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REVIEW ARTICLE

COMMUNICATION NETWORK

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ARTICLE DETAILS

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ABSTRACT

Communication network is used a communication network are central to the to describe the way in which specific people in a group interact with one another. Academics use varying definitions of "communication network" to refer to the same underlying concept. These three critical dimensions are typically used to characterize the communication network: (1) the network structure, (2) the interactional patterns, (3) the functional characteristics.

KEYWORDS

Structure Communication, Network, Interactional Patterns, Functional Characteristics

1. INTRODUCTION

To understand the nature of a communication network is to analyze its size and the way in which its members interact with one another. Increased density in a network is characterized by a greater abundance of connections or ties between its nodes. The relationships between nodes in a network are the primary focus of the patterns of interaction between them. An observer may care about, for instance, the frequency of interactions, the depth of friendships, and the nature of relationships between members of a group. The directionality (i.e., one-way vs. two-way) and reciprocity (i.e., one-way vs. two-way) of communication between different pairs of members are also characteristics of interactions. Scholars in the field of health communication often zero in on the third dimension of a communication network, which is its functional characteristics (Berkman, and Glass, 2000). The various forms of social support (emotional, instrumental, and informational) that can be provided by network's *raison d'être*.

There are two main methods for gauging the efficacy of a given network for exchanging information. Establishing a person's egocentric network is the standard practice. An individual's social connections can be determined using the egocentric network by having that person make a list of their ties and then analyze the interactional patterns between each of those ties (e.g., list the nature of the relationship). Though this approach avoids more complex analyses of the network's structure, it still allows researchers to pinpoint key players in the communication network (i.e., those listed more often).

The *sociometric approach* is the second (of many) ways to quantify a communication network and calls for every node in the network to detail its connections to every other node. Most studies examining the relationship between social networks and health use an egocentric approach to network measurement due to its convenience and reliability. Marital status, the number of close friends one has, and the frequency with which one communicates with them are just a few of the seven components of the widely used Berkman-Syme Social Network Index, which can accurately predict a variety of health outcomes.

2. NETWORK EFFECTS ON HEALTH

It is common practice for researchers studying the relationship between communication networks and health to begin by determining a subject's social network, and then to compare that network to health outcomes of interest. The range of possible health outcomes includes but is not limited to mortality, well-being, and the adoption of potentially harmful behaviors (Fujimoto, and Valente, 2012). The discussion below is structured around network structure, interactional patterns in the network, and the influence mechanisms of communication networks in order to provide an overview of the scholarship in communication networks and health (Rice et al., 2012).

3. STRUCTURE OF NETWORKS

Any distinction made by the researcher regarding the size of a particular network is purely arbitrary. Size of a network is defined as the total number of connected nodes. The study also provides a definition of what constitutes a network tie. Some research may only be interested in very close personal relationships (such as marital status), while other research may be interested in all ties in a given network, no matter how close or distant they may be people you have regular conversations with at work. While some studies have found a negative correlation between a person's network size and mortality, others have found the opposite, showing that a larger network improves health. Many of these studies report small effect sizes for network influence after controlling for individual-level characteristics.

Although a person's social network can increase his or her access to informational resources, a too-dense network can make that access redundant and make it harder to learn something new. Thus, a less dense, but more diverse network may provide a person with more perspectives and options when dealing with a disease or treatment. There is some evidence that suggests that low-density networks are better for people's mental health, and a diverse set of connections can lead to more opportunities for learning and more social support. So, a greater number of connections within a network of people does not ensure better health results (Smith and Nicholas, 2008).

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4. PATTERNS OF INTERACTION

A wealth of literature has been devoted to the topic of how one's place in a network affects the likelihood of various health outcomes. Network theorists use terms like *centrality*, *liaison*, and *isolate* to describe people's relative positions within a given network. The idea of centrality, or how influential one is in his or her network, is by far the most widespread. In general, people who are more centrally located are better informed and less likely to engage in risky behavior because of their proximity to key information sources. For instance, Cheryl Alexander and coworkers found that adolescents living closer to the city center had a lower cigarette smoking rate. Being socially connected reduces the risk of isolation, which is harmful to health.

An intriguing finding in the literature indicates that, in some networks, it is advantageous to be less central or on the network's periphery (Granovetter, 1973). This is especially prevalent in dysfunctional or antisocial networks, where a lower centrality score predicts a lower propensity to conform to established social norms. Individuals at the youth on the outer edges of networks of runaway and homeless people are less likely to report having sexual encounters without protection.

A liaison in a network is a person who acts as a go-between for two separate parties. It's interesting to note that despite their role as a bridge, liaisons typically have weak ties to each group. Using Mark Granovetter's well-known notation, we can say that liaisons are most effective when they have weak ties to multiple groups, as this allows them access to information and perspectives to which few others have access. Although liaisons' wide range of social connections can provide valuable insights into a variety of health topics, it also increases their risk of being exposed to potentially harmful practices.

A communication network isolate is a node that has few or no connections to other nodes. Studies on the effects of social isolation on health have shown that those who experience it are more likely to suffer from those consequences. Adolescents who don't have many friends are more likely to be overweight, and lonely teenage girls are more likely to contemplate suicide than their more socially integrated peers.

5. PROCEDURES FOR INDUCING CHANGE

Insightful review of the various mechanisms by which communication networks affect health outcomes was provided by Lisa F. Berkman and Thomas Glass. The first mechanism is social influence, which describes the contagious effect of modeling healthy behaviors like increased exercise, regular doctor visits, and improved diet. Second, one's ability to provide

and receive support from friends and family members is a key part of the social support mechanism. Different social ties serve various supportive purposes (e.g., emotional support, instrumental support, informational support). Thirdly, the extent to which an individual is involved in and contributes to group activities. Improvements in physical health and subjective well-being have been linked to increased social interaction. Finally, one's ability to tap into a network's worth of resources is a powerful source of influence (Wills et al., 2001). Those who have more social connections may benefit because they have easier access to helpful health resources and information. Conversely, those who have more Individuals with fewer ties to one particular group may have a greater chance of learning about new health trends through contact with members of other communities.

6. CONCLUSION

An individual's health and happiness over the course of their life can be profoundly affected by their social network's structure and their position within that network. Many mechanisms exist through which communication networks can impact health outcomes. When examining the relationship between social networks and health outcomes, it appears that both the number and strength of ties play a significant role.

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