

Social Network Analysis as a Tool in Improving Mental Health

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Abbreviation

SNA: Social Network Analysis; SES: Socioeconomic status

Human beings are by nature social creatures. We are born, we grow up and we live our lives surrounded by different types of social networks that provide us with the social resources that we need to tackle life's difficulties and solve the problems that cross our paths. Granted, at times some of the social networks that we belong to can also bring negativity into our lives: they can alter our beliefs and behaviours, and they can drag us down paths that take us far away from what we consider to be a state of well-being.

Social networks can actually affect our well-being [1] and therefore also our health, as these two concepts are closely related to one another. This is why a broad and deep knowledge of the social networks that we belong to is absolutely essential. Social network analysis (SNA) is a method for providing us with this knowledge. It is a formal scientific methodology based on anthropology, social psychology and sociology, and through it we can perfectly capture the essence of how society around us is structured, which in turn offers us information about our environment that helps us to optimize networks.

If we focus our analysis on a particular social entity (the combination of the individual and his or her links with other participants in the network), we can use SNA to examine different perspectives. That is, if we study networks egocentrically (from the starting point of a specific individual) or also sociocentrically (by looking at the network as a whole) (Figure 1), we can devise the optimal research approach for describing, exploring and understanding structural aspects related to health [2].

By using SNA, not only can we analyse the extent to which networks influence us or, conversely, how far we select the things that make up our environment based on aspects of similarity (a phenomenon known as homophily) [3], but it also becomes easier for us to identify the leading players who have an impact on our health, to analyse support groups that provide support or facilitate self-help or that are part of informal networks, and to understand how messages that promote health and disease prevention can be shared more efficiently [4]. Similarly, SNA can make it possible to identify the spread of infectious diseases [5] or chronic diseases such as obesity [6], the way to tackle certain risk behaviours in crucial stages of the life cycle [7], bullying in schools [8] and matters of an organizational nature such as optimizing healthcare workers' performance through their professional networks [9].

SNA has also been applied to different research projects on mental health. In 2005, Carpentier and Ducharme [10] analysed support networks for caregivers of patients with dementia with a view to improving how social resources are distributed. Among other things, they concluded that it is extremely important to study networks over the daily life of the caregiver as well as the nature of the support provided. Pachucki., *et al.* [11] managed to show how altered states of mental health can shape the structure the relationships that surround us, and they also noted differences based on gender.

Looking at online social networks and their influence on eating disorders, Tubaro and Mounier [12] analysed the support networks used by patients with these conditions. Their study highlights the importance of the various types of support that can meet needs not covered by health services.

To conclude, we want to highlight the modifiable nature of the behaviors of daily life related to health, based on the networks that we belong to.

Since relationships can change due to many variables, and these changes can also influence health behaviors, we could ask ourselves the following question: So why don't we optimize and empower our networks to bring about change? We already have a method to evaluate this kind of change; it is called SNA. Salathé, *et al.* [13] tells us that within networks negative feelings are much more contagious than positive ones. Let's change this trend. If we do, we'll have much to gain-especially life.

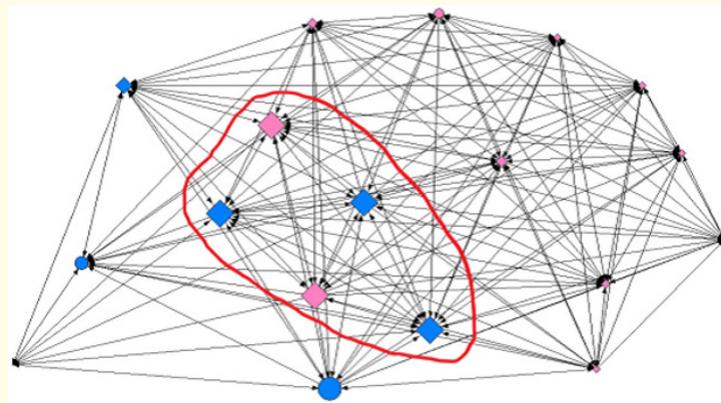


Figure 1: Graphical representation of one of the networks in the study of Arias, *et al.* [14] in the study of social networks based on socioeconomic status (SES), where node size indicates the capacity for intermediation (betweenness). Individuals with higher SES level occupy central positions in terms of betweenness. Females are shown in pink, males in blue; circles represent individuals with a medium-low SES and diamonds a high SES. Graphs were produced using UCINET software [15].

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