

The following is a detailed account of the data limitations and the consequential adjustments made during data entry.

Participants could leave one or more response options blank, e. g. ranking only one or two of the top three functions for communication/reliance. Thus, as described in the pre-registration, if a participant had missed ranking some of the higher levels of a question (e.g. “communicated with the most”), but filled out some of the lower levels (e.g. “communicated with second most”), the lower levels would be moved up to take the place of the missing value. The same adjustment was applied for instances where higher rankings were excluded. Such adjustments were made four times for communication networks (session 3, 1x; session 4, 1x; session 5, 2x) and two times for reliance networks (session 5, 2x).

Experiment 1, the response format (pen and paper survey) did not restrict participants from ranking the same function twice, meaning for instance, that they could rank the same team member as being both the person they communicated most with, and the person they communicated second (or third) most with. It is unclear what participants meant by such responses, and they do not fit our intended plan for scoring the responses. In instances where a participant had ranked the same team member twice, only the highest ranking was registered. If there were lower ranked functions they were moved up in ranking accordingly. This adjustment was made one time in the reliance network of recording session 11.

In actual emergency events, teams sometimes bring in an additional personnel coordinator (PK) or marine vessel coordinator (SM). This may be due to expecting the workload for this function to require two people. In some cases in Experiment 1, two individuals representing the same function attended a data collection session. In such instances, the permanent team member was labeled “PK1” or “SM1”, and supplementary individuals were labeled “PK2” or “SM2”. However, the assignments into “1” and “2” may not have been clearly agreed upon and known to all of the other team members, as the responses indicate inconsistencies in how the assignments were used. As each node in the networks were meant to represent a specific team function, double ratings to or from any given node could lead to a skewed network. The “double” nodes would likely be depicted as highly central and thus, influential, as a result of being able to rate and be rated twice as many times as team functions represented by only one individual. All ratings reporting PK1, PK2, SM1 or SM2 were therefore rescored to remove the numerical assignment, thus identifying a

function in the team rather than a team member. In networks containing responses from two individuals filling the same function, the data was reduced so that it generated the same input to the network as if it had come from a single member (i.e. just three 'communication' ratings and three 'reliance' ratings). Participants who had identified themselves as being primary in this function (i.e. PK1 or SM1) was given priority, and this member's ratings were used rather than the participant identifying themselves as being secondary (i. e. PK2 or SM2). Following from the above description, in instances where rankings from PK1 or SM1 were missing, the rankings of PK2 or SM2 were inserted into the analyses, according to the original ranking order. For instance, if a PK1 had ranked only one other team function, and this was ranked in third place, that response was moved up to first place, and the rankings of PK2 would be inserted in second and third place after PK1's ranking. In some cases, two individuals filling the same function rated each other (i.e. PK1 and PK2 rated each other, or SM1 and SM2 rated each other). Such rankings were excluded from the analysis, and the function listed next in the ranking was moved up to that place, in accordance with the adjustments implicated in cases of self-ranking. All PK1/PK2 and SM1/SM2 were re-coded, and their rankings were combined to express the function they represent. This adjustment was made for all recording sessions in experiment 1 (recording session 1-6) for both network types, for a total of 12 instances of re-coding. Insertion of scores from a secondary function was done a total of four times, two times in communication networks (session 2, 1x; session 3, 1x) and two times in reliance networks (session 2, 1x; session 3, 1x).

In both experiments, respondents were able to state their own team function as an answer to the questions. Such a response may be due to participants misunderstanding the question, interpreting it differently than was intended, or making a mistake in responding. In instances where a team function was performed by two participants, they may have stated their own function to indicate that they communicated and/or relied upon the other individual performing the same function. Such responses are difficult to fit into a social network analysis, as they will distort or skew the network by, for instance, giving their own function more ties or weights, resulting in misleading centrality scores. To correct for this type of erroneous response, self-rankings were excluded from the analysis. This adjustment was made 11 times for the communication networks and 13 times for the reliance networks. In all

but one case (reliance network session 5, function 'K' ranking itself) these adjustments were due to the aforementioned, doubled 'PK' and 'SM' functions ranking themselves.