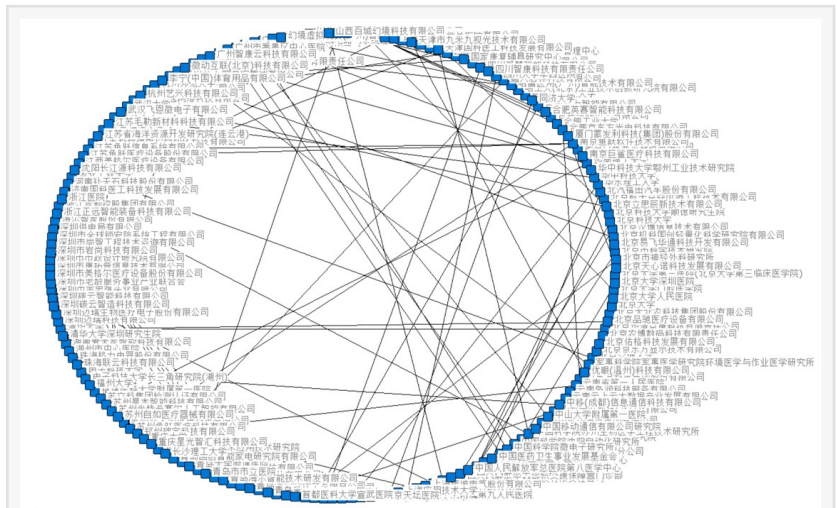# Unlocking the Innovation Secrets in Smart Medical

USA, June 27, 2024 /EINPresswire.com/ -- To address the needs of innovation and development in the smart healthcare industry, this study employs the ERGM method, which can identify network endogenous effects, to comprehensively analyze the formation mechanisms of innovation networks in this sector. This analysis aims to help the industry optimize the layout of innovation networks and improve innovation efficiency.
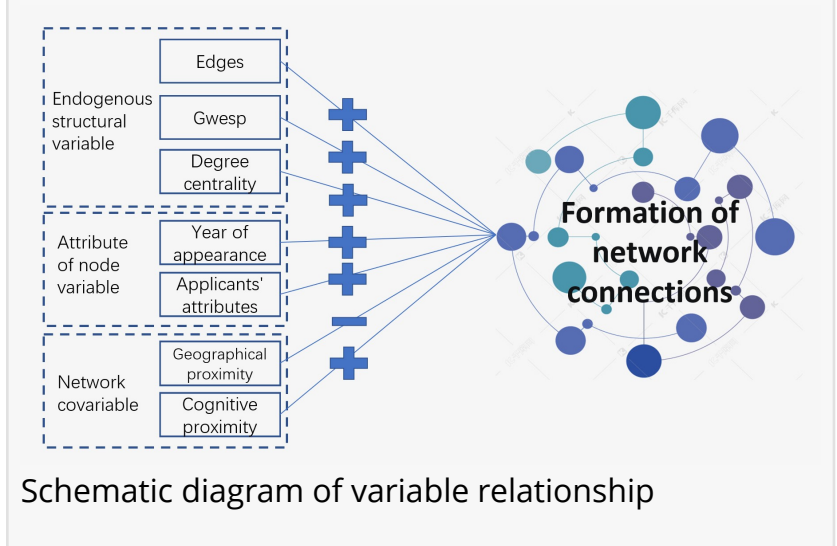
Smart medical is the product of the deep integration of the healthcare service industry and information technology. With the advent of new-generation information technologies such as artificial intelligence, big data and cloud computing, along with the support of government policies, the application scope of smart healthcare continues to expand.

In an article (doi: 10.1016/j.jdec.2023.06.001) published in the Journal of Digital Economy, a duo of scholars from the School of Management at Shanghai University used cooperative patent data from the smart medical industry to study the factors and mechanisms of innovation network formation, supplementing the research on the endogenous factors driving network innovation in this field.

"Innovation networks are interactive organizational relationships constructed through mutual cooperation among innovation participants," explains Professor Chao Lu, the first author of the study. "Besides external factors such as the geographical distance between nodes and the

Innovation network of China's smart medical industry

Schematic diagram of variable relationship

organizational attributes of nodes, the structural characteristics of the network itself, such as geometrically weighted edge sharing and degree centrality, also influence network formation."

Given that the innovation network in the smart medical industry is rapidly forming, a comprehensive analysis of the formation mechanism is essential. "Most existing studies in the field of smart medical are qualitative in nature, and few have focused on using quantitative methods to study the innovation process. Our study addressed this gap by integrating the intrinsic effects of network endogenous variables on network formation, thereby enhancing the reliability and validity of research on innovation networks in the smart medical industry," adds corresponding author Bin Li.

The authors found that among the main participants in the smart healthcare industry innovation network, similarities in organizational attributes, geographical proximity and more recent years of patent cooperation all promote the formation of network connections. Conversely, a pronounced core-periphery structure and lower network density can hinder the formation of diverse network connections to some extent, which is not conducive to the healthy development of the network.

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