and for each of the two approaches (see also frequency tables). Next, absolute difference was calculated between the name generator and the role relation indicators, which was used as the dependent variable in the MCA.¹⁰ Seven support types were measured, respondents were given two choices and 16 possible role relations were defined; therefore, the meta analytic data base consisted of 224 (7x2x16) units.¹¹

Explanatory variables used in the analysis were as follows:

- Choice (first, second),
- Type of social support (instrumental, emotional, informational, work),
- Type of tie (strong, weak, no one),
- Uniquely defined ties (yes, no),
- Frequency of a type of tie in the name generator and the role relation approach (more frequent in the name generator approach, more frequent in the role relation approach).

Results of the meta analyses are presented below.

¹⁰ Absolute difference was used as the dependent variable since we were interested in differences between the approaches as such and not so much which role had a larger percentage in one or the other approach. Additionally, since the MCA operates also with positive/negative deviations from the total mean, the interpretation of absolute difference is more straightforward.

¹¹ Although the units in this analysis are interdependent and do not form a probability sample, statistical tests were performed nevertheless in order to show, the effects of which factors on network composition indices are »significant«.

Table 2: The effect of choice, strength of ties and type of support on the absolute difference in percentages of roles between the name generator and the role relation approach.

	N	Absolute difference		
		sig. level	β	deviation
CHOICE				
First	112			2.13
Second	112		.056	1.80
TIES				
Strong	112	***		2.38
Weak	98			1.11
No one	14		.306	4.63
SUPPORT				
TYPE				
Instrumental	96			1.48
Emotional	64			2.61
Informational	32			1.91
Work	32		.159	2.18
Multiple R ²		.122		

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

In this section results of meta analyses by the MCA method are presented. Since we have too few data to put all predictors into one analysis (which would result in empty or very small subgroups), two separate analyses were done. Table 2 presents the results of the analysis with choice, type of tie and type of social support as the predictors. It can be seen that only type of tie has a strong, statistically significant effect on the difference in network composition between the two approaches. Differences (see multivariate deviation from the grand mean) are largest with the category “no one” (H3), followed by strong ties and weak ties (H1). The effect of the type of social support is also statistically significant, but only marginally (H2). As hypothesized, differences are greatest for emotional support, followed by work, informational and instrumental support. Comparison of first and second choices shows no statistically significant differences in network composition (H4). By these three predictors, 12% of variance is explained.

Table 3 shows the results of the second MCA analysis. Here the effects of uniqueness of ties and frequency of a type of tie in both approaches are studied. In this case only uniqueness of ties has a marginally significant effect, but the deviations from the grand mean are inconsistent with hypothesis H1 – differences are larger for unique ties (e.g., partner). Only 2% percent of variance is explained by this model.

Table 3: The effect of uniqueness of relationship and frequency of appearance of a role on the absolute difference in percentages of roles between the name generator and the role relation approach.

	N	Absolute difference	
		sig. level	β deviation
UNIQUE		*	
Non-unique relationship	168		-.17
Unique relationship	42	.124	.69
MORE FREQUENT IN NG			
More frequent in RR	94		-.02
More frequent in NG	116	.005	.01
Multiple R ²		.015	

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

6 Discussion and conclusions

In conclusion we could say the following. Comparison of the name generator approach and the role relation approach was performed at two levels. First, comparison of frequency distributions of role categories shows the predicted differences. Social support types yield different results; provision of instrumental support is similar in both approaches, whereas provision of emotional and informational support is estimated differently, depending on the approach (H2 confirmed). The reason for this may be that emotional support is usually provided by strong ties, while instrumental support is often provided by weak ties as well. Major differences were observed for the most important ties (partner) and for ties that are not uniquely defined in the role relation approach (H1 confirmed). However, we should treat the latter result with some caution, since the effect was relatively weak and the percentage of explained variance low. Large differences were observed in the category “no one”, since this category was explicitly offered in the role relation approach, but not in the name generator approach (H3 confirmed). Here the researchers face the same dilemma as with offering the »don't know« possibility in survey questions. On the one hand, there are respondents who may not have anyone to turn to in a specific situation. It is substantively important to detect and study who such people lacking support resources in different life situations are (their gender, age, etc.). On the other hand, the »no one« possibility may give uninterested, distrustful or simply tired respondents an easy and quick way out of the survey interview. In some cases category “no one“ may have been used more as “not applicable” category, particularly with retired respondents regarding work support, but not with students who got instructed to imagine a problem related to their studying. In the future it could be interesting to study how respondents understand and use category “no one” with one of the qualitative testing methods. The first choice gave results similar to those from the second

choice. However, when differences were in strong ties (i.e., partner), the first choice should be different in distribution. When difference lay in roles that were not uniquely defined (i.e. friend), the second choice was different in distribution (H4 confirmed). With regard to dispersion, no important differences on the level of frequency distribution were detected.

Further analysis on network composition showed that differences were larger for uniquely defined roles (the main reason would be large differences in the percentage of partners – see also frequency tables) and for strong ties, but not for more frequent ties in the name generator approach (H1 partially confirmed).

Differences were slightly larger for the first choice, but the effect is only marginally significant (H4 not confirmed).

Dispersion of roles was slightly larger for the name generator approach, which is contrary to our expectation (H5 not confirmed). It seems that the open-ended format of the name generator approach still produces a greater variety of different ties and that the offered list of ties in the role relation approach is still limiting, despite including types of ties that respondents may not remember to include without prompting (e.g., grandchildren). The reason may be precisely in the already mentioned interchangeability of some roles (e.g., if a respondent has chosen “friend” as the first choice he/she may mean “any of the friends” and would chose another role altogether as the second choice, e.g., “brother”). Nevertheless, differences were small and appear in some support questions only and mainly for weak ties (e.g., co-workers, other kin, neighbours), sometimes also for grandchildren and grandparents.

Differences in frequency distributions between the two approaches were small (mostly up to 5%), therefore confirming hypothesis 6.

In this paper the analysis was done on frequency distributions and on the aggregated level – comparison of differences in the frequency distributions of network composition.¹² With regard to basic frequency distributions, for instrumental support it does not matter which approach we use. Similar findings were obtained for both approaches. Therefore, the role relation approach can be used without fear that this cheaper and simpler method would give biased results as compared to the name generator approach. There is, however, a quite different situation with emotional and work support. Whenever a non-unique category is the most frequent or the most important provider of social support (close friend, or co-worker for work related problems), there are huge differences (20%) in frequency distribution for the second choice. On the one hand, it is well established (e.g.,

¹² In Kogovšek and Hlebec (2008) the differences in network composition indicators were calculated (and compared) in two ways. The aggregated level means that average percentage for each role was calculated across all respondents, for each approach separately, and afterwards differences in percentages were calculated between the approaches. The individual level means that first, for each respondent, differences were calculated between the two approaches for each role, followed by averaging the differences across all respondents and comparing them between the two approaches.

Holland and Leinhardt, 1973) that fixed choice designs are severely limited. However, if such a design is used and until it is established more precisely, what kind of mechanisms produce these differences we would strongly advise against using the second choice (the second most important provider) but recommend limiting responses to only one choice. Also, we would strongly recommend researchers using secondary data bases – cross-country comparative surveys (e.g., Gender and Generation Programme, International Social Survey Programme, European Quality of Life Survey) to carefully consider the measurement instruments which are used to assess social support provision before analyzing and interpreting the data.

Furthermore, we advise using compound measures of network composition, owing to smaller overall differences than differences in individual frequency distributions.

In our future work we could analyze the differences calculated on the level of individual respondents, since some of the previous research showed these to be larger than on the aggregated level (e.g., Kogovšek and Hlebec, 2008). A more detailed analysis could be done at the aggregated level by using control variables such as respondent personal characteristics (e.g., gender, education or age). This study and some related studies focus on social support networks and how different measurement approaches (i.e., the name generator and the role relation approach) affect the characteristics of such networks. In the future, the use of different measurement instruments could be applied to different types of networks (e.g., work related networks, academic networks) and comparability and generalizability of the results could be studied across different types of networks.

Finally, a few words on the limitations of our study and possible ways to overcome them in future research. In our previous and the present experiments we have assumed the name generator approach to be some kind of a gold standard, to which other approaches should be compared. It supposedly produces the most complete data, however it may be more costly and burdensome for respondents. The role relation approach has just the opposite characteristics, it offers less complete data, but is supposedly cheaper and easier on respondents. Therefore, if no (large) differences are found between the approaches, the less costly and the less burdensome could be used, but if differences are found, it is still advisable to use the name generator approach. On the other hand, the extent of burden for respondents in either of the approaches has not been systematically tested yet. Therefore, one possible line of further research could be to test, whether the role relation approach is actually less burdensome compared to the name generator approach, e.g., by estimating the average length of interviews and non-response in both approaches or investigating the extent and type of burden by using qualitative methods (e.g., semi-structured interviews, focus groups). Additionally, the two approaches may be operationalizing different types of social networks – thinking about network members in terms of abstract roles (within which actual persons may be interchangeable) versus in terms of actual, individual people. Therefore,

their properties (e.g., network composition) may not be (completely) comparable from a conceptual point of view. If a researcher is interested in the diversity and importance of different actual support resources and needs as precise estimates of network properties as possible, then perhaps the name generator approach is more advisable. But if the research question is about availability of certain support resources in more general terms, then the role relation approach may be suitable enough to use.

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