

# **"The integrative information model": a theoretical and applicative model for behavioral change (weight loss) by a structured program based on information and technology (personal website or cellular apps) / Ravit Weisman**

## **ABSTRACT**

The access revolution is over. Mobile is changing us, changing our frame of reference so that we see information as portable, personalized, and participatory. (Fox, 2010)

**Purpose of the research:** the main objectives of this research are to examine the efficacy of a new behavioral program for changing lifestyles and weight loss based on the need for information and its supply online, to formulate a theoretical model and a practical (technological) model for a behavioral change intervention program, and to examine the suitability of two technological platforms for its implementation – a personal web site and a mobile application.

**Research method:** in the current study we examined a structured behavioural program for the treatment and prevention of overweight with information transmitted to the participants through an information system and a therapist (dietician) on one of two technological platforms – a personal web site and a mobile application. The research comprised 55 Israeli women with an average weight of  $M=77.6$  kg ( $SD=11.6$ ), average BMI of  $M=29.3$  ( $SD=4.1$ ) and average age of  $M=37$  ( $SD=10.6$ ). The participants were divided into two groups according to the technological platform used for transferring information about the program: the 'internet' ( $n=27$ ) and the 'mobile' ( $n=28$ ). Both of the groups received the same program and used the same modules including asynchronous chat between the therapist (dietician) and the participant. Both quantitative and qualitative methodologies were used.

**Main Findings:** We found that both the information transferred between the parties regarding the intervention program and the technologies used for transmitting it, play a significant role in the behavioral change intervention program. Regarding the data – we identified various types of data required by the participant and found significant differences regarding its use. In this way, we also identified the more frequently occurring situations that lead to the need for information in order to cope with behavioral change. Regarding the technological platforms – we found that the two

technological platforms examined acted as a mediator between the two human factors – the participant and the dietician. It was also found that the technological platform plays an active role in the process of transmitting reciprocal information by automatically pushing information. In addition, we found that not only was the cellular platform perceived as being more accessible but also using it and its modules was significantly greater than the internet platform.

**Conclusions:** The technological platform and its use for transmitting information between the dietician and the participant play a significant role in the behavioral change processes. The platform facilitate two processes between the individual and the therapist: 1) the process of supplying information and its utilization; 2) the process of utilizing the information. These key processes are the foundation of the 'The Integrative Information Model' proposed in this dissertation.

The first process, **the supply of information and its utilization** is derived from understanding the role of the technological platform and the role of the various types of information. First of all, the technological platforms serve as a significant third party in the process for behavioral change and weight loss, and mediate between the participant and the dietician. Secondly, we found that the participants' need for information was influenced by the situations and crises with which they had to cope. The second process, **the participants' use of the data** generated a behavioral change and mental awareness in them to justify their actions. The information-based activities of the participants created new experiences and led to the participants succeeding in achieving the desired behavioral change. Moreover, in the age of information technology, mobile technology has a more significant impact than internet technology on the behavioral change process. The mobile application is perceived as easier and more accessible compared to the personal web site.

**Research contribution:** For the first time aspects of information and technological platforms have been studied while considering the sum of its parts – a combination of different types of participants – human factors (the therapist / consultant and the person being treated / advised), and the automated factor (the technological platform), a combination of types of information and various methods for transferring information using technological platforms which are well-known (internet sites) and innovative (mobile applications).

**Importance of the study:** this research illustrated the effect of information transferred using a technological platform – the internet and mobile network – and the

role it can take in improving the lives and health of millions of people. In the present case, people with specific paramedical requirements (weight loss) were examined. However, the results of the research and the 'The Integrative Information Model' may shed light and have an effect on many areas requiring remote leverage and behavioral change on a range of problems relating to one's behavior. The proposed model lays the foundation for further studies of the effect of technology and information on behavioral change in addictive.

**System No.**

002453583