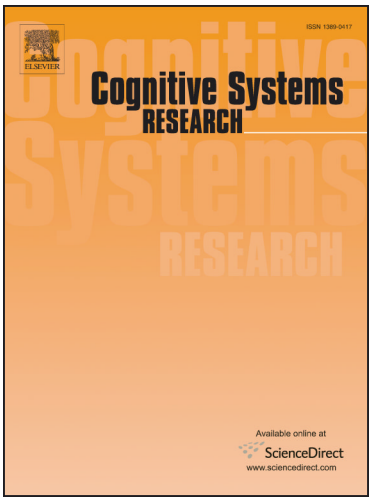
Accepted Manuscript



With a Little Help from My Friends: A Computational Model for the Role of Social Support in Mood Regulation

Seyed Amin Tabatabaei, Altaf Hussain Abro, Michel Klein

PII: S1389-0417(16)30203-0
DOI: https://doi.org/10.1016/j.cogsys.2017.09.001
Reference: COGSYS 580

To appear in: *Cognitive Systems Research*

Received Date: 11 November 2016
Revised Date: 21 July 2017
Accepted Date: 6 September 2017

Please cite this article as: Amin Tabatabaei, S., Hussain Abro, A., Klein, M., With a Little Help from My Friends: A Computational Model for the Role of Social Support in Mood Regulation, *Cognitive Systems Research* (2017), doi: https://doi.org/10.1016/j.cogsys.2017.09.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

With a Little Help from My Friends: A Computational Model for the Role of Social Support in Mood Regulation

Seyed Amin Tabatabaei, Altaf Hussain Abro, Michel Klein
Vrije Universiteit Amsterdam, Behavioural Informatics Group
De Boelelaan 1081, 1081 HV Amsterdam, the Netherlands
{s.tabatabaei, a.h.abro, michel.klein}@vu.nl

Abstract. The growing interest in the role of social support in mental and physical health has led to the development of several intelligent systems that aim to use social mechanisms to simulate healthy behaviour. In this paper a computational model of a human agent is presented which describes the effect of social support on mood. According to the literature, social support can either refer to the social resources that individuals perceive to be available or to the support that is actually provided in problematic situations. The proposed model distinguishes between both roles of social support. The role of social network characteristics has been taken into account, as an individual can perceive or receive social support through his/her social network. In addition, the number of connections (friends), strength of ties (relationships), social isolation and social integration have been studied. Simulation experiments have been done to analyze the effect of the different types of support in different scenarios and also to analyze the role of various social network characteristics on the mood level. It is shown that support can help to reduce the induced stress and thus can contribute to healthy mood regulation and prevention of depression. The presented model provides a basis for an intelligent support system for people with mood regulation problems that take the social network of people into account.

Keywords: social support, stress buffering, human ambient agent, perceived support, social network characteristics.

1 Introduction

In the life of people, now and then stressful events take place. For some people, these events ultimately lead to mental problems. Support of others can alleviate the effect of stress on an individual's psychological situation [1]. Social support plays a beneficial role in the mental wellbeing of humans through its impact on emotions, cognitions and behaviours [2], and through this it even contributes to good physical health. Effective social support can be provided through adequate social networks. A person who is well integrated in social networks is less vulnerable to stress or depression.

Social support is often used in a broad sense, referring to any process through which social relationships might promote health and wellbeing. It is still a scientific question by which mechanism the social support actually influences people's mental health. The psychological literature on social support and health includes multiple

Download English Version:

https://daneshyari.com/en/article/4942331

Download Persian Version:

https://daneshyari.com/article/4942331

Daneshyari.com