

Project Background and Study Design Overview

The V*Net 2023 (Volunteer Network 2023) project collected data among volunteers at the three largest Hungarian music festivals in 2023. The festivals were 4 to 6 days long. The target group consisted of contracted festival volunteers, coordinated by the Festival Volunteer Center, an independent organization. Any volunteer could participate in our study if registered for the research on site.

The volunteer organization employs permanent staff to manage volunteer programs for different festivals and events. Volunteers contract with volunteer organization for specific projects or time frames, like individual festivals or events. A strong partnership between our research team and volunteer organization was crucial for data collection.

Due to privacy concerns, volunteer organization was unable to provide a pre-defined list of volunteers for the festivals. However, they permitted on-site recruitment of participants for our research and allocated us a stand at the volunteer base, facilitating the continuous researcher presence, frequent contact with participants, and engagement in data collection during the festivals.

While the festivals lasted for four to six days, volunteers were typically present for a longer time as they checked in three to five days before the event started. The volunteer network boundaries were defined based on officially constituted status (Laumann et al. 1989). Individuals who finalized their volunteer contracts with volunteer organization by paying the deposit were considered volunteers at the festivals. FÖK provided the research team an estimate of the total number of volunteers who paid the deposit during each festival, and the precise number after the end of the festivals (N_1 =146, N_2 =86, and N_3 =651).

Two survey rounds were carried out (cf. Figure below). First, at the beginning of the festival, we asked for registration, socio-demographic data, pre-existing relationships (Smith 2021), and motivation (Esmond and Dunlop 2004, adapted to Hungarian by Bartal and Kmetty 2011). Second, at the end of the festivals, we collected information on network ties, norms, and norm violations among festival volunteers. The survey consisted of 120 items, with 40% of them related to social networks (25% to ego networks and 15% to complete networks). The questionnaire took approximately 10-15 minutes to complete in the first and 15-20 minutes in the second round. Motivational gifts were provided to encourage participation and completion of the questionnaires.



Methodology and Data Collection Process

Description of the data collection platform

Pre-designed survey interfaces, such as Google Forms or Survey Monkey, do not support the collection of social networks data well, especially without a predefined member list. Hence, we developed a new web-based network collection survey tool using Reakt App (https://create-react-app.dev/). This platform functioned as an application accessible via a link that participants received as a QR code. The link eased participant registration. The application constructed a database of registered names to assist answering social network questions. The platform handled multiple surveys, tracked their completion, and visualized the progress of completion.

Volunteers providing consent were asked for their full names and nicknames (if applicable). They accessed five questionnaires: three in the first (socio-demographic characteristics, motivation, and first networks) and two in the last round (networks and norms). Participants who had registered were reminded about the last round and incentives for completion. To gather relevant background information and ensure validity checks concerning the emergence of networks, norms, and norm violations, a total number of 60 interviews were conducted between the two survey rounds.

For the first network survey, registered participants nominated peers they had already known before the volunteer program. We used these registered names as a background list of a network roster, minimizing

cognitive burden for the respondents. At the largest festival, however, we permitted participants to add new names in the last round, due to a high number of missing registrations in the first round.

During data collection, personal data, including registered participants' names, were stored in our database along with unique codes. Pre-existing relationships reported in the first survey round were stored until the end of the festival and anonymized for analysis. Names matching registered respondents were replaced with their IDs, while non-registered names received new IDs. To match registered names with nominations in the first social network survey, we utilized the Jaccard distance measure of text similarity for the names in combination with human annotator checks. The Jaccard index measures the overlap between two sets of data, in this case, two strings, compared to the union of the two sets of data. We matched nominations with the most similar registered name. The matchings were reviewed by researchers. Any unmatched or ambiguously matched names received new IDs.

Fieldwork and the utilization of spatial boundaries

The Volunteer Base serves both as an administrative and social hub for the volunteers at the festivals. It is accessible only to them, their mentors, and coordinators. At the beginning of festival, volunteers are required to attend a training session, they sign their contracts and receive volunteer wristbands here. Additionally, volunteers have to check in and out of their shifts, which means they visit the Volunteer Base at least twice on shift days. Volunteers also receive one hot meal on shift days, available for pickup here. The Volunteer Base is equipped with phone charging stations, free water access, refrigerators, and space for resting or socializing.

A crucial part of our research strategy was that we gained access to and established continuous researcher presence at the Volunteer Base. We strategically utilized spatial boundaries of the Volunteer Base for data collection (Figure below). Researchers ensured the visibility of the research stand/desk, motivational gifts, and project advertising. Researchers engaged volunteers at the volunteer base during their formal introductory information, presenting the research project and distributing motivational gifts. For the first set of questionnaires, volunteers were approached when they initially checked in, received training, and paid their deposits, which occurred in small groups over a few days scheduled for different times. Given the hectic nature of arrivals, researchers remained present throughout the day to accommodate volunteers checking in outside their scheduled slots.





The research stand/desk was positioned strategically in the most frequented area of the Volunteer Base, near beer tables and benches for eating and socializing, and close to amenities like water refill stations and refrigerators. The proximity to the check-in/check-out desk allowed us to encounter potential

participants during their registration as volunteers. This positioning facilitated seamless engagement with volunteers and enhanced the likelihood of their participation in research activities.

Volunteers were provided with a QR code upon entering to the Volunteer Base (Entrance) and during their introductory training (Tables). If they agreed to participate, the QR code directed them to the study's registration page, where they completed a written consent form and initial network survey on pre-existing social networks, demographic background, and motivations for volunteering. The platform tracked the completion of the first three surveys, and participants received a small gift, typically a healthy and nutritious muesli bar. The number of gifts was increased for the second data collection and interview participation. Volunteers could complete the surveys on their smartphones, but the research team provided alternative devices in case of technical problems.

Engagement with participants was essential to validate survey responses and gather background information about the emergence of norms, norm violations, and rules. This was achieved through inperson interactions at the Volunteer Base. The research team also conducted qualitative interviews, focusing on observed and committed norm violations and their impact on the volunteer community. These interviews allowed volunteers to share confidential experiences such as instances where they exchanged shifts without permission.

Outcomes

Overall, our field strategy successfully responded to multiple challenges. Intensive researcher presence and strategic spatial positioning emerged as crucial factors enabling a high participation rate and reliable social network data in a temporary organization. By the differentiation of various types of contacts (e.g., personal communication, work-related communication, spending free time together, help-seeking, and providing help), we could illustrate how formal and informal networks intersect or diverge. In addition, our data collection reduced the cognitive burden of respondents by assisting them with names from the network roster of registered volunteers.

The vast majority of volunteers registered for the study at the beginning of each festival, and the majority of them completed the last network questionnaire, especially at the second and third festivals (Table 1). While the response rate declined, our data clearly indicates the emergence of network ties within this short time frame.

| | Festival 1 | Festival 2 | Festival 3 |
|--|-------------|------------|-------------|
| Target group | 146 | 86 | 651 |
| (Signed volunteer contracts) | | | |
| Registered research participants | 125 | 82 | 458 |
| Participation rate | 86% | 95% | 70% |
| Completion of the first network questionnaires <i>among registered</i> <i>participants</i> | 122 (97.6%) | 79 (96.4%) | 451 (98.5%) |
| Number of ties in the first network questionnaire | 136 | 64 | 586 |
| Completion of last network questionnaire <i>among registered</i> <i>participants</i> | 73 (58.4%) | 65 (79.3%) | 319 (69.7%) |
| Number of ties in the last network questionnaire | 405 | 235 | 1123 |

Table 1: Volunteers and respondents at each festival

Our research design showed that careful planning and execution could reach up to 95% of the target group and collect quality network and additional explanatory data from up to 79% of participants with on-site online surveys. Despite the methodological limitations and practical constraints, our network surveys generated rich findings regarding short-term volunteers' networks, with important additional insights from on-site participant observation and interviews.

We have shown how the challenge of collecting high quality network data in transient organizations can be overcome. Although the literature has not yet fully recognized the importance of studying social networks in short-term work groups, we urge researchers not to dismiss such studies based solely on the short duration of interactions. According to our findings, the response rate could be further improved by promoting the research to the potential target group beforehand. Technological improvements could also serve as better controls for the respondents' research status, such as recording check-in and check-out time, location inside or outside the base, being on shift or not, having lunch or not, number of completed questionnaires, collected by a smart watch. A more nuanced understanding through the application of new tools will further enhance the understanding of cooperation, efficiency, norms, and conflicts in transient organizations.

Project Team

Eliza BODOR-ERANUS¹, Eszter VIT¹, Károly TAKÁCS^{2,1}, Zsuzsanna SZVETELSZKY^{3,1}, Ákos BOCSKOR^{4,1}, Béla JANKY^{5,1}

¹ Computational Social Science - Research Center for Educational and Network Studies (CSS-RECENS), HUN-

REN Centre for Social Sciences, Tóth Kálmán street 4, H-1097, Hungary

² The Institute for Analytical Sociology (IAS), Linköping University S 601 74 Norrköping, Sweden

³ Károli Gáspár University of the Reformed Church in Hungary, Institute of Social and Communication Sciences, Department of Sociology, Faculty of Humanities and Social Sciences, Budapest

⁴ Institute of Sociology of the Czech Academy of Sciences

⁵ University of Technology and Economics, Faculty of Economic and Social Sciences, Budapest

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