Abstract

The United Nations’ Millennium Development Goals listed high infant mortality rates as a major problem in developing countries, especially in rural areas. Given their powerful information dissemination capabilities, information and communication technologies (ICTs) have been suggested as interventions to build infant care awareness and modify healthcare behaviors. We examine how the use of one ICT intervention—eHealth kiosks disseminating authenticated and accessible medical information—can alleviate the problem of high infant mortality in rural India. We investigate how mothers’ social networks affect their use of eHealth kiosks, specifically in seeking professional medical care for their infants and, ultimately, the effect on infant mortality. Drawing on the social epidemiology and the social network literatures, we focus on advice and hindrance from both strong and weak ties as the conduit of social influence on mothers’ health-related behaviors for the care of their infants. Over a period of 7 years, we studied 4,620 infants across 10 villages where the eHealth kiosks were implemented along with support resources for proxy use. The results revealed that (1) eHealth kiosk use promotes seeking professional medical care and reduces infant mortality, (2) mothers are especially vulnerable to hindrance from both strong and weak ties as they choose to maintain the status quo of traditional infant healthcare practices (e.g., reliance on untrained personnel, superstitions, fatalism) in villages, and (3) advice from both strong and weak ties offers the potential to break down misplaced beliefs about infant healthcare practices and to develop literacy on seeking professional medical care. In contrast, in a comparative group of 10 neighboring villages, the reduction in infant mortality was not as pronounced and the effect of professional medical care in reducing infant mortality was lower. Our findings suggest that an ICT intervention can effectively address one of society’s most important problems—infant mortality—even in parts of the world with limited resources and deep suspicion of technology and change. Overall, we believe such an ICT intervention will complement other investments being made including the facilitation of use (proxy use) and provision of professional medical facilities to reduce infant mortality.

Keywords: Social networks, strong ties, weak ties, infant mortality, Millennium Development Goals