



ORIGINAL RESEARCH ARTICLE

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## ANALYSIS OF THE CONCEPT OF PERSUASIVE COMMUNICATION IN THE LIGHT OF THE THEORETICAL-METHODOLOGICAL REFERENCE OF MELEIS

<sup>\*1</sup>Smalyanna Sgren da Costa Andrade, <sup>2</sup>Karen Krystine Gonçalves de Brito, <sup>3</sup>Maria Júlia Guimarães Oliveira Soares, <sup>3</sup>Maria das Graças Melo Fernandes, <sup>4</sup>Maria Miriam Lima de Nóbrega and <sup>5</sup>Simone Helena dos Santos Oliveira

<sup>1</sup>Docotorate student of the Nursing Postgraduate Program (CAPES Scholar). Federal University of Paraíba. João Pessoa, Paraíba. Brazil.

<sup>2</sup>Docotorate student of the Nursing Postgraduate Program (CAPES Scholar). Federal University of Paraíba. João Pessoa, Paraíba. Brazil

<sup>3</sup>Professor, PhD, Department of Clinical Nursing and Nursing Postgraduate Program. Federal University of Paraíba. João Pessoa, Paraíba. Brazil

<sup>4</sup>Professor, PhD, Department of Collective Health Nursing and Nursing Postgraduate Program. Federal University of Paraíba. João Pessoa, Paraíba. Brazil. CNPq Researcher

<sup>5</sup>Professor, PhD, Health Technical School and Nursing Postgraduate Program. Federal University of Paraíba. João Pessoa, Paraíba. Brazil

### ARTICLE INFO

#### Article History:

Received 22<sup>nd</sup> June, 2017  
Received in revised form  
24<sup>th</sup> July, 2017  
Accepted 09<sup>th</sup> August, 2017  
Published online 29<sup>th</sup> September, 2017

#### Key words:

Concept Formation.  
Persuasive Communication.  
Health. Behavior. Nursing Theory.

#### \*Corresponding author

### ABSTRACT

The purpose of the article was to identify definitions and their attributes, antecedents and consequences of the concept of persuasive communication used in health through Meleis' theoretical and methodological framework and to establish an expanded definition of persuasive communication in relation to health behavioral adoption. This is a theoretical study of concept analysis in the light of the Meleis' Method in national and international studies published online in any year. Persuasive communication becomes an intervention option to implement educational, motivational, impactful or significant messages to control diseases, influence or modificate norms, beliefs, attitudes, behaviors and decision making.

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Citation: Smalyanna Sgren da Costa Andrade, Karen Krystine Gonçalves de Brito, Maria Júlia Guimarães Oliveira Soares, Maria das Graças Melo Fernandes, Maria Miriam Lima de Nóbrega and Simone Helena dos Santos Oliveira. 2017. "Analysis of the concept of persuasive communication in the light of the theoretical-methodological reference of meleis", *International Journal of Development Research*, 7, (09), 15217-15225.

### INTRODUCTION

The creation of a concept results from the plurality of situations or events that reveal interest, relocating the notion of truth of a phenomenon for ownership in the philosophical, scientific and artistic fields. Thereby, creating concepts and using them in a coherent way means exploring experiences and producing reality.<sup>1</sup> The relevance in analyzing a concept consists in the clarification or development of a term, which

can be used appropriately in theories or in the evolution of scientific research and assistance practices.<sup>2</sup> In the health area, the definition of concepts allows proposing explicit terminology to facilitate the understanding of the agents that influence the illness process.<sup>3-4</sup> In the academic field, several methods are capable of providing the analysis of concepts, such as Meleis' Concept Analysis Method<sup>5</sup>, which becomes interesting for the systematization, methodological clarity and easy applicability.

For this purpose, the term concept is used to describe, categorize or characterize a phenomenon or phenomena group, providing a name or even a summary of the idea or event.<sup>5</sup> Also according to the theory, there are three strategies to develop the meaning of a concept, which are: exploration, clarification and analysis of the concept. Meleis<sup>5</sup> focused on an integrated approach to the development of the concept that includes definition, differentiation, delineation of antecedents and consequences, modeling, analogy and synthesis. In this study, the process steps include definition, differentiation and delineation of antecedents and consequences, considered satisfactory to clarify the concept for later adequate use in the theoretical field, in the nursing practice and in scientific research. The chosen concept was the persuasive communication, for being a convincing feature that facilitates behavioral adoption (individual or collective) to a situation. In the health area, it sometimes has supportive role in modifying unhealthy habits, raising the need for analysis of this concept for better appropriation of its meaning and serving as research and planned assistance allowance, which contributes to the quality of services at the hospital or in public health. In the nursing field, the use of theoretical and methodological models helps to structure the care, when adapted to Metaparadigm. The nurse's role clings to the specificities of the individual, environment and health conditions, requiring the use of elaborate arguments in epistemological contributions that help the professional knowledge and practice.<sup>6</sup> In this context, discussing the phenomenon called persuasive communication becomes relevant for interventional strategies in the social and health field. The World Health Organization stated that interventions are important components to aid strategies in health programs, because they influence the behavior related to people's health and disease process<sup>7</sup>.

The Cochrane systematic review on behavioral interventions for prevention of cervical cancer concluded that the persuasive communication can potentially influence standards, knowledge, attitude, individual beliefs and health behaviors. The authors also stated that the use of conceptual models or behavioral theories elaborated in disciplines such as sociology, psychology and education may explain the mechanisms of behavioral changes, benefitting the development of effective interventions.<sup>8</sup> In health promotion and disease prevention, it is relevant to search for strategies that contribute to advances in research and clinical practice, generating positive consequences to scientific development. In this perspective, nursing should focus on the references that facilitate actions with greater chances of success to healthy behavioral change. Therefore, considering the importance of theoretical studies to aid science and understanding that the persuasive communication can be a strong strategy for behavioral change, this research was guided by the following question: what is the delineation of the concept of persuasive communication in healthcare? The objective was to identify definitions and their attributes, background and consequences of the concept of persuasive communication used in health through Meleis' theoretical-methodological reference and establish an enlarged definition persuasive communication regarding health behavioral adoption.

## MATERIALS AND METHODS

Theoretical study of concept analysis in the light of Meleis' method. The concept analysis structured by Meleis<sup>5</sup> follows several steps that do not have a specific order or need

to be fully followed.<sup>5</sup> This study focused only on: semantic (language meaning of the concept and its attributes) and context definition (conditions under which the concept is manifested), background and consequences of the concept.<sup>5</sup> This research intended to evaluate only the studies published online and indexed in the Virtual Health Library (VHL) to indicate an overview of what this institutional division under the coordination of the Latin American Center on Health Sciences Information conveys online. The VHL is responsible for compiling important science investigations, integrated by the Latin American and Caribbean Literature in Health Sciences (LILACS), the Spanish Bibliographic Index of Health Sciences (IBECs), International Health Sciences Literature (MEDLINE), Scientific Electronic Library Online (SciELO) and the Cochrane Library. In order to identify the original term, the site 'Health Sciences Descriptors (DeCS)' of the VHL was used. In the icon 'Consulting the Decs', in Portuguese language, the word or term "persuasion" was inserted by 'Permuted Index'. The intention was to know exactly whether this descriptor was widespread and recognized in the literature. However, only the descriptor "persuasive communication" in English, Spanish and Portuguese brought results. The category numbered by the system for this descriptor was L01.143.762.

The search was separated by language, with the insertion of two by three DeCS descriptors followed by the Boolean operators AND and OR in Portuguese, English and Spanish. As the intention was also to check the relation of the analyzed concept with the adoption of health behaviors, there was integration between the terms (*Comunicação Persuasiva*) OR (Persuasive Communication) OR (*Comunicación Persuasiva*) AND (*Comportamento*) OR (Behavior) OR (*Conducta*) AND (*Saúde*) OR (Health) OR (*Salud*), which generated 955 results. Given the range of studies, the publications were selected by using the 'Filter' tool, restricting the results to full text and main topic. This strategy has favoured a concept assessment more specific to the proposal of this study. The subjects were restricted to persuasive communication, healthy behaviors and risk-reduction behavior, resulting in 235 productions. Of these studies, there were full papers without site access (13) and unavailable electronically for free by the journals (157). There was full reading of 65 complete works available. The inclusion criteria were national and international productions with complete texts, published in any year. Exclusion criteria were work that did not address persuasive communication (11), duplicate productions (4) and those whose contents included the study of persuasive communication, but was related to other areas of knowledge other than health, such as politics, economics and marketing (6). Therefore, 44 online complete studies composed the analysis universe, characterizing and supporting definitions and their attributes, background and consequences of the concept of persuasive communication.

For organization of findings, each article was numbered in sequential order and characterized regarding the knowledge sub-area, year, definition and its attributes, background and consequences of the concept. While reading the studies, the analyzed items were identified and recorded in collection sheets, containing the paginated text for future reference. All articles were published in journals associated with the health field and the subareas were identified from the maximum degree of the corresponding author explained in the manuscript, reflecting the context of the concept definition. There were degrees related to other areas such as Humanities

and Applied Social Sciences, although the investigation belonged to the health field. Some productions did not showed the authors' degree, hindering the classification.

highest degree, there were greater proportions to Communication (25%), Medicine (20.4%) and Psychology (20.4%), unidentified degrees (13.6%) and smaller

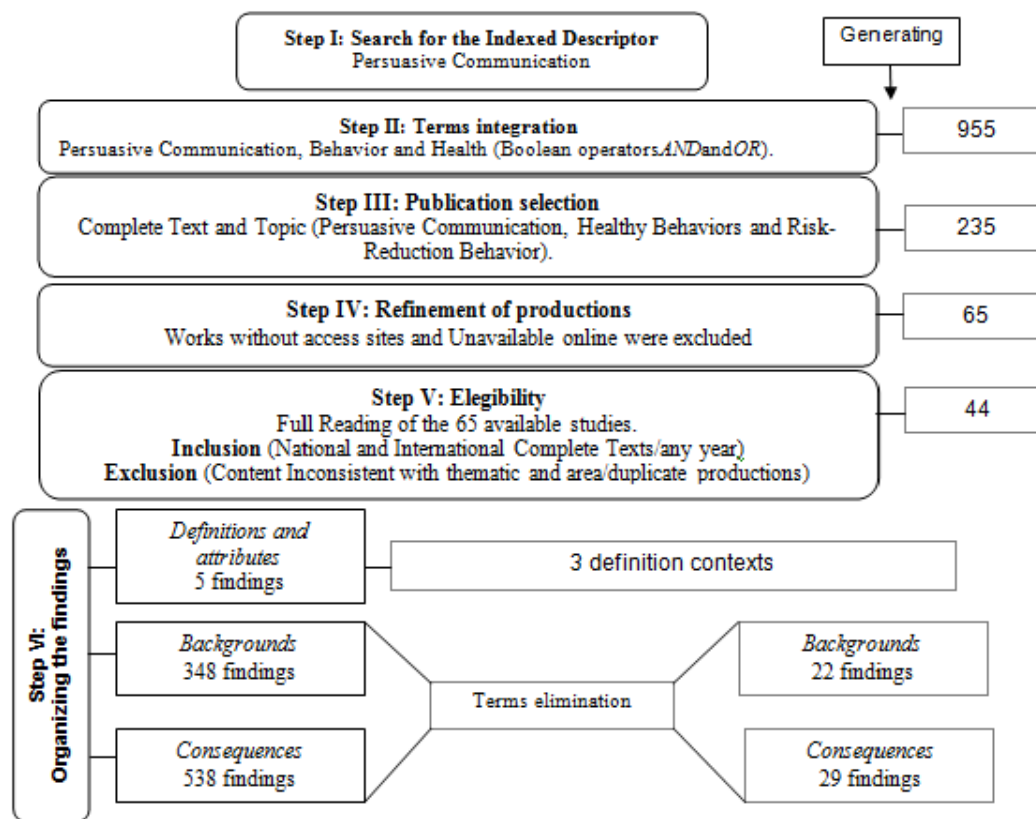


Figure 1. Synthesis of the methodological path of the persuasive communication concept analysis in the light of Meleis' method. João Pessoa, Paraíba, Brazil, 2015. (n=44)

In order to facilitate the data analysis, the meanings well prepared and without ambiguity were considered concept definitions. The backgrounds are contextual conditions that precede the concept, i.e., events necessary for the phenomenon to occur. Consequences are the resulting events, that is, the effects caused or conditions resulting from the phenomenon.<sup>9</sup> The analysis allowed observing that only five out of the 44 online studies presented the definitions and their attributes. There were also 348 situations preceding and 538 events arising from the phenomenon of persuasive communication in all studies, also considering the repetitions in the same study. The phenomena that appeared at least twice in the analysis were included as background and consequences. The synonyms were eliminated, avoiding repetitions, leaving lighter and less redundant data. In this study, message and communication were words used with similar meanings, denoting information (between two or more people and/or through sound and image), dialogue or conversation. Likewise, the strategy and resource terms were expressions that symbolized method, mechanism, tool, technique or procedure. In the conceptual map, these expressions were used as synonyms for clearer and aesthetical view of the results. A table, a graph and conceptual maps show the results. The conceptual maps were developed through the freeware Cmap Tools, version 6.01.01. The operational steps were carried out between June and September 2015 (Figure 1).

## RESULTS

**Persuasive communication concept definitions and attributes:** Regarding the subareas of the main authors'

proportions to Bio-ethics/Ethics (4.5%) Public health (2.3%), Nutrition (2.3%), Nursing (2.3%), Health informatics (2.3%), Population health (2.3%), Technology (2.3%), and Information and Communication Science (2.3%). All the studies were in English, except one, which was published in Spanish. In relation to time, it is possible to observe the linear dispersion of articles over the years (Figure 2).

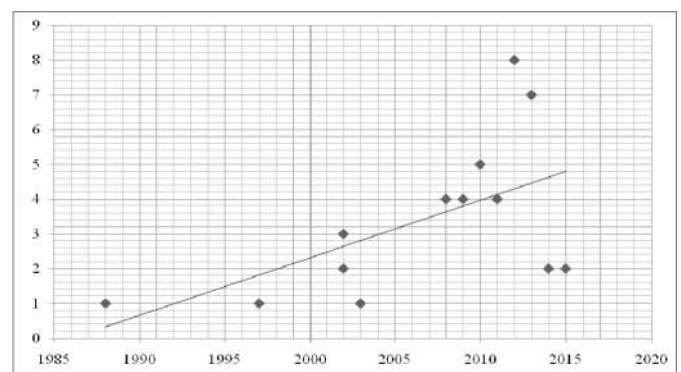


Figure 2. Distribution of the articles according to the year of publication. João Pessoa, Paraíba, Brazil, 2015. (n=44)

There were greater proportions of publications in 2012. The increasing linear dispersion presented homogeneity of distribution between 2008-2011 (approximation with the reference line), and the 2014-2015 ratios decreased (Figure 2). Thus, when considering the first year of publication, the number of productions on the subject increased, with variability in the number of articles published each year, demonstrating that the persuasive communication is a strategy

that earns interest of researchers over the years, confirming its strength and importance in the health context. Regarding the concept definitions, here are excerpts found in the studies, the context (subarea) and semantic analysis (Frame 1).

terrorism, while persuasion means offering reasons for acceptance of change, preserving the freedom of individual's choice.<sup>15</sup> Although the definitions are peculiar, and suffer influence of the purpose of each study, it was deemed that the

Frame 1. Characteristic of the persuasive communication identified in the studies. NN, 2015. (n=44)

Authors	Year	Context	Definition	Attributes
Miller-Day M, Hecht ML <sup>10</sup>	2013	Communication	Engaging messages that share knowledge that results in healthy behavioral patterns	Communication that affects knowledge, attitudes, behaviors and decision making
Krieger JL, Coveleski S, Hecht ML, Miller-Day M, Graham JW, Pettigrew J et al. <sup>11</sup>	2013	Communication	A social influence strategy directed at people through visual or linguistic tools of credibility that suggest cultural behaviors for decision making	
Mason AM, Miller CH <sup>12</sup>	2013	Communication	Sensitization of participants, making them aware of their vulnerabilities and serving as an inspiration for cognitive strengthening of attitudes	
Krawitz A, Fukunaga R, Brown JW <sup>13</sup>	2010	Psychology	Differentiated purpose messages that try to influence choices made by individuals	Communication affecting freedom of choice
Swindell JS, McGuire AL, Halpern SD <sup>14</sup>	2010	Medicine	Technical and ethical messages aimed at improvement or motivation directed at the decision of patients	Communication that affects motivation and decision making for health

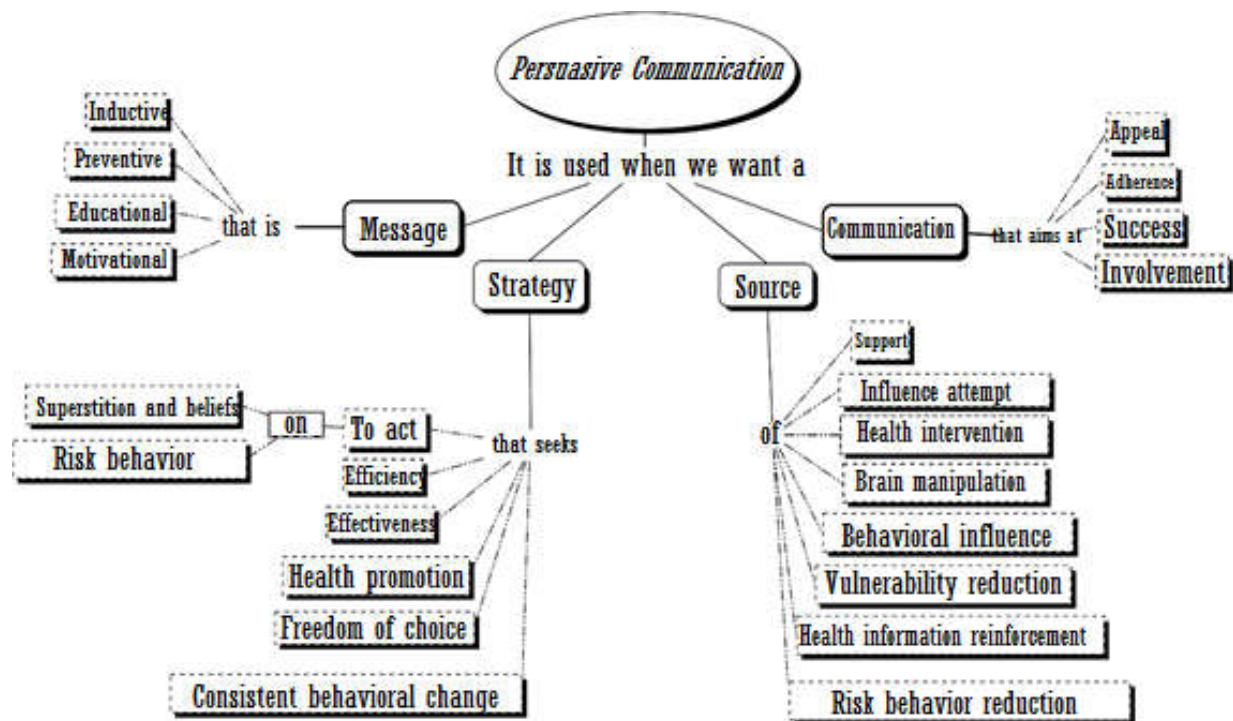


Figure 3. Background to the concept of persuasive communication identified in the studies. João Pessoa, Paraíba, Brazil, 2015. (n = 44)

The degrees in the field of Health Sciences, Applied Social and Humanities show that scholars with diverse backgrounds interested in interventions with great possibilities of success in the area of health. For both, the authors claim that using the knowledge of the field of psychology, as a persuasive communication, to persuade patients to take healthy decisions that linger for long periods is an ethical and necessary attitude<sup>14</sup>, justifying the employment of this intervention in various spheres. Regarding the concept definition, as the method chosen, it should be explicit and free of ambiguity. All had similar feature being messages in order of modification of behavioral patterns or influence on the decision-making of individuals submitted to persuasive communication (Table 1). It is important to note that persuasion is different from coercion, and separate the two concepts for better clarification of its meaning. Coercion aims to control the individual, through enforcement, threats, constraints, intimidation or

most complete<sup>11</sup> was presented by sub-area of communication and another<sup>13</sup> for synthetic Psychology (Table 1). The attributes grouped as the subareas demonstrated that the persuasive communication affects subjective peculiarities that favour the decision-making process. The strategy runs the traditional model of information sharing, making the message more attractive and convincing to whom it is given.

**Background of the concept of persuasive communication**

On the background, you can see the situations that precede the phenomenon of persuasive communication, which is necessary for the phenomenon happens (Figure 3). As for the concept's background, the persuasive communication is preceded by the will of someone trying to employ inductive stamp messages for behavioral change<sup>16-19</sup> or educational<sup>10,20</sup>, character<sup>12,17-18,20-29</sup> and pre-emptive motivational under health<sup>10,22,25,28-30</sup>(Figure

3). Although the present analysis studies citing educational nature of persuasive communication, it is this concept of decoupling health education, from which the goal is to transform existing knowledge of individuals through information, improving the understanding of their conditions or situations related to health.<sup>15</sup> Although educational messages act as influencers of knowledge, attitudes and behaviors<sup>31</sup> when using call-based resources aimed at damaging pipes<sup>32</sup> or negative consequences<sup>11</sup>, persuasive communication goes beyond its symbology in addition to teaching about health-disease information. Therefore, it should not be qualified only as educational, the persuasive communication would be more than that, it is in line with the education, but overcomes this scope of information and impact the receiver, encouraging behavioural change.

manage illness or prevent aggravations are essential points and listed in several actions aimed at satisfaction or well-being of people, which makes it convenient to proposal of persuasive communication. The intent of the strategy would be to achieve successful outcomes in reducing vulnerabilities<sup>11,14</sup> and risk behaviors.<sup>10,36,43-45</sup> It also serves as resource for action in the field of health<sup>10,20</sup>, used in an attempt to influence behavioral<sup>11,14-15,18,21,24,27,46-47</sup>, health information enhancing<sup>16,36</sup> and for those who want to support during some treatment<sup>12,41</sup> (Figure 3). Brain manipulation<sup>10,13</sup> configured an interesting history, due to possibility of mental processes to be modified during the reception of persuasive communication. Research has identified the message promotes awareness on brain activity, because during the mapping of neural regions in the course of the persuasive communication

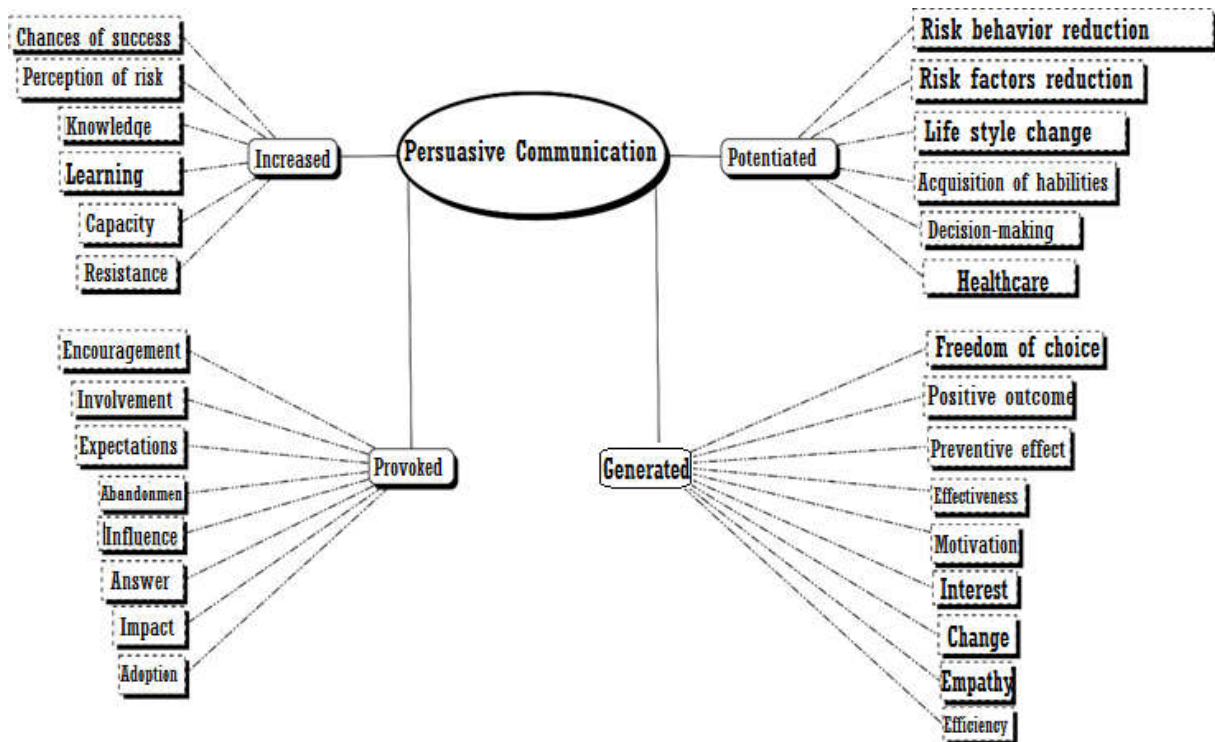


Figure 4. Consequences of the persuasive communication concept identified in the studies. João Pessoa, Paraíba, Brazil, 2015. (n = 44)

The persuasive communication must be applied when the researcher aims to end the membership of some action suggested<sup>19,33</sup> and when it wants to execute strategy appealing, whether moral or rational<sup>11,15</sup>. Can also be used when you want to emotional involvement of the person subjected to intervention or when you intend the success of action<sup>10,12,18,34-37</sup>. Maybe these antecedents are attuned to nature of moving or shocking the subject through exaggeration of resources used, changing sensations and feelings that lead to acceptance of the proposal by the investigator and may culminate in successful phenomenon. Moreover, the strategy when fetching effectiveness<sup>37-40</sup> efficacy<sup>10,41</sup>, diseases' control<sup>20,22</sup>, health promotion<sup>10,14,17,37-38</sup>, behavioral change is consistent<sup>14,17-18,22,27,33</sup>, freedom of choice for the behavior that fulfills you<sup>13,15</sup>, acting superstition/inappropriate beliefs in the field of health<sup>29,32</sup> and risk behaviors.<sup>18,20,32,42</sup> Find an efficient strategy to serve a specific purpose, to ensure the success of the action is yearning to various researchers. In the field of health, this aspiration has become increasingly frequent, to consider the course of numerous chronic conditions or related problems that reach diverse populations. Therefore, promote health,

process there was no activation of brain areas associated with the control of attitude, intention, behavior, memory, attention, visual imagination, affective experience, motor performance and imitation.<sup>48</sup> It is noticed that the persuasive communication consists of blunt and controversial feature to the influence on the decision of the participants, which can share the opinion of the scientific community about your ability to determine that the individual should or should not do in the face of circumstances presented.

In health, these elements can represent positive tactics to adopt healthy behaviors, because as the individual shakes on the choice of negative habits, it may rethink its manners and lifestyle, reflecting on the way to drive your routine or standard of conduct. This can improve the quality or perspective of the practices aimed at individual or collective health. On the other hand, if the persuasive communication is used in non-temperate and without proper planning, it could generate rebound effect with results harmful to health or adoption of unsatisfactory behaviour.

## Consequences of the concept of persuasive communication

Likewise, it is possible to observe the situations arising from persuasive communication, the events produced by the phenomenon (Figure 4). As for the consequences, which are events arising from the phenomenon<sup>5</sup>, persuasive communication increased the chances of success of the participant introjecting determined conduct<sup>35,44,48-50</sup>, as well as improved risk perception about a harmful behavior<sup>17,25,28,34</sup>, knowledge<sup>10-11,20,33,36</sup> and learning about a particular subject<sup>10,50</sup> employed in the study, and has expanded the ability to perform given<sup>33,38</sup> function and resistance to join unhealthy habits<sup>11,23</sup> (Figure 4). It reaffirms the consistency between the use and the effect caused by the persuasive communication, which determines the real and functional applicability to reach several goals, especially for encouraging the proper health habits. It increased the reduction of risk factors associated with disease or behavioral choice<sup>22,51</sup>, satisfying lifestyle<sup>19,22,35,52</sup>, reduction of risk behaviour<sup>10,18,22,25,29,53</sup>. The acquisition of skills<sup>11,18,52</sup>, increased accession<sup>14,39</sup>, therapeutic advancement in decision-making<sup>11,13-14,22,27,33,36,45,51-52</sup> and health care<sup>20,44</sup> were other consequences identified in this study (Figure 4). It is understandable that encouraging the engagement of the individual as responsible for its health, by means of stimuli that incites zeal, dedication and consistency in therapeutic processes, culminating in care, are reasons for the rational use of persuasive communication.

Specific situations, such as abandonment of unhealthy habits, were observed.<sup>22,47,53</sup> It also caused some subjective situations as encouragement to perform a specific behavior<sup>30,35-36</sup>, emotional involvement of participants with the situation presented<sup>10,36,5</sup>, promoting better awareness and positive expectations about the future.<sup>18,36</sup> There were influence of persuasion over people's<sup>20,51</sup> lives which could be normative<sup>33,37</sup>, beliefs<sup>17,53</sup>, attitude<sup>12,17</sup> or behavior.<sup>17-18,45</sup> When the strategy involves the influence of standards, rules or precepts, it probably will interfere in the way people conduct your daily life. Therefore, intervening in these regulatory issues can be essential to changing some aspect which causes behavior similar to that established by the researchers. The responses caused by persuasive communication were considered suitable or satisfactory to the goal defined by the researchers.<sup>10,16</sup> Respondents seemed to have cognitive control on the subject and some<sup>15,45</sup> needed reflection about the content addressed.<sup>10,15,36</sup> With it, the use of persuasive communication may arouse some interest in people on the argument in question. It does not go unnoticed and all information produced sensitizes the end somehow. There were also results that showed some kind of impact<sup>10-11,46</sup> or psychological beliefs<sup>34,41</sup>. The persuasive communication caused adoption of conduct<sup>29,41</sup>, attitude improvement<sup>35,40-41</sup> or positive health behaviors.<sup>18,34,37</sup> Raised freedom of choice<sup>14-15,17</sup>, outcome or positive result to the study<sup>11-12,27,36</sup>, preventive effect in many fields<sup>22,29,43,45</sup> and effectiveness of strategy used (Figure 4).<sup>11,14,18,33,41,53</sup>

Efficiency and effectiveness were cited qualities when someone wants to apply the persuasive communication as intervention (background) and as results (consequences). The efficiency occurs when the strategy works in ideal conditions or experimental and the effectiveness in real-world conditions.<sup>54-55</sup> So, concept analysis enabled stating that persuasive communication proved satisfactory in controlled research with specific assessment objects or factual and

occasions legitimate events of people's lives that occur commonplace. Motivation<sup>10-11,17,19-20,21,23-24,36</sup>, interests of people by a particular subject raised after<sup>10,52</sup> themed approach and empathy with the situation presented<sup>10-11,14</sup> were consequences cited by several studies (Figure 4). Get motivated or to identify themselves with an event are positive traits that favor the reproduction of healthy behavior. These particularities reinforces the use of persuasive communication in healthcare. It was encouraged in studies aimed at the prevention and control of diabetes<sup>20</sup>, reduction of obesity associated with another or metabolic<sup>22</sup> disease in HIV<sup>39</sup> treatment programs and anti-drug<sup>49</sup>, campaigns, anti-smoking and anti-alcohol.<sup>45,56</sup> Investigations clarified that persuasive communications can benefit by reducing barriers to adherence to healthy habits and improving control of chronic diseases.<sup>57-58</sup> It can be effective because it differs from the usual interventions, stimulating ability of individuals. The findings showed that persuasive communication influence health behaviors through messages that target changes in lifestyle and positive practices in the context of health. Still on the consequences, there was a widespread, positive change<sup>33,36,53</sup> in beliefs<sup>10,49,54</sup>, attitudes<sup>13,16,18-19,24,26,46,48-49,53,56</sup>, behavioral intention<sup>46,48-49</sup> and behaviors (Figure 4).<sup>10,16,18,21-22,24-25,27,29,32,34,36-38,45,48-49</sup> Thus, it was possible to identify statistically significant relationship between still persuasive communication and change of attitudes.<sup>53,59</sup> Therefore, persuasive communication approaches based on cognitive neuroscience and behavioral theories can provide interesting insights about effective messages and determinants to improve clinical care and public health through successful behavioral changes.<sup>13</sup>

## Conclusion

Identification of definitions and their attributes, background and consequences of the concept of persuasive communication and relationship with behavioral health adoption allowed to elaborate a comprehensive theoretical definition to the analyzed phenomenon, considering the various contexts of the publications. To this end, this study establishes that the persuasive communication can be defined as a strategy designed to influence or ethics awareness using audio-visual resources or modifications with the aim of interpersonal beliefs, attitudes, behavioural intentions and/or conduct related to a situation, suggesting choices or decision-making process for adoption of healthy behaviors. Search limitations are the lack of national studies on the use of persuasive communication as a strategy of intervention in health indexed at the VHL, as well as the non-availability of some productions on the subject, which could add more information to the results. The continuity is encouraged to further analysis about the persuasive communication, considering that this is a concept relevant to the scientific community and that can cooperate with more efficient approaches in health.

## REFERENCES

1. Freitas MC, Mendes MMR. A dimensão do conceito em Deleuze e na enfermagem. Rev Latino-Am Enferm [Internet]. 2004 [citado 2015 jun 12];12(1):128-33. Disponível em: <http://www.scielo.br/pdf/rlae/v12n1/v12n1a18.pdf>
2. Favero L, Pagliuca LMF, Lacerda MR. Transpersonal caring in nursing: an analysis grounded in a conceptual model. Rev Esc Enferm USP [Internet]. 2013 [cited 2015

- Jun 12]; 47(2): 500-5. Available from: [http://www.scielo.br/pdf/reeusp/v47n2/en\\_32.pdf](http://www.scielo.br/pdf/reeusp/v47n2/en_32.pdf)
3. Freitas MC, Mendes MMR. Chronic health conditions in adults: concept analysis. *Rev Latino-Am Enferm* [Internet]. 2007 [cited 2015 Jun 20];15(4):590-7. Available from: <http://www.scielo.br/pdf/rlae/v15n4/v15n4a11.pdf>
  4. Bousso RS, Poles K, Cruz DALM. Nursing concepts and theories. *Rev Esc Enferm USP* [Internet]. 2014[cited 2015 Jun 20]; 48(1):141-5. Available from: <http://www.scielo.br/pdf/reeusp/v48n1/0080-6234-reeusp-48-01-141.pdf>
  5. Meleis AI. *Theoretical nursing: development and progress*. 5<sup>th</sup> ed. Philadelphia (PA): Lippincott William e Wilkins; 2012.
  6. Shaurich D, Crossetti MGO. Produção do conhecimento sobre teorias de enfermagem: análise de periódicos da área, 1998-2007. *Esc Anna Nery Rev Enferm*. [Internet]. 2010 [citado 2015 jun 21];14(1):182-8. Disponível em: <http://www.scielo.br/pdf/ean/v14n1/v14n1a27.pdf>
  7. World Health Organization - WHO. Report of the SAGE Working Group on Vaccine Hesitancy. WHO [Internet]. 2014 [cited 2015 Dec 14]. Available from: [http://www.who.int/immunization/sage/meetings/2014/october/1\\_Report\\_WORKING\\_GROUP\\_vaccine\\_hesitancy\\_final.pdf](http://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf)
  8. Shepherd JP, Frampton GK, Harris P. Interventions for encouraging sexual behaviours intended to prevent cervical cancer. *Cochrane Database Syst Rev*. [Internet]. 2011 [cited 2016 Jan 7];13(4). Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4040418/>
  9. Meleis AI. *Theoretical nursing: development and progress*. 3<sup>th</sup> ed. Philadelphia (PA): Lippincott William e Wilkins; 2005.
  10. Miller-Day M, Hecht ML. Narrative Means to Preventative Ends: A Narrative Engagement Framework for Designing Prevention Interventions. *Health Commun*. [Internet]. 2013 [cited 2015 Dec 19]; 28(7): 657-70. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3795942/>
  11. Krieger JL, Coveleski S, Hecht ML, Miller-Day M, Graham JW, Pettigrew J, et al. From Kids, Through Kids, To Kids: Examining the Social Influence Strategies Used by Adolescents to Promote Prevention Among Peers. *Health Commun*. [Internet]. 2013 [cited 2015 Aug 23]; 28(7): 683-95. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3924869/>
  12. Mason AM, Miller CH. Inoculation message treatments for curbing noncommunicable disease development. *Rev Panam Salud Publica* [Internet]. 2013 [cited 2015 Nov 23];34(1):29-35. Available from: <http://www.scielosp.org/pdf/rpsp/v34n1/04.pdf>
  13. Krawitz A, Fukunaga R, Brown JW. Anterior Insula Activity Predicts the Influence of Positively-Framed Messages on Decision Making. *Cogn Affect Behav Neurosci*. [Internet]. 2010 [cited 2015 Sep 13];10(3): 392-405. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3003304/>
  14. Swindell JS, McGuire AL, Halpern SD. Beneficent Persuasion: Techniques and Ethical Guidelines to Improve Patients' Decisions. *Ann Fam Med*. [Internet]. 2010 [cited 2015 Sep 13]; 8(3): 260-64. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2866725/>
  15. Saghai Y. Salvaging the concept of nudge. *J Med Ethics* [Internet]. 2013 [cited 2015 Sep 21]; 39:487-93. Available from: <http://jme.bmj.com/content/early/2013/02/19/medethics-2012-100727.long>
  16. Job RFS. Effective and Ineffective Use of Fear in Health Promotion Campaigns. *AJPH* [Internet]. 1988 [cited 2015 Oct 23]; 78(2):163-7. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1349109/>
  17. Vet R, Wit JBF, Das E. The efficacy of social role models to increase motivation to obtain vaccination against hepatitis B among men who have sex with men. *Health Educ Res*. [Internet]. 2010 [cited 2015 Nov 24]; 27(2): 192-200. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21106651>
  18. Galavotti C, Pappas-DeLuca KA, Lansky A. Modeling and Reinforcement to Combat HIV: The MARCH Approach to Behavior Change. *Am J Public Health*. [Internet]. 2001 [cited 2015 Nov 4]; 91(10): 1602-7. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446836/>
  19. Schmid KL, Rivers SE, Latimer AE, Salovey P. Targeting or Tailoring? Maximizing Resources to Create Effective Health Communications. *Mark Health Serv*. [Internet]. 2008 [cited 2015 Dec 4]; 28(1): 32-7. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2728473/>
  20. Burner ER, Menchine MD, Kubicek K, Robles M, Arora S. Perceptions of Successful Cues to Action and Opportunities to Augment Behavioral Triggers in Diabetes Self-Management: Qualitative Analysis of a Mobile Intervention for Low-Income Latinos With Diabetes. *J Med Internet Res*. [Internet]. 2014 [cited 2015 Dec 4]; 16(1): e25. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3936269/>
  21. Smith SW, Atkin C, Skubisz CM, Munday S, Stohl C. The Impact of Personal and/or Close Relationship Experience on Memorable Messages about Breast Cancer and the Perceived Speech Acts of the Sender. *J Cancer Educ*. [Internet]. 2009 [cited 2015 Dec 4]; 24(2): 129-34. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3936269/>
  22. DeBar LL, Schneider M, Drews KL, Ford EG, Stadler DD, Moe EL, et al. Student public commitment in a school-based diabetes prevention project: impact on physical health and health behavior. *BMC Public Health*. [Internet]. 2011 [cited 2015 Dec 5]; 11:711. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3189889/>
  23. Shadel WG, Fryer GS, Tharp-Taylor S. Uncovering the most effective active ingredients of antismoking public service announcements: The role of actor and message characteristics. *Nicotine Tob Res*. [Internet] 2009 [cited 2015 Dec 12]; 11(5): 547-52. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2671467/>
  24. Saporova D. Motivating, Influencing, and Persuading Patients through Personal Health Records: A Scoping Review. *Perspect Health Inf Manag*. [Internet]. 2012 [cited 2015 Dec 15]; 9(Summer). Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3392953/>
  25. Lieberman LD. Relationships and Context as a Means for Improving Disease Prevention and Sexual Health Messages. *Health Education & Behavior* [Internet]. 2012 [cited 2015 Dec 16];39(3):255-8. Available from: <http://heb.sagepub.com/content/39/3/255.full.pdf+html>
  26. Ling PM, Glantz SA. Why and How the Tobacco Industry Sells Cigarettes to Young Adults: Evidence From Industry Documents. *Am J Public Health*. [Internet]. 2002 [cited Nov 27]; 92(6): 908-16. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447481/>
  27. Evans WD, McCormack L. Applying Social Marketing in Health Care: Communicating Evidence to Change Consumer Behavior. *Med Decis Making* [Internet]. 2008

- [cited 2015 Dec 1];28:781-92. Available from: <http://mdm.sagepub.com/content/28/5/781.full.pdf+html>
- 28 Toll BA, Salovey P, O'Malley SS, Mazure CM, Latimer A, McKee SA. Message framing for smoking cessation: The interaction of risk perceptions and gender. *Nicotine Tob Res.* [Internet]. 2008 [cited 2015 Dec 4]; 10(1): 195-200. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2527723/>
  - 29 Baer JS, Kivlahan DR, Blume AW, McKnight P, Marlatt GA. Brief Intervention for Heavy-Drinking College Students: 4-Year Follow-Up and Natural History. *Am J Public Health.* [Internet]. 2001 [cited 2015 Dec 6]; 91(8): 1310-16. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446766/>
  - 30 O'Keefe DJ, Wu D. Gain-Framed Messages Do Not Motivate Sun Protection: A Meta-Analytic Review of Randomized Trials Comparing Gain-Framed and Loss-Framed Appeals for Promoting Skin Cancer Prevention. *Int J Environ Res Public Health.* [Internet]. 2012 [cited 2015 Nov 6]; 9(6): 2121-33. Available from: <http://www.mdpi.com/1660-4601/9/6/2121>
  - 31 Matsumoto PM, Barreto ARB, Sakata KN, Siqueira IMC, Zoboli ELCP, Fracolli LA. A educação em saúde no cuidado de usuários do Programa Automonitoramento Glicêmico. *Rev Esc. Enferm. USP* [Internet]. 2012 [cited 2015 Dec 4];46(3): 761-5. Available from: [http://www.scielo.br/pdf/reeusp/v46n3/en\\_31.pdf](http://www.scielo.br/pdf/reeusp/v46n3/en_31.pdf)
  - 32 Kayani A, King MJ, Fleiter JJ. Fatalism and its implications for risky road use and receptiveness to safety messages: a qualitative investigation in Pakistan. *Health Educ Res.* [Internet]. 2012 [cited 2015 Dec 6]; 27(6): 1043-54. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22987861>
  - 33 Kelders SM, Kok RN, Ossebaard HC, Van Gemert-Pijnen JEW. Persuasive System Design Does Matter: A Systematic Review of Adherence to Web-Based Interventions. *J Med Internet Res.* [Internet]. 2012 [cited 2015 Nov 23]; 14(6): e152. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3510730/>
  - 34 Slater MD, Jain P. Teens' Attention to Crime and Emergency Programs on Television as a Predictor and Mediator of Increased Risk Perceptions Regarding Alcohol-Related Injuries. *Health Commun.* [Internet] 2011 [cited 2015 Nov 23]; 26(1): 94-103. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3045822/>
  - 35 Lin JJ, Mann DM. Application of persuasion and health behavior theories for behavior change counseling: Design of the ADAPT (Avoiding Diabetes Thru Action Plan Targeting) program. *Patient Educ Couns.* [Internet]. 2012 [cited 2015 Dec 3]; 88(3): 460-6. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3417073/>
  - 36 Greene K. The Theory of Active Involvement: Processes Underlying Interventions that Engage Adolescents in Message Planning and/or Production. *Health Commun.* [Internet]. 2013 [cited 2015 Nov 23]; 28(7). Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3816280/>
  - 37 Greene K, Hecht ML. Introduction for Symposium on Engaging Youth in Prevention Message Creation: The Theory and Practice of Active Involvement Interventions. *Health Commun.* [Internet]. 2013 [cited 2015 Dec 4]; 28(7). Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3816279/>
  - 38 Van Gemert C, Dietzel P, Gold J, Sacks-Davis R, Stoové M, Vally H, Hellard M. The Australian national binge drinking campaign: campaign recognition among young people at a music festival who report risky drinking. *BMC Public Health* [Internet]. 2011 [cited 2015 Nov 4]; 11:482. Available from: <http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-11-482>
  - 39 Costa TM, Barbosa BJP, Costa DAG, Sigulem D, Marin HF, Castelo Filho A, et al. Results of a randomized controlled trial to assess the effects of a mobile SMS-based intervention on treatment adherence in HIV/AIDS-infected Brazilian women and impressions and satisfaction with respect to incoming messages. *Int J Med Inform.* [Internet]. 2012 [cited Dec 7]; 81(4): 257-69. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3766367/>
  - 40 Purewal S, Van Den Akker OBA. A study of the effect of message framing on oocyte donation. *Human Reprod.* [Internet]. 2009 [cited 2015 Dec 16]; 24(12):3136-43. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/19801573>
  - 41 Bigman CA, Cappella JN, Hornik RC. Effective or ineffective: Attribute framing and the human papillomavirus (HPV) Vaccine. *Patient Educ Couns.* [Internet] 2010 [cited 2015 Dec 19]; 81(S1): S70-S76. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2993779/>
  - 42 Washington HA. Burning Love: Big Tobacco Takes Aim at LGBT Youths. *Am J Public Health.* [Internet]. 2002 [cited 2015 Dec 14]; 92(7): 1086-95. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222279/>
  - 43 Tonani M, Carvalho EC. Cancer risk and preventive behavior: persuasion as an intervention strategy. *Rev. Latino-Am. Enfermagem* [Internet]. 2008 [cited 2015 Dec 17]; 16(5): 864-70. Available from: <http://www.scielo.br/pdf/rlae/v16n5/11.pdf>
  - 44 Akl EA, Oxman AD, Herrin J, Vist GE, Terrenato I, Sperati F, et al. Using alternative statistical formats for presenting risks and risk reductions. *Cochrane Database Syst Rev.* [Internet]. 2015 [cited 2015 Dec 19]; 16(3). Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21412897>
  - 45 Comello MLG, Slater MD. Effects of Ads from a Drug and Alcohol Prevention Campaign on Willingness to Engage in Alcohol-Related Risky Behaviors. *J Health Psychol.* [Internet]. 2011 [cited 2015 Dec 19] 16(8): 1268-76. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3196782/>
  - 46 Akl EA, Oxman AD, Herrin J, Vist GE, Terrenato I, Sperati F, et al. Framing of health information messages. *Cochrane Database Syst Rev.* [Internet]. 2015 [cited 2015 Dec 19]; 7(12). Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22161408>
  - 47 Wakefield MA, Spittal MJ, Yong HH, Durkin SJ, Borland R. Effects of mass media campaign exposure intensity and durability on quit attempts in a population-based cohort study. *Health Educ Res.* [Internet]. 2011 [cited 2015 Dec 19]; 26(6): 988-97. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3219882/>
  - 48 Falk EB, Berkman ET, Mann T, Harrison B, Lieberman MD. Predicting Persuasion-Induced Behavior Change from the Brain. *J Neurosci.* [Internet]. 2010 [cited 2015 Dec 19]; 30(25): 8421-4. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3027351/>
  - 49 Yzer MC, Cappella JN, Fishbein M, Hornik R, Ahern RK. The Effectiveness of Gateway Communications in Anti-Marijuana Campaigns. *J Health Commun.* [Internet]. 2003 [cited 2015 Dec 21]; 8(2): 129-43. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4145603/>



- 50 Schabath MB, McIntyre J, Pratt C, Gonzalez LE, Munoz-Antonia T, Haura EB, et al. Health Care Providers' Knowledge and Attitudes about Rapid Tissue Donation (RTD): Phase one of Establishing a Rapid Tissue Donation Program in Thoracic Oncology. *J Med Ethics*. [Internet]. 2014 [cited 2015 Dec 15]; 40(2): 139-42. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3924895/?tool=pubmed>
- 51 Morrongiello BA, Bradley MDM. Sibling power: influence of older siblings' persuasive appeals on younger siblings' judgments about risk taking behaviours. *Injury Prevention* [Internet]. 1997 [cited 2015 Dec 17]; 3(1): 23-8. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1067759/>
- 52 Landman A, Ling PM, Glantz SA. Tobacco Industry Youth Smoking Prevention Programs: Protecting the Industry and Hurting Tobacco Control. *Am J Public Health*. [Internet]. 2002 [cited 2015 Dec 19]; 92(6): 917-30. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447482/>
- 53 Strasser AA, Cappella JN, Jepson C, Fishbein M, Tang KZ, Han E, et al. Experimental evaluation of antitobacco PSAs: Effects of message content and format on physiological and behavioral outcomes Nicotine. *Tob Res*. [Internet]. 2009 [cited 2015 Nov 29]; 11(3): 293-302. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2666374/>
- 54 Nita ME, Secoli SR, Nobre M, Ono-Nita SK. Métodos de pesquisa em avaliação de tecnologia em saúde. *Arq Gastroenterol* [Internet]. 2009 [citado 2015 dez 5]; 46(4):252-5. Disponível em: <http://www.scielo.br/pdf/ag/v46n4/02.pdf>
- 55 Carvalho EC. Taxonomias de enfermagem e estudos de eficácia, eficiência e efetividade: um desafio. *Rev. Latino-Am. Enfermagem* [Internet]. 2010 [citado em 2015 Jul 23];18(4). Disponível em: [http://www.scielo.br/pdf/rlae/v18n4/pt\\_01.pdf](http://www.scielo.br/pdf/rlae/v18n4/pt_01.pdf)
- 56 Gozález-Elías IE, Trujillo AH. La sugestión como parte de un sistema terapéutico integrado en un grupo de adolescentes fumadores y consumidores de alcohol. *Medisan* [Internet]. 2014 [cited 2015 Dec 19]; 18(1): 78-83. Available from: <http://scielo.sld.cu/pdf/san/v18n1/san11114.pdf>
- 57 Arora S, Peters AL, Burner E, Lam CN, Menchine M. Trial to Examine Text Message-Based mHealth in Emergency Department Patients With Diabetes (TEXT-MED): A Randomized Controlled Trial. *Ann Emerg Med*. [Internet]. 2013 [cited 2015 Dec 18];63(6):745-54. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24225332>
- 58 Pop-Eleches C, Thirumurthy H, Habyarimana JP, Zivin JG, Goldstein MP, de Walque D, et al. Mobile phone technologies improve adherence to antiretroviral treatment in a resource-limited setting: a randomized controlled trial of text message reminders. *AIDS* [Internet]. 2011 [cited 2015 Dec 19]; 25(6):825-34. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3718389/>
- 59 Jarcho JM, Berkman ET, Lieberman MD. The neural basis of rationalization: cognitive dissonance reduction during decision making. *Soc Cogn Affect Neurosci*. [Internet]. 2010 [cited 2015 Dec 16]. Available from: <http://scan.oxfordjournals.org/content/early/2010/07/09/scan.nsq054.full>

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