

Comparative Analysis of Survey Instrument to Social Network Analysis

to Assess Key Team Attributes

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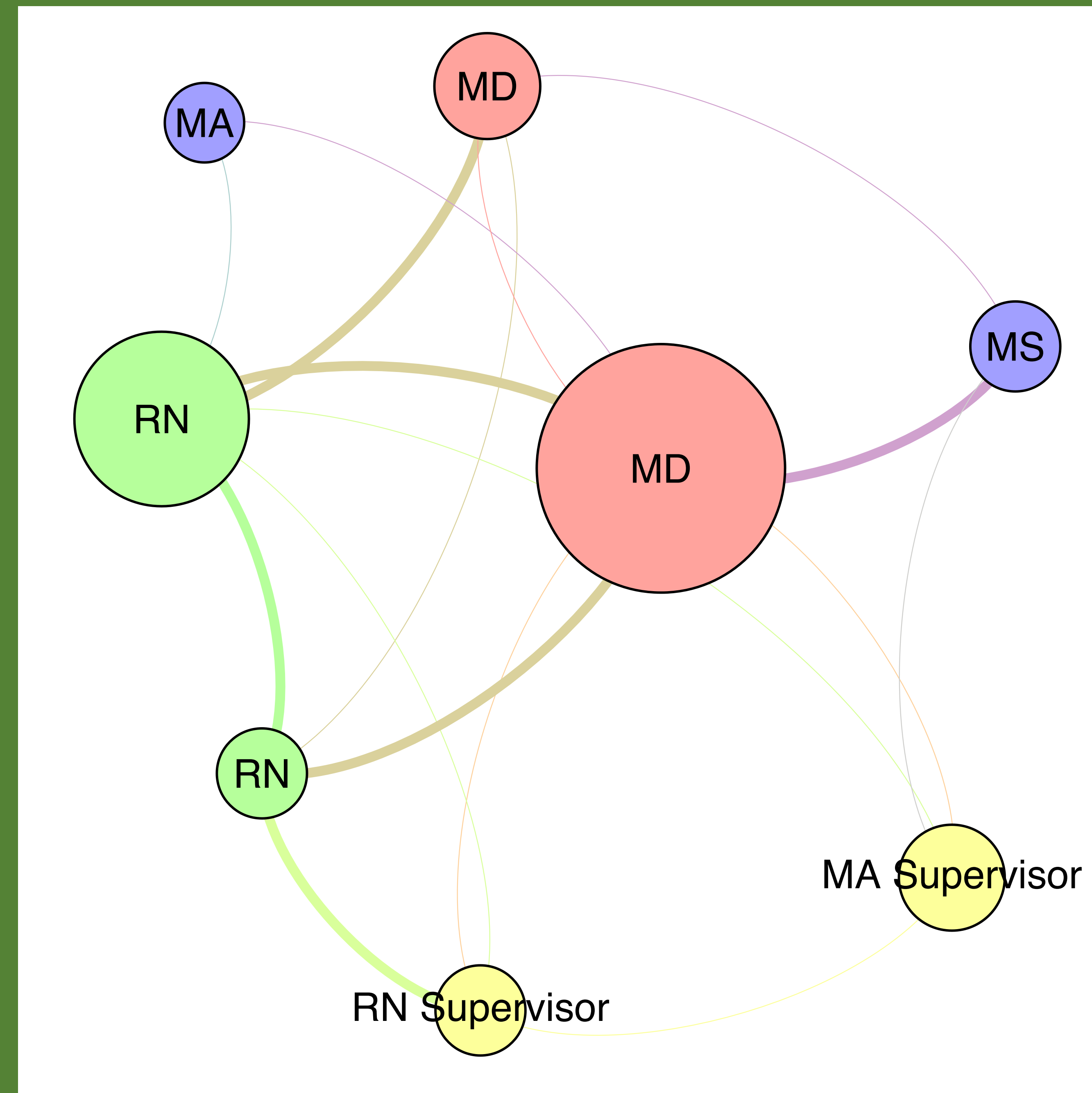
IMPORTANCE

- Primary and Specialty care require effective teams to deliver high quality, safe, patient-center care.
- A needs analysis completed early team development can identify opportunities to improve evidence-based team attributes (Lacerenza et al. 2018).
- Most validated team survey instruments are **labor intensive** and **tedious**
- Social Network Analysis (SNA) measures various elements of networks eg, teams **using a single question.**
- How do the insights surfaced by SNA compare to those from comprehensive validated survey instruments eg the Team Development Measure (TDM, Stock et al. 2013).

METHODS

- The TDM and SNA surveys were created using Qualtrics software and administered via email to the Atrius Health Weight Management Team
- TDM responses were scored using the scoring methodology listed on PeaceHealth and visualized using Excel
- SNA responses were analyzed with *Gephi*, an open-source network analysis and visualization software.
 - Density: Connection strength
 - Closeness centrality: distance from other members
 - Betweenness centrality: Bridge over communication gaps
 - Clustering Coefficient: predicted future collaboration
- Report results were shared with team members for qualitative comparison

Social Network Analysis generates complimentary insights to a validated teamwork survey

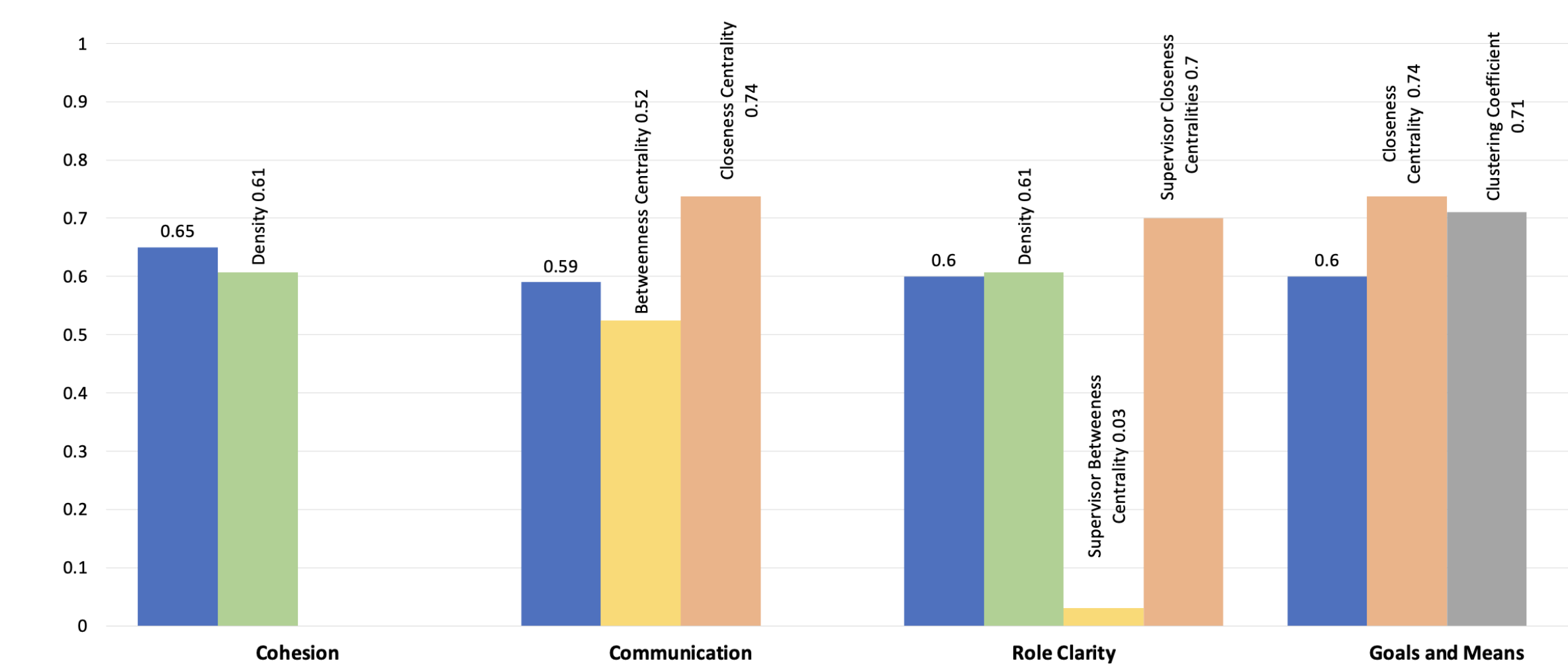


- Social Network Analysis efficiently measured 3 key attributes of successful teams in 1 question traditionally obtained through 31 questions
 - Cohesion
 - Communication
 - Role Clarity
 - Goals and means
- Social Network Analysis *uses compelling and straightforward graphics* to convey attributes of well-developed teams

RESULTS

- TDM: Stage 2 “Building Communication”

Normalized TDM Attribute Scores vs. SNA Metrics



DISCUSSION

Where They **AGREE**:

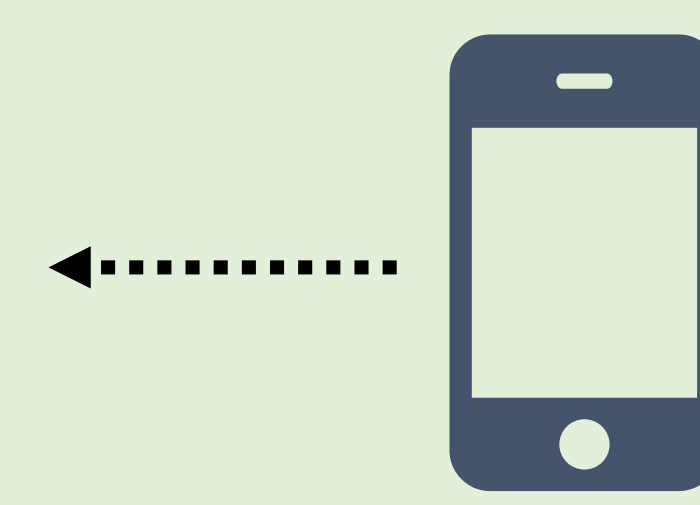
- Cohesion correlates with connection strength
- Communication correlates with the total number of “bridges” and average distance members are from each other.
- Role clarity is correlated to team connection strength and supervisor connectedness.
- Goals and Means Clarity relates to a team’s mastery of the foundational attributes of cohesion and communication, and may be correlated to future collaboration predictions

Where They **DISAGREE**:

- Goals and Means does not have a distinct correlational SNA metric, however it may be related to foundational attribute metrics.

Implications for Practice:

- Further exploration into the combined use of the TDM and SNA as a communication assessment would be beneficial in increasing the efficiency of team development
- Additional research on team development interventions targeted to improve specific attributes or metrics would be beneficial for implementation of a team development program that utilizes the TDM and SNA



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