5-1-2007

Internet-Based Tailored Health Communications: History and Theoretical Foundations

Shawn Davis
Pacific University

Follow this and additional works at: http://commons.pacificu.edu/inter07

Recommended Citation

This Article is brought to you for free and open access by the Interface: The Journal of Education, Community and Values at CommonKnowledge. It has been accepted for inclusion in Volume 7 (2007) by an authorized administrator of CommonKnowledge. For more information, please contact CommonKnowledge@pacificu.edu.
Internet-Based Tailored Health Communications: History and Theoretical Foundations

Rights
Terms of use for work posted in CommonKnowledge.

This article is available at CommonKnowledge: http://commons.pacificu.edu/inter07/19
Internet-Based Tailored Health Communications: History and Theoretical Foundations

By Shawn Davis, Ph.D. <davissh@pacificu.edu>

Introduction

Health-based communications have taken a number of forms during the past century with goals ranging from the “health publicity” campaigns of the early 20th century to a focused individualized communication characteristic of the tailoring approach currently on the forefront of health communication messaging. Tailored communication has been defined as an individualized form of communication intended to reach one specific person that is based on information about characteristics that are unique to that person [1] [2]. Information presented via tailored communication, designed to focus directly on an individual’s unique needs, has been found to be more effective than other methods of information presentation in the promotion of a variety of healthy behaviors [3].

Following is a review of the major changes that have occurred during the last century in how health information has been communicated. The pattern of evolution presented herein details changes that have led to the use of Internet-based tailored health messaging as one of the most recent and successful advances in the field of health communication.

The Early 20th Century: Health Publicity Campaigns

During the first half of the 20th century, health education consisted primarily of what has been termed “health publicity” [4]. The fundamental role of health educators at this time was to disseminate information about health in general and the threat of disease to both at-risk populations and to the general public. The popular belief among health care professionals of the
time was that the quality of life would improve and the duration of life could be extended if people could better understand health issues and causes of disease [5].

This early health education primarily consisted of dispelling popular myths as much as presenting facts and giving guidelines for actions believed to encourage good health or (more often than not) prevent disease. Implicit in early health campaigns was the belief that an increase in knowledge alone would lead to positive changes in health behavior and that more information would lead to greater changes. While this was an important step in the development of the dissemination of public health information, this approach was minimally effective in producing widespread behavioral change in that the messages were not understood, not remembered, or not seen as applicable to the individual [6].

The 1950s: A Move to Community-Based Education

By the early 1950s, it had become obvious that the traditional role of health educators as mere disseminators of health-based information was not yielding the expected behavioral results. Health educators began to work within communities in the promotion of health and disease prevention and they adopted a new role as catalysts for change. These health educators now viewed community members as potentially involved participants active in the processes of health education and behavioral change rather than passive containers to be filled with knowledge. It was recognized that an increase in the effectiveness of health education efforts would require a better understanding of the needs and values of community members [7]. A shift towards an increasingly interactive and assessment-based approach to health education and health communication was underway.

Regardless of this newfound recognition of the value of receiver characteristics (or those of the receptive audience), uncertainty remained as to how best address the needs of specific communities. This uncertainty, coupled with the persistent belief that public health objectives could be successfully achieved were the appropriate message merely given to the “right person and the right time”, shifted the channel of health promotion initiatives in the United States to the use of mass media campaigns [8].

The Use of Mass Media Campaigns

Even though radio and newspaper health publicity initiatives reached large populations during the second half of the 20th century, television increasingly proved itself the dominant medium for mass health education [9]. Using mass media as a vehicle for planned health promotion campaigns was appealing to those involved in health communication for a number of reasons. First, its broad influence promised to expose increasingly large audiences to health messages. Second, those who design mass media campaigns could (at least in theory) maintain control over which messages were shown to whom, and at what time [10]. Finally, mass media campaigns could provide high visibility for the health issues they were addressing, and thus help maintain certain issues in the public awareness [11].
Excitement about the potential of mass media campaigns seemed, however, to mask some of its inherent limitations. Basically, such mass media campaigns suffer from the same basic limitation as traditional health education materials. In particular, they are characteristically "generic" in that they are aimed to provide as much information as possible within a single communication (or finite number of communications).

Generic health communications fail to consider characteristics specific to the intended audience (or audience member) and, basically, aspire to be “all things to all people” [12] [13]. Such generic communications are limited, therefore, in their effectiveness in that they don’t consider demographic, psychological, or psychosocial characteristics particular to a single individual.

In generic health communication messages, individuals have been found to generally disregard particulars of the message that don’t apply to them and focus instead on information that is personally applicable (given they are knowledgeable enough or motivated enough to do so successfully!) [14]. While generic forms of communication are generally the most cost-effective method of reaching a large audience, their all-inclusive nature serves to limit their eventual effectiveness. A clear improvement to generic forms of messaging, therefore, is the use of a more targeted communication.

**Targeted Health Communication**

Targeted health education materials are designed to reach some specific subgroup within the general population, usually based on a set of demographic characteristics shared by a subset of its members [15]. In that they present information pertinent to members of a subgroup within the population, targeted messages reduce much of the effort necessary to identify information relevant to an individual active within the targeted subgroup. This is an incremental and important improvement over the limited approach of generic health communications.

A targeted communication assumes that a single approach can be used to reach all members within a subgroup of people with some (usually demographic) characteristic in common. Thus, implicit in targeted health messaging is the assumption that sufficient homogeneity exists among members of the targeted subgroup. This assumption, however, is largely unfounded in many instances [16] [17] [18]. While there is evidence that targeted communications can contribute to individual behavioral change [19] [20], targeted materials cannot address variations between individuals on factors that are not demographic in nature.

**The Advantages of Tailored Health Communication**

As previously stated, tailored communications are individualized communications intended to reach one specific person and are based on information about characteristics that are unique to that individual [21] [22]. Tailored communication differs from a completely generic form of communication in a number of ways and there are, conceptually, a number of gradations between these two extremes.
In general, it is expected that as the level of assessment increases, so would the degree of individualization that is possible in the content of the communication. Obviously, the more information one has about the intended recipient of the communication, the better-equipped one is to create messages and materials individualized to that person’s specific needs.

As mentioned before, health education materials have traditionally been either generic in nature (aiming to provide as much information as possible within a single health communication) or targeted (basing their messages on limited personalized factors that are unique to individuals (e.g., age, race, name)). These factors alone, however, provide little information about the cognitive and behavioral patterns that influence people’s health-related decisions and actions [23]. Both approaches, therefore, lack the depth of understanding necessary to develop a truly individualized strategy necessary to address complex lifestyle behaviors. By tailoring health communications, one can build upon the strengths of demographic, personal identification, and behavioral information, without being confined by the limitations inherent in exclusively utilizing population-based demographic information. A tailored health communication is based upon an individual’s needs, interests, and concerns, and utilizes that information in the creation of health messages and materials to fit that specific person.

Tailoring is, fundamentally, a process of creating individualized communication. It is an assessment-based approach in which personal data is obtained related to a given health outcome. Those data are, in turn, used to determine the most appropriate information or strategies necessary to meet each person’s unique health needs. In that tailored health communication is assessment-based at the level of the individual, the content of its communication can be highly individualized, going beyond simply presenting risk status to develop personal plans to modify complex health-related behaviors by addressing an individual’s motivation and beliefs [24].

Through assessment, tailored materials can address only those factors known to be important to an individual recipient [25]. Tailored materials frame information in the terms that are most salient to the individual, thus presenting a communication focused on an individual’s particular health needs and motivations.

In terms of the individualization of presented information, tailored health communication can, therefore, be seen as a clear improvement over both the generic messages of mass media and a demographically based targeted communication. It does, however, share the strengths inherent in each. Like targeted communication, tailored health messages recognize and address the uniqueness of both populations and individuals. Tailored messages also actively engage the individual in the change process itself, recognizing that only by conducting an individual assessment could the specific health concerns of different individuals be addressed. Additionally, because the technology needed for the production of tailored communications is becoming more commonplace, tailoring has a broad reach potential (like mass media campaigns) and can maximize the number of people who could benefit from such messaging.
Tailored communications avoid the limitations that have compromised the effectiveness of these previous approaches. Tailoring does not provide people only with health facts (like health publicity programs) nor does it select a single communication approach to use with a group of people just because they share a particular demographic characteristic (as does targeting). Tailored health communication greatly reduces the burden of sifting through potentially non-relevant information imposed by generic materials, and provides more focused information that is truly individualized. Also, in contrast to other communication approaches, the strength of tailored communication rests in its ability to identify and address the specific informational and behavioral needs of a single individual. A tailored health communication program measures a person’s needs, interests, and concerns, and utilizes that information to develop messages and materials that provide direct feedback customized to fit that individual.

Advances in computing and Internet communication technologies are the enabling factors in the emergence of tailored communication and have made it possible to collect data on individuals from large populations and use that information to tailor educational and behavior change materials to match the unique needs of each member. The application of computer automation allows for individual responses to an assessment to be processed and interpreted rapidly to easily determine which health messages (from a pre-existing library) are most appropriate for each individual. With little more than a personal computer, standard office software, and an Internet presence tailored communication programs can have broad influence and maintain individual specificity at a reasonable cost. Beyond the long-term economic benefits of adopting a tailored communication system, there is also a clear theoretical rationale and growing body of research evidence that suggests tailoring to be a promising health communication approach.

**Theoretical Rationale: The Elaboration Likelihood Model (ELM)**

Theories of information processing have been particularly useful in explaining why a tailored health communication would be more effective than a non-tailored approach. In particular, [26] Petty and Cacioppo’s Elaboration Likelihood Model (ELM) details that individuals process information more thoughtfully (i.e., more actively and elaborately) if they perceive it to be personally relevant and that the efficacy of message persuasion, in terms of endurance, depends on the likelihood and extent of this elaboration. The ELM is based on the assumption that people are active information processors. When the arguments used in a message are deemed important or are seen as personally relevant to the message recipient, the information contained in the message is processed more deeply and the expected change in attitude will be greater than if the message is of little or no relevance to the receiver. That is to say, the message recipient contemplates information carefully, relates new information to previously encountered information, and considers the messages in the context of their own previous life experience (i.e., processes the information more elaborately) when the message is seen as personally relevant. Furthermore, research has found that messages that are processed more elaborately tend to be retained longer and are more likely to lead to permanent attitude change [27].

It is in the case that when both motivation and ability to process a given message are present
that message elaboration will happen and enduring persuasion will take place when the message recipient is strongly compelled by the arguments presented in the communication. These arguments will cause favorable thoughts that will eventually be rehearsed. However, when the arguments are perceived as weak, thinking about these arguments will cause counter arguments to be rehearsed, and it is likely that the person will react in the opposite direction that the message was intended (i.e., a boomerang effect). As presented in the ELM, if the individual is ready to process the message (i.e., has the motivation and ability to do so), the following sequence of events will occur: attention, comprehension, elaboration, integration, and finally enduring change [28].

The concept of enhanced or “deep” processing leading to superior retention and improved recall is one that is not new. Craik and Lockhart [29] proposed the levels-of-processing approach which holds that deep, meaningful kinds of information processing leads to retention that is more permanent than shallow (i.e., sensory) kinds of processing. In an application of the levels-of-processing approach to information that is personal in nature, the self-reference effect holds that individuals recall more information when it is related to themselves [30]. As explanation for the self-reference effect, Bellezza [31] suggested that the “self” is rich in internal cues to which new information can be associated. This association, therefore, enhances the resulting memory and thus leads to improved retention and eventual recall.

Current research in the area of autobiographical memory has found further support for the enhanced processing and encoding of self-relevant information. Keenan and Baillet [32] demonstrated that factual knowledge which is highly self-relevant (and evaluative) is processed more rapidly and is retained more accurately than factual knowledge that is not. According to Conway [33], this suggests that factual knowledge that has an autobiographical reference may, therefore, be processed and represented differently than factual knowledge that is not self-referencing.

The rationale for utilizing an Internet-based tailored communication is founded in the idea that elaboration is more likely when a message is seen as personally relevant and that increased elaboration leads to an enhanced likelihood of adoption and utilization of the tailored message. This rationale has been succinctly detailed in a five-part logic sequence by Kreuter, Strecher, and Glassman [34]. First, superfluous and unnecessary information is eliminated in tailored communications, thus allowing for a more focused communication. Second, given that the information that is utilized in tailored communications is based on an individual assessment of the message recipient, the resulting communication is, therefore, deemed more personally relevant to the learner. Third, individuals attend more fully to material that they deem personally relevant. Fourth, when information is attended to, it is more likely to have a lasting impact (i.e., be remembered better) than is non-attended to information. Fifth, when the tailored information that addresses needs specific to the particular individual are attended to, the individual becomes and stays motivated, gains new skills, and is more likely to enact and keep the desired behavioral change.
Conclusion

The goal of this article has been to demonstrate not only the utility of an Internet-based tailored messaging protocol, but also provide a historical context within which such messaging has developed. Furthermore, the theoretical rationale for this type of messaging was detailed. Part two of this series examining Internet-based tailored health communications will explore research conducted to date and will present potential future applications and directions for this approach.

ENDNOTES


[14] Ibid.


[24] Ibid.


This entry was posted in Uncategorized by Editor. Bookmark the permalink [http://bcis.pacificu.edu/interface/?p=3363].

ONE THOUGHT ON “INTERNET-BASED TAILORED HEALTH COMMUNICATIONS: HISTORY AND THEORETICAL FOUNDATIONS”

Ross Berenger on February 5, 2014 at 3:28 PM said:

Hey – nice weblog, schaut sich um einige Blogs, scheint eine ziemlich gute Plattform, die Sie verwenden könnten. Ich bin derzeit mit WordPress für ein paar meiner Seiten, sondern schauen, um 1 von ihnen mehr als eine Plattform ähnlich wie bei Ihnen als ein Probelauf verändern. Etwas in spezifischen würden Sie darüber empfehlen?