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Taking action to improve health for all

Transforming relationships: how organizational change reshapes networks in healthcare

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Context: Organizational change

- Organizational change in healthcare is inherently complex and continuous. (Castiglione & Lavoie-Tremblay, 2021)
- The literature has identified several critical organizational factors, such as infrastructural support or teamwork culture, that can facilitate or hinder the success of changes in healthcare organizations. (Nilsen et al., 2020)
- The success of change initiatives depends heavily on recipients' reactions—ranging from support to resistance. (Bartunek et al., 2006)
- Our study focuses on the antecedents for the successful implementation of a change initiative, specifically change-supportive behavior. (Herscovitch & Meyer, 2002)
- In particular, we focus on the change of relationships among healthcare professionals affected by a major organizational change that modifies their way of working and daily activities.

Context: Multiplexity and Interplay

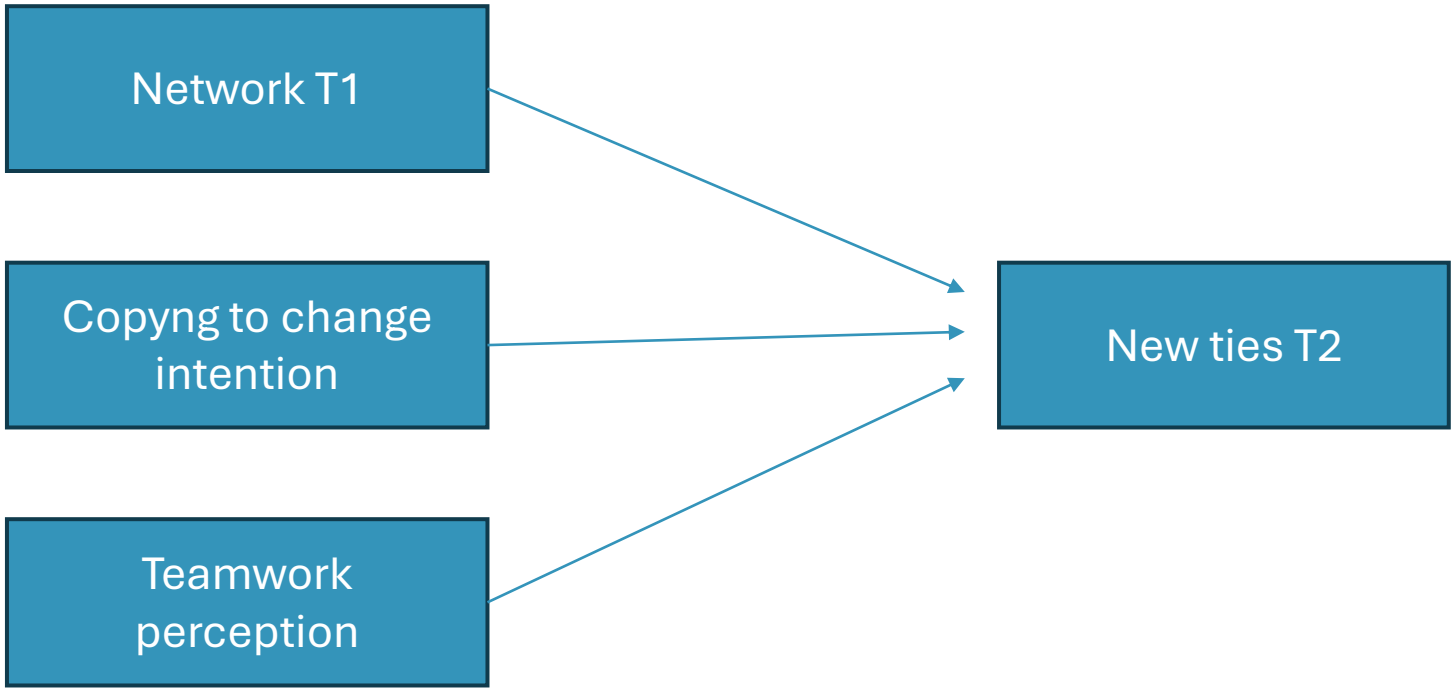
- Existing literature on organizational change and its effect on network modification generally considers only one type of network. (Ertug, Brennecke & Tasselli, 2023)
- This single point of view of the employees' relations does not consider multiplexity, namely the coexistence of more than one type of relationship between a pair of actors. (Ertug, Brennecke & Tasselli, 2023)
- Relationships that appear new in one network may already exist in another. (Shipilov, 2012)

Research Gap

Our research seeks to deepen understanding of interorganizational networks and their interaction with change in healthcare settings

- What antecedents increase the likelihood that healthcare professionals form new ties during a process-based reorganization?
- How do different pre-existing task-related relationships contribute?
- How do cognition and intentions towards change held by potential relational partners affect the emergence of new connections?

Model


Network T1
Copyng to change intention
Teamwork perception
New ties T2

Hypothesis 1

Hp 1a: if two health professionals have an advice tie at T1 (before the change), they will be more prone to create a SME tie at T2 (after the change)

Hp 1b: if two health professionals have a SME tie at T1 (before the change), they will be more prone to create an advice tie at T2 (after the change).

- Individuals with pre-existing advice ties are more effective in sharing knowledge and acquiring complex skills during organizational change, fostering SME ties crucial for integrating new information (Cross, R., & Sproull, L., 2004).
- In times of change, professionals seek trusted colleagues for guidance and reassurance, leading to the evolution of relationships that extend beyond expertise to ongoing advice and support networks (Ibarra, H., & Andrews, S. B., 1993).

Hypothesis 2

Hp 2a: if two health professionals have different copying to change intentions at T1 (before the change), they will be less prone to create a SME tie at T2 (after the change)

Hp 2b: if two health professionals have different copying to change intentions at T1 (before the change), they will be less prone to create an advice tie at T2 (after the change)

- Differences in intentions to cope with change can impair the formation of new relational ties, particularly advice ties, which depend on social identity and perceived group cohesion (Ashforth, B. E., & Mael, F. ,1989).

Hypothesis 3

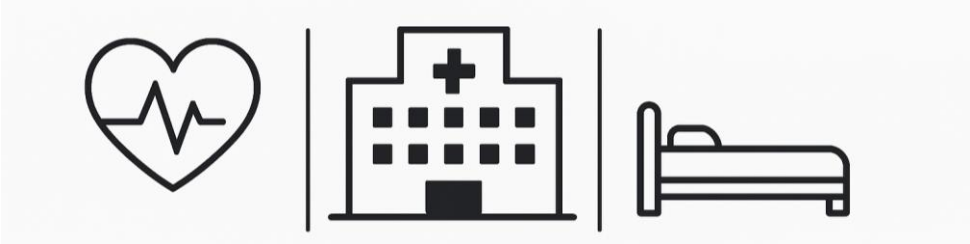
Hp 3a: if two health professionals have a different perception of teamwork at T1 (before the change), they will be less prone to create a SME tie at T2 (after the change)

Hp 3b: if two health professionals have a different perception of teamwork at T1 (before the change), they will be less prone to create an advice tie at T2 (after the change)

- Perceptions of teamwork value are crucial for effective collaboration. When individuals differ in their views of teamwork value, these discrepancies can hinder effective collaboration and the formation of strong professional ties. (Rousseau, D. M., & Tijoriwala, S. A., 1999

Study setting

- Study conducted in a cardiovascular department of an Italian teaching hospital.
- Department has 88 beds, employs 112 healthcare professionals.
- Reorganization in April 2023 focused on restructuring high-cost care activities via clinical pathways. (processes based)
- Physicians and nurses were primarily affected; technicians less so



Methods

- Utilized social network analysis to study interprofessional ties.
- Paper survey conducted 6 months after reorganization with **67 participants (60% response rate).**
- Participants provided data on demographics and their advice and SME networks before and after change.
- Analyzed new ties as dependent variables; previous networks, teamwork perception, coping with change as independent variables.

Results 1/2

LR-QAP regression analysis indicated that sharing common alters within the advice network predicts the formation of new SME ties (OR = 3.762, p < .041).

Conversely, differences in tenure between two actors negatively affect the creation of new SME ties (OR = .964, p = .058).

Our Hypothesis 1a is supported, as there is a positive and significant association between existing advice network relationships before the change and the subsequent formation of SME ties (OR = 4.907, p < .003).

Additionally, individuals with similar intentions regarding copying with change are less likely to establish SME ties (OR = 1.569, p < .026), supporting Hypothesis 2a.

Table a			
Logistic regression quadratic assignment procedure (LR-QAP) regression results			
Dipendent variable: New SME Ties			
Parameters	Coef	OR	Sig
Intercept	-5.106	0.006	0.013
Network Variables			
Advice network T1 (Hp 1a)	1.591	4.907	0.003
Advice network T1 transitivity	0.077	1.080	0.288
Advice network T1 common alters	1.325	3.762	0.041
SME network T1 reciprocity	0.358	1.431	0.236
Attributional Variables			
Same Gender	0.196	1.217	0.266
Tenure Similarity	-0.037	0.964	0.058
Same Ward	0.149	1.160	0.298
Copying with change Similarity (Hp 2a)	0.450	1.569	0.026
Teamwork perception Similarity (Hp 3a)	-0.179	0.836	0.195

Results 2/2

Regarding the creation of new advice ties after the change, we observe a positive and significant effect for having common alters: (OR = 3.746, p = 0.022).

Tenure, however, has a significant but negative impact (OR = 0.964, p = 0.071) on the creation of new advice ties.

We found significant positive associations between the dependent variable and the copying with change variable (OR = 1.371, p = .087).

Additionally, we found significant positive associations between the dependent variable and teamwork perceptions (OR = 1.640, p = .015), confirming that dissimilarities in the perception of the value of teamwork are negatively related to the creation of new advice ties. These findings provide strong support for Hypothesis 3b

Table 3b

Logistic regression quadratic assignment procedure (LR-QAP) regression results

Dependent variable: New Advice Ties

Parameters	Coef	OR	Sig
Intercept	-3.501	0.030	0.792
Network Variables			
SME network T1 (Hp 1b)	-0.876	1.416	0.477
Advice network T1 transitivity	0.114	1.121	0.189
Advice network T1 common alters	1.321	3.746	0.022
SME network T1 reciprocity	-0.104	0.901	0.477
Attributional Variables			
Same Gender	-0.334	0.716	0.114
Tenure Similarity	-0.037	0.964	0.071
Same Ward	-0.158	0.854	0.355
Copying with change Similarity	0.316	1.371	0.087
Teamwork perception Similarity	0.446	1.640	0.015

Discussion

- Despite growing interest, insights into network adaptation mechanisms are still limited.
- Advice ties significantly influence the formation of SME ties, underscoring the reciprocal nature of these relationships.
- A lack of intention to cope with change can obstruct new tie creation, aligning with homophily principles where similarity facilitates connections.
- Healthcare managers should understand existing networks and their dynamics to enhance adaptability and resilience during organizational change.

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THANK YOU

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