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Department of Communication and Art

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**O Audiovisual para Promoção da Saúde: caso da  
cessação tabágica**

**Audiovisual for Health Promotion: smoking cessation  
case**





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## **Audiovisual for Health Promotion: smoking cessation case**

Dissertation thesis presented to the University of Aveiro as a fulfillment of the necessary requirements to the obtainment of the Master's Degree in Multimedia Communication, accomplished under the scientific supervision of Professor Dr. Ana Isabel Veloso, Assistant professor of the Department of Communication and Arts of the University of Aveiro and Professor Dr. Vassiliki Zisi, Assistant professor of the Department of Physical Education and Sports Science of the University of Thessaly.

Dedico este trabalho à *“Madonna del Divino Amore”* e ao *“Sacro Coure di Gesu”* pelo incansável amor e protecção e à minha mãe pelo apoio que sempre me deu em todos os momentos da minha vida.

I dedicate this work to *“Madonna del Divino Amore”* and *“Sacro Coure di Gesu”* by the untiring love and protection and to my mother by the support which always gave me in all the moments of my life.

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## **Palavras-chave**

Mudança de Comportamento, Teoria da Persuasão, Transtheoretical Model, Elaboration Likelihood Model, Elementos Audiovisuais.

## **Resumo**

Este projecto consiste no desenvolvimento de vídeos que irão funcionar como materiais alternativos no tratamento terapêutico a indivíduos que querem alterar os seus comportamentos aditivos. Os vídeos foram desenvolvidos de acordo com experiências nas práticas terapêuticas e materiais impressos, seguindo certas teorias de aprendizagem e comunicação, tais como, Behaviorismo, Cognitivismo, Construtivismo, Teoria da Persuasão e modelos Transteorético e de Probabilidade de Elaboração.

Um estudo aprofundado destas teorias e modelos irá ajudar a compreender como o indivíduo pensa, facilitando o desenvolvimento dos vídeos que podem ajudar os pacientes. Este projecto é desenvolvido na área de utilização de práticas terapêuticas, aplicando à realidade grega através do audiovisual.

O projecto teve lugar na Universidade de Tessália, Departamento de Educação Física e Ciência do Desporto, na cidade de Trikala, Grécia. O modelo conceptual foi elaborado com a influência de conceitos de design centrado em terapias especializadas com componentes audiovisuais.

A sua avaliação de conteúdo foi feita por especialistas em programas de cessação tabágica, media e fumadores onde foram avaliados aspectos como o design, qualidade, mensagem, entre outros.

Esta avaliação preliminar permitiu concluir que o uso do audiovisual pode ter um papel importante na luta pela cessação tabágica, já que o seu uso pode trazer motivação adicional para fumadores e apresentar informações através de estratégias interessantes.



**Keywords**

Change Behavior, Theory of Persuasion, Transtheoretical Model, Elaboration Likelihood Model, Audiovisual Elements.

**Abstract**

This project aims on the development of three videos which will function as a tool to used along with therapeutical treatment for individuals who intent to change their health behaviors. The videos were developed using experts' therapeutic practical experiences and printed materials following certain, learning and communication theories such as Behaviorism, Cognitivism, Construtivism, Persuasion theory, Transtheoretical and Elaboration Likelihood models.

A profound study on these theories and models helped to understand health behaviors facilitating thus the development of the videos which might contribute smoker's efforts to alter bad health habits, bad addictive behaviours and shift to healthier lifestyle.

The project took place at the University of Thessaly, Departament of Physical Education and Sports Science, at the city of Trikala, Greece. The conceptual model was elaborated with the influence of user centred design concepts from therapists specialized on this technique, originating the development of a prototype with audiovisual elements. Its assessment content was done between some experts in the fields of smoking cessation intervention program, media and smokers to evaluate certain of its aspects (design, quality, messages and others).

This preliminary evaluation allow to the conclusion that audiovisual material might play an important role on smoking cessation interventions, since its usage might bring extra motivation for the smokers and present information through more interesting strategies.



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# 1. INTRODUCTION

## 1.1 Research problem

Smoking is the major cause of mortality worldwide. On a global level, almost 5 million premature deaths per year can be attributed to smoking. Smoking has been estimated to cause 440, 000 deaths per year in the United States of America, 120,000 in United Kingdom, and 137,000 in Germany and in 7000 in Sweden<sup>1</sup>.

According to the World Health Organization (WHO), smoking can be a major cause of living disability of the most developed regions of the world, with 12% of the total loss. In addition, the loss of productivity in the economy due to smoking adds an indirect cost, which can be as large as the costs for health care.

A review of work on smoking behavior indicates that the analysis of the determinants of smoking has fallen well short of pharmacological research, and partly as a result of termination, still lacks empirical and theoretical researches. (Fiore et al., 1990)

Therapeutical programs with a purpose for research of both behavioral and pharmacological aspects of smoking may offer reductions of tobacco addiction. In countries like United States of America, England and Australia, smoking cessation programs with a support of Media (anti-smoking advertising, music, movies and videos) has been used for more effective strategies for smoking cessation.

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<sup>1</sup>Information available at [www.parliament.uk/post/home.htm](http://www.parliament.uk/post/home.htm)

Media interventions through audiovisual products on smoking cessation programs already show promising results and can become valuable additions to the strategies of behavioral change. In addition, much progress has been made in the study of audiovisual influence as measures of tobacco control, becoming focus of researches conducted at universities, research institutes and health centers worldwide.

Considering that use of anti-smoking messages in movies, on televisions, short videos, music media, and others, is still being explored, empirical studies can provide a rich source of information about the impact of audiovisual materials embedded on smoking cessation programs.

One of the points under discussion concerns understanding the effects of persuasive messages presented through of video interventions to behaviors change promotion. Many of these messages come in form of narratives of positive views of non smoking, attractive pictures, sound tracks or information about health lifestyle benefits. Understand the impact and effects of these persuasive messages is relevant for empirical use of audio and visual components as ways to provide direct reinforcement for behavior change on smoking cessation programs (Solomon & Englis 1994).

Therefore, more studies about the potential use of audiovisual components for health promotion can be important contributions to smoking cessation programs conducted by health centers and helpful for reduce the number of individuals with tobacco addiction.

## **1.2 Research Questions**

After the explanation the importance of this study in further researches about audiovisual elements in therapeutic treatments for smoking cessation, the following research questions occur:

- What learning and communication theories and behavior model can be included in the conceptualization of audiovisual materials to help in a smoking cessation program?
- How can audiovisual materials embedded in therapeutical sessions contribute to a Smoking Cessation Program?

## **1.3 Aims and Objectives**

### **1.3.1 Aims**

Contribute to conceptualize and evaluate audiovisual materials in video formats as a support for therapeutic programs, specifically those against tobacco use and evaluate it using the advice of experts and smokers.

### **1.3.2 Objectives**

- Research the use of learning theories in designing of videos for Smoking Cessation Program.
- Understand how model of behavior change Transtheoretical Model and Persuasion Theory combined to Elaboration Likelihood Model, can be include for conceptualization of audiovisual materials.
- Perceive the potential of use of audiovisual materials on treatment sessions for therapeutic purposes.

## 1.4 Research methodology

The methodology used during this research was the exploratory method. The methodology commenced with a review of the literature pertaining to learning theories, particularly, as an influence the uptake of aspects of change.

The literature also summarizes some of the conceptual thinking about the pathways of Transtheoretical Model, Persuasion Theory and Elaboration Likelihood Model of persuasion and the use of media for health promotion, especially as those related with behavioral change skills through exposition of media messages (presented in audiovisual products) in therapeutical treatment. The review has been undertaken as a first step toward gaining a better understanding of contextual factors.

The data collection procedure was applied through the elaboration of a case study obtained through viewpoint of the sample after watched videos for therapeutical purposes. The impact of media interventions for health promotion, specifically, the use of audiovisual products as a support instrument of smoking cessation were evaluated.

The conceptualization of the videos considered common objectives with a Smoking Cessation Program from University of Thessaly, Greece, and the effects of media interventions for health promotion. It was developed a videos package with relaxation techniques, motivation for healthy living increase and information about risk of passive smoking.

In terms of data collection process, two techniques were applied: questionnaire and interview. The process was administered to a representative sample of 15 participants. The sample was divided in groups of smokers and specialists. The criteria established was: one group of smoking cessation and media experts for evaluate technical and specific features of their specialization and another group of smokers for video's evaluation (messages, quality, contribution to smoking cessation, and others.)

In what concern to evaluation process, the participants watched three videos: "Relaxation Techniques", "Motivation to Practice Exercises" and "Passive Smoking". The process consisted on evaluate each video separately.



Three different groups (smokers, smoking cessation experts and media experts) tested each video; with the main goal to understand what video's aspects could be helpful to smoking cessation interventions.

The next step of the methodology consisted in collecting all data and analyzing it. The final step of the methodology was completed through the development of guidelines that can assist in the conceptualization of audiovisual materials for therapeutic treatments, specifically, smoking cessation programs.

#### **1.4.1 Model of analysis**

The model of analysis presented corresponds to the concepts, dimensions and indicators related to the research questions proposed by this study. The model suggests the comparison of observational data, suggested by JP Quivy (2005). It is important to emphasize that the hypotheses are confirmed or not during the analysis of results.

Remembering once more the research questions "What learning and communication theories and behavior model can be included in the conceptualization of audiovisual materials to help in a smoking cessation program? and "How can audiovisual materials embedded in therapeutic sessions contribute to a Smoking Cessation Program?" the concepts that can be extracted are: target audience, learning theories, model of behavior change, communication theory, audiovisual material and smoking cessation treatment.

The concepts presented were separated in dimensions and indicators as can be seen in Table 1. The target audience concept is linked with smokers. The learning theory is presented through Constructivism, Cognitivism and Behaviorism theories, followed by the model of behavior change, Transtheoretical Model.

The media communication for health promotion is linked with Persuasion Theory and Elaboration Likelihood Model of Persuasion. The concept of audiovisual is separated in: script, visual plans, narrative, camera angles and post production.

Finally, the smoking cessation program concept is divided into treatment sessions and number of cigarettes per day.

<b>Concepts</b>	<b>Dimensions</b>	<b>Indicators</b>
<b>Target audience</b>	Smokers	Age, Gender
<b>Learning theories</b>	Constructivism	Hypermedia structure, hot spots participation promotion;
	Cognitivism	Questions and clarifications; examples and practice;
	Behaviourism	Immediate feedback; positive examples; forcing the individual to repeat a certain behavior;
<b>Model of behavior change</b>	Transtheoretical Model	Intention to change behavior
	Persuasion Theory	Media uses and effects, Stimulus and decode the message
<b>Media communication for health promotion</b>	Elaboration Likelihood Model	Motivation, ability and opportunity to process the information
<b>Audiovisual Material</b>	Production Storyboard Script Framework Camera movements Shooting Editing of footage Post- production	Strategies Objectives Duration Visual language Narrative language Technical dimensions Appeal
<b>Smoking Cessation Treatment</b>	Treatment sessions, number of cigarettes per day, smoking prevalence	Behavior change

**Table 1 - Concepts, dimensions and indicators of model of analysis.**

Bearing in mind the concepts established and the dimensions and indicators that associate to these the following hypotheses can be presented:

a) The learning theories (Behaviourism, Constructivism, Cognitivism) and behavior model (Transtheoretical Model) combined to Persuasion Theory and Elaboration Likelihood Model of persuasion can be included in the conceptualization of videos for a smoking cessation program.

b) The models and theories are chosen to promote behavior change and become relevant to the conceptualization of the videos. On videos, the union of the elements (the process of learning, participation, motivation and persuasive messages) present in these models and audiovisual elements provide immediate feedback with smokers.

c) The visual language and narrative, as well as technical dimensions (audio and video) are used as a stimulus to decode the message (Persuasion Theory) present in audiovisual products.

## **1.5 Dissertation structure**

This dissertation thesis is organized in three different parts. The part one corresponds to the state of the art, part two is relative to the empirical research and the last part, to the study conclusions. However these parts follow this introduction to the study.

The introduction is divided into 6 sections, being the research problem, research question, aims, objectives, methodology, model of analysis and the present section, dissertation structure.

The Part I of the document presents the State of the Art. This part begins as an interdisciplinary study on Social Cognitive Theories, highlighting the Behaviorism, Cognitivism and Constructivism in the context of learning environments and behavior change. The follow sections present the model of behavior change Transtheoretical Model, Persuasion Theory and Elaboration Likelihood Model, as behavioral intervention for health promotion on therapy sessions.

The state of the art includes a review of the literature pertaining to media for health promotion, especially the use of audiovisual elements for conceptualization of videos on clinical sessions. Settings on the types and properties of the media will be also performed. Finally, in last section there will also be examples of films, videos, commercials, multimedia applications with the approach to smoking.

The Part II presents the Empirical Research and is divided between the description of the case study, the results and data analysis. The chapter 6 includes the conceptualization and development of the case study. It is organized in 5 sections: study contextualization, characterization of the target group, contextualization of the study subject and video's development. The results and data analysis chapter presents the results obtained of data collected and the analysis and discussion of those results.

Finally, the last part of the dissertation presents the conclusions comparing to initial objectives of the research. The final sections provide a further discussion of the empirical findings in the context of the case study and identify issues for further research.

**PART ONE**  
**STATE OF THE ART**

# 2. THEORIES OF SOCIAL COGNITIVE

Trivia related to the nature of mind, body and human behavior, from the great philosophers of ancient Greece, are considered key elements from different perspectives. However, the possibility of further scientific research to examine the mental structures (structural), functioning of the mind and the body's adaptation to its environment (functionalism) started in other fields of behavioral studies. (Atkinson & Atkinson, et al. 2002)

Such considerations, based on psychology, demonstrated the need for an interdisciplinary study of human development, both in socio-cultural perspective, physiological and behavior. In fact, psychological evolution and many factors that influence the development of human life cannot be dispensed (Rubio & Rubio, 2003).

Even with the description of the principles, current approaches in psychology are described from different perspectives (cognitive, behavioral, psychoanalytic, biological, and phenomenological) that contribute to the understanding of theories and model in the context of the design of behavioral changes the person as a whole. Founded by John B. Watson, behaviorism represents the combined influence of various philosophical and scientific traditions, and because of its practical applications, defines the psychological factor from the notion of behavior (Molo, 2004). In this way, the man is first studied as an association between stimulus (social environment) and responses (behavior) established during his life. (Bock, 1999, p.25)

Another important point is that the behavior comes from unconscious processes, such as beliefs, desires and models, considered as a prerequisite for the psychoanalytic approach. A final discussion that emerges is that the interest or humanist is phenomenological, as we can see, understand and interpret our social worlds. (Atkinson & Atkinson, et al. 2002)

This description leads to the understanding of the approaches, trends, theories and models that some authors have suggested to study the behavior of different segments of the population. This happens because of the difficulty of considering the influence of the variables that better explain human behavior. Focusing on therapeutic programs, such theories and models have helped to understand the behavior, but also suggest strategies for intervention (Sallis & Owen, 1999, p.48).

According to Kaplan (1975), these theories consider traces of a real similarity and its content is what provides the basis for making these similarities. As for the models, the author considers it necessary to have a causal relationship in association between relationships, when appropriate.

In other words, Glanz (1999) understands the theories as a set of propositions and interrelated concepts used to discover the reasons for taking a systemic view of events or situations.

In this context, it is interesting to note the observations of Thomas (1983) on the relationship between individual, changing and behavior. According Thomas (1983) the action brings the experience and expertise to influence and take action the individual confronted with a specific means do the best to achieve the objectives of its action, is also face prefixes obstacles (Thomas, 1983, p. 32).

These considerations can be considered for research on behavior change in therapeutic treatment, in this case, smoking cessation programs. To therapeutic intervention purposes, scientists have identified strategies based on learning and behavior theories (Cognitivism, Constructivism and Behaviorism) to help the individual to initiate and sustain a change in behavior related to health. Such strategies may occur in stages in relation to the adoption and maintenance of behavior (Taylor, Miller & Plant, 1994).

Despite several considerations in this regard, the evidence confirms that, based on theories for understanding the behavioral changes, it is known that the intentions represent the motivation to implement a plan or a decision when linked to a particular behavior (Dishman, 1993, Bandura, 2001).

## 2.1 Learning Theories

### 2.1.1 Behaviorism

Behaviorism theory was born from deep studies of an American psychologist J. Watson. In this theory, the object of research is just the behavior. For behaviorism, behavior is defined as a ratio between the stimulus and response, defining human behavior as a set of observable responses that the body performs in the face of stimuli also directly observable.<sup>2</sup>

According to Watson, after a given stimulus, a reaction can be expected. The stimulus that caused it can also be determined making it possible establish a cause and effect relationship. However, Watson presented a too simplistic interpretation of human behavior and it was not given due importance to the cognitive universe of individuals. To therapeutic treatment purposes, where the aim is to promote behavior change with respect to behavioral mechanisms, basically, learning is achieved through a common response and immediate reinforcement. The performance is also seen as the result useful in the treatment (Taylor, Miller & Plant, 1994).

According to Taylor, Miller & Plant, in general, these treatments promote individual stimulation. This process is accomplished with a task analysis, which divides the behavior of a sequence of observable actions (Taylor, Miller & Plant 1994, p.27).

The evaluation of the objectives is measured according to some performance indicators operationally, defined and measured through to the performance of individuals (Taylor, Miller & Plant, 1994, p.27). In a program for smoking cessation conducted with college students by the department of psychology at the University of Michigan, USA, were investigated the efficacy of alternative materials during therapy sessions.

The behavioral Strategies used in the treatment consisted in self-report methodology to assess performance, the scheduling - reduced smoking and functionally derived strategies of self-management. The use of a device for functional evaluation, since the descriptions of antecedent - behavior relationships results, thereby increasing their self-ideographic cessation

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<sup>2</sup>Information available at [www.edusurfa.pt](http://www.edusurfa.pt)



management strategies, and a reduced schedule component smoking was included in order to facilitate the planned reduction in nicotine intake.

Also were included measures of self-reported frequency of intake of nicotine. Treatment included four weekly sessions lasting approximately 45 minutes. Although the participants did not reach to complete smoking cessation, was obtained 70% of cigarette reduction use and at least 6 months of follow up (Cole& Bonem, 2000).

Through this study, one realizes that the use of multicomponents with overlooking of behavioral aspects can provide a reduction in the number of tobacco addicts.

In short, contemporary models of health care using behavioral aspects combined to functional analysis can provide positive results. However more studies are needed to research the efficiency of this type of treatment.

### **2.1.2 Cognitivism**

Cognitive psychology is a school of psychology that studies the mental processes involved in behavior.

This theory generated between decades 50 and 60 by Jean Piaget, focuses on the cognitive and social behavior, and states that such actions are mere products of environment and a simple result of the internal rules and structures produced on own individuals life (Piaget , 1948 apud (Smith, 1995, p. 26)). In the theory proposed by Piaget, the self-efficacy expectations derive from four main sources of information: performance accomplishments, vicarious experience, verbal persuasion and physiological states.

In each period, the mental operations are structured in a different way, determining the way how individuals see the world.

As a result, it was observed that:

a) All human beings suffer some changes during the universal cognitive development, some of them on quite distinct times of development

b) These changes are related to how the humans understand the world around him in all of those times. The time for development is what Piaget called the stage of thought or stages of development.

In therapeutic treatments, factors influencing the cognitive processing forms appear as emotional, hortatory, and emotional sources. The differential power of various therapeutic procedures is analyzed in terms of the postulated mechanisms of cognitive operation (Misha, 2002, p. 26-27).

The results reported through the analysis of emotive modes of treatment support the hypothesized relationship between perceived self-efficacy and behavioral changes (Misha, 2002, p. 32).

This theory states that psychological processes, in whatever form, can change the level and strength of self-efficacy. It is speculated that the self-efficacy expectations determine the behavior to be initiated, how much effort is spent and how long it will be sustained in the face of obstacles and aversive experiences (Flavell, Miller&Miller, 2002).

Following this analysis, according to Flavell, Miller& Miller (2002), persistence in activities that are subjectively threatening but in fact relatively safe, produces further strengthening of self-efficacy and corresponding reductions in behavior defensive.

Currently, new discussions arise about the structures in this model. According to Misha (2002), strategic processing activities are relevant and stimulating; it is assumed that the patient acquires the information efficiently to resolve the problem. Misha (2002) suggests that a different assessment actually interferes with the change in observable behavior and specific operations in mental tests.

### **2.1.3 Constructivism**

In Piaget's viewpoint of learning, the Constructivism is committed to explain how intelligence develops through mutual action between the individual and the environment. This concept seeks to explain how the individual, from birth, builds knowledge.

According to Piaget (1948) the man is not born smart, but it is not taxable under the influence of the environment, it responds to stimuli to build and organizes their own knowledge (Piaget, 1948 apud (Smith, 1995, p.32)).

In this theory, cognitive development is a process of successive qualitative and quantitative changes of cognitive structures. Therefore, the individual continually builds and rebuilds the structures that make it increasingly able to balance (Piaget, 1948 apud (Smith, 1995,p. 32)).

Currently, factors such as intuition and creativity have played major roles for development and implementation of constructivist learning environments (Dick & Carey 2001).

Dick and Carey (2001) reflect the creation of learning materials in learning environments as a point of discussion based the constructivist theory. Based on learning environments, designers, for example, already adopt a mixed approach to projects; it offering a complete flexibility. Some companies and industry designers show a mix between analysis and evaluation of the objectivist approach with simulations and progress of constructivist approaches (Dick, & Carey 2001).

Actually, the use of alternative materials in environments of treatment programs, such as audiovisual products or interactive systems, are based on intuitive beliefs of designers rather than being based on psychological research, pedagogical and technological (Hannafin & Hooper, 1989, Park & Hannafin, 1993; Spiro, Feltovich, Jacobson & Coulson, 1991). As advances, new technologies offers opportunities for learning, it is important to use a variety of theoretical perspectives to optimize use of alternative materials (Wild & Quinn, 1998).

# 3. MODEL OF BEHAVIOR CHANGE

A healthier and more physically active lifestyle can reduce the risk of developing serious diseases like cancer, heart disease and diabetes<sup>3</sup>. However, the adoption of healthy behaviors presents challenges, both individually and in population.

Faced with the aggression of addictive behaviors on individual health and its high prevalence in the world, targeted interventions for therapeutic treatments has been considered one of the goals in the field of public health.

A functional assessment on addictive behaviors is that smoking is functional and serves as a basis for the individual in the context in which it behaves. Another hypothesis is that smoking is not a static answer issued within a single set of contingencies (Meyers & Smith 1995).

Meyers and Smith (1995) suggest that the purpose of functional assessment on consumption of nicotine is to identify the chain of events that lead to smoking and clarify the consequences of smoking prevalence.

One of the advantages of a functional assessment is that the patient can learn more about some of the antecedents and functional consequences related to smoking (e.g. controlling variables) and dispel the belief that “smoking just happens”. In addition, one of the goals of clinical behavior analysis is helping patients identify the causes on private or implicit environments (e.g., thoughts and emotions). According Kazdin (1982) the own of patient reports about their behaviors or their perceptions, thoughts and feelings, may be relevant to understand many clinical problems (Kazdin , 1982 p. 35).

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<sup>3</sup> Information available at <http://chestjournal.chestpubs.org/content/129/3/651.full.html>

Considering health risks, the smoking cessation programs play an important role to public health. These programs can be designed to reach high risk groups such as students, or those at high risk for morbidity and mortality associated with smoking (Fiore et al., 1990).

A variety of methods to help smokers achieve and maintain smoking cessation evaluated in several studies could be divided into several categories.

The smoking cessation programs include behavioral methods (e.g., self-control techniques and aversion), non-pharmacological methods (e.g., nicotine replacement therapy), self-help approaches (e.g., Freedom from Smoking in 20 Days, American Lung Association, 1984).

During the clinical sessions, others kind of alternative materials have been included, as a use of acupuncture, methods of mass communication and interactive systems (Glasgow & Lichtenstein, 1987; Pechacek, 1979; Schwartz, 1987; Skaar et al. 1997).

Procedures with multiple components systematically can reduce the use of nicotine. These procedures relate the two key components to the success of smoking cessation: initial cessation and maintenance (Cinciripini et al., 1995, 1995, Foxx & Brown, 1979).

In this sense, approaches potentially promising intervention for health promotion may be the design of actions involving the concepts and operational strategies presented by the model of behavior change: Transtheoretical Model (TTM).

### 3.1 Transtheoretical Model (TTM)

Originally, the Transtheoretical Model (TTM) has been developed from studies of clinical interventions related to drug, alcohol and tobacco addictions. However, through major specific adjustments to each result, has become widely used in a variety of health behaviors, including smoking cessation.

The model of stages of change developed by Prochaska in 1983 suggests that people generally move in five major scales of change. The main usage of this model is related to the prevention of disease. According to Prochaska (1994), the term “*transtheoretical*” derives from the interaction of several major theories of behavior change. Thus, although mainly based on attributes of psychological imprint, this model assumes in its design, cognitive factors, social and environment in which it is likely to justify their greater prominence in the health field.

The Transtheoretical Model has been used frequently in the treatment of addictions such as alcoholism and smoking. It is a model that incorporates other theoretical approaches in progress and involves a series of steps. These phases reflect the intentions of each level to change behavior, which vary in time and stability (Weinberg & Gould, 2000).

The Model includes two dimensions: stages of behavior changes and behavioral change processes. The stages of behavior changes refer to temporal aspects, motivation and loyalty of a specific behavior, while the behavioral change processes are linked to the events of intervention that can cause changes in individual experience and behavior change target.

The strength of Transtheoretical Model is the integration of these two dimensions, once identified the stage of behavior change, the change process more suitable for use in that particular situation is selected. Therefore, in this perspective, individuals are identified at different stages behavior change and may benefit through appropriate interventions at different stages where they are now.

The effectiveness of the Model on smoking cessations assistance has been widely documented in the literature. The basic premise is that behavioral changes must occur cyclically through a continuum of actions, not by a single event. In addition, individuals show different levels of motivation and willingness to change its force behavior.

The Transtheoretical Model attempts to explain how and why they should be changes in behavior. Unlike previous models, the model assumes a pragmatic approach and offers suggestions on how explicit materials may be assisted in trying to change their behavior.

The Model suggests that there are distinct stages involved in the continuum related to behavior change: Precontemplation, Contemplation, Preparation, Action, Maintenance and Termination. In addition, ten different events to intervene in cases of change can be used and divided into two groups of actions: personal experiences and the environment.

It is important to note that the continuum of stages of change of the model is presented in a circular arrangement and not linear. The Transtheoretical model is visible in Figure 1.

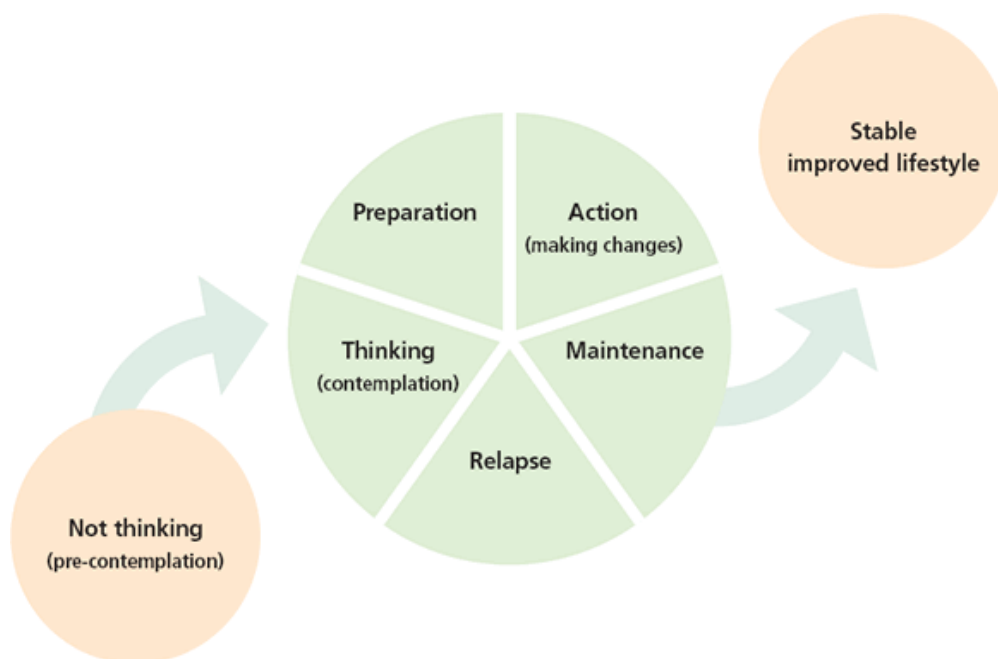


Figure 1 - Transtheoretical Model of behavior change<sup>4</sup>.

<sup>4</sup> Retrieved from: <http://withfriendship.com/user/svaruna/transtheoretical--model.php> (March 2,2010)

## (A) Stages of change therapy

According to Prochaska (1994), the stages reflect the intentions, as well a variation of the behavior, such as:

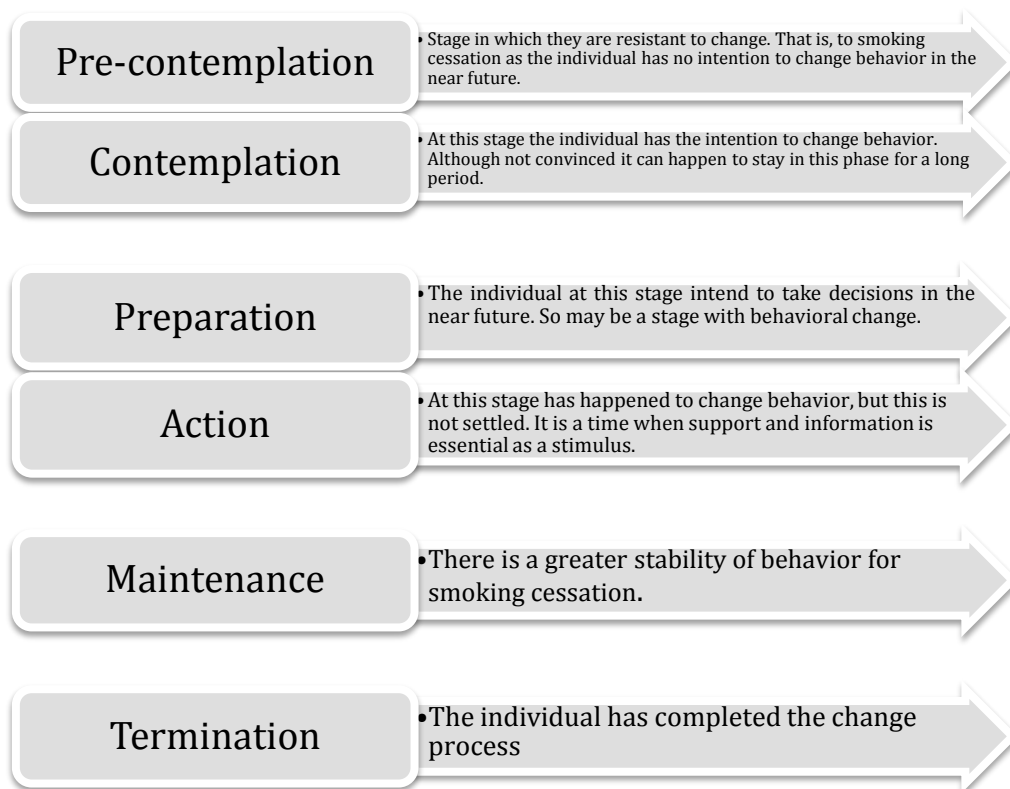


Figure 2- Stages of behavior change (Transtheoretical Model)

In this way, patients of therapeutic treatment, can't migrate on way up and continuously throughout the five stages, eventually but it may be ebb and flow at any point along the continuum of stages of change that are several times (Levesque, Prochaska & Prochaska, 1999). Previous studies have tried to assume that the identification of stage of change of behavior in which the subject is the time to point out their level of participation in treatment programs.

According (Weinberg & Gould, 2000), empirically, the systematic relationships between variables, such as stages, processes, pros and cons of change can be demonstrated through a number of issues, people and organizations. An accumulation of knowledge can occur, resulting in an implementation of planned or intentional change.



In practice, this emerging science as a model of behavior change that can be applied by therapists to reduce resistance to change, increase participation and increasing progress, and improve the implementation of the initiatives of individual change (Weinberg & Gould, 2000).

# 4. COMMUNICATION THEORY FOR BEHAVIOR CHANGE

## 4.1 Persuasion Theory

Through the studies conducted by behavioral scientists, methods for communication to creation persuasive messages started to develop different versions of materials for different population subgroups (Rimer & Glassman, 1998, p. 37).

Although the principles of segmentation of the audience had been well known to scholars of communication and widely used in advertising and marketing, including social marketing, the use of audiovisual elements and interactive systems, for the creation of educational materials directed at health was innovative (Maibach, Rothschild, & Novelli, 2002; Pepper, 2000).

Persuasive messages usually were based on principles of social marketing and the assumption that the important differences between the groups could be resolved by creating different versions of communication for health.

Decisions about what information provided were based on research guided by theories used in this period. In this way the persuasive impact depends on the mode of information processing adopted by the subject. The process by which the message has is reason in the treatment of the arguments, and the results configure in positive attitudes, negative or neutral.

According to Castro and Franco (2002) the persuasion depends on both the quantity and quality of thoughts about the message content and the meaning of these thoughts (Castro, Franco, 2002, p. 34)

After the trial of the arguments for the transmission of the message, there will be one of three situations: the entry of attitude in the cognitive structure, changes in attitude in advance, or sedimentation attitude previously stored in relation to the message. Therefore, if the attitudes generated are different from previous actions, we are in a process of change in cognitive structure. In the event that the attitudes generated are the same as previous attitudes, we are in a process of consolidation or reinforcement of the attitude of the subject (O'Keefe, 1991). Cognitive structure only occurs when there is an attitude previously generated, and the change in cognitive structure is the substitution of the new attitudes generated by the persuasive process (O'Keefe, 1991).

In situations reinforcement of attitude, the process culminates with the sedimentation of the effect of rejection or the persuasive effect. In the case of neutral attitude, the cognitive structure of the subject does not suffer any registration, amendment or sedimentation, have no or incipient. In any case, the subject always is able to restart the process of building attitudes about the size of any message, since they guaranteed, while the original terms of motivation, ability and opportunity of transformation. (O'Keefe, 1991)

The process of persuasion is complete with the explicit intention of the subject or because of the diminishing of the initial conditions. In short, the central processing is the generation of arguments and counter - arguments about the message, providing the direction (positive or negative) and magnitude (number of thoughts) of attitude, while the peripheral processing is the generation of surface of attitudes transient, with little ability to influence future behavior.

According Garcia and Franco the persuasion will depend on the number of thoughts on the content of the message and the favorability of these thoughts. In the messages aroused favorable or positive thoughts, as it increases the production increases persuasion. In contrast, messages that arouse negative thoughts or unfavorable, with increasing development impact is persuasive reduction.

That is, the persuasive influence the outcome of a process in which various factors contributed established by elaborations generated at any given moment around the axis of communication, or around the variables for the implementation of communicative artifact.

## 4.2 Elaboration Likelihood Model (ELM)

The Elaboration Likelihood Model (ELM), conceptualized by Richard Petty and Cacioppo (1985) is a model of persuasion used as valid reference treatments to promote behavior change. This Model is used as a mechanism for increase attitudes and part of the central concept of development is defined as the extent to which a person thinks about the relevant arguments of a message (Garcia, 2001, p.103).

The Model is not more than the interpretation of the subject as an information processor and the cognitive mechanism from which we develop our attitudes and behaviors. According to Petty and Cacioppo (1985), the Elaboration Likelihood Model is a proposal for organization, categorization and understanding of the processes and possible outcomes of persuasive communication.

For such cases, the Model is an attempt to explain the impact on the attitudes of pre-processing information - the involvement, motivation, ability and opportunity of transformation to which the individual builds relationships with objects, people and situations according to their needs, values and personal interests.

Therefore, the intensity of these relations depends on the relationship of the individual with the subject, the question that guides them. The cognitive state is the apprehension content Issued by advertising.

The emotional state is the generation of attitudes toward the offer. In this context, attitude is a predisposition apprehended result of the evaluation of supply, relatively durable in the influence of the subject's behavior (Garcia, 2001, p.108). In other words, the elaborative processing of the message occurs when there is a combination among involvement, motivation, opportunity and ability to decode the code as the message.

According to Garcia and Franco (1999), the ability to interpret the message is dependent on the cognitive subject of education, intelligence personal and the complexity of the message. In this context, motivation is not enough for the development of messages. However the person must also have the ability to process the message.

Thus, detection, treatment and coding of the stimulus occur when all conditions are moderating variables of elaboration. The quality of the thoughts depends on the time before

the subject, while the amount of preparation depends on the cognitive need of the moment. In the Elaboration Likelihood Model, the subject can take two routes to get messages: via central or peripheral route. The main route are generated a set of analytical thinking, critical and reflective (cognitive elaboration of information) for subsequent storage in long-term memory (Garcia& Franco, 1999, p. 26).

A critical evaluation of the message allows the subject to compare decisions made with the prior knowledge, resulting in the inclusion, amendment or consolidation of favorable or unfavorable attitude in the cognitive structure. On the other hand, the peripheral route followed when the subject has low levels of motivation, or when she has the ability to decode the codes as communicative artifact.

This route is through the development of ways unlikely to affect the structure of the attitudes of the subject. However, we can generate a temporary change of attitude because of the credibility of sources and or attractiveness in this message, it means that no relevant cognitive effort (Petty & Cacioppo, 1981).

### (A) Stages of change therapy

According to the Elaboration Likelihood Model, the individual can create, consolidate or change the attitudes at triage (deep or superficial) of the message. The individual and situational factors influence the ongoing process of development of the information may be treated as argument in the central route or suggestion in the peripheral route.

Motivational factors and the factors of skill are the guarantees of the development objective and cognitive performance relationship (Petty & Cacioppo, 1981). In Model by Richard Petty and John Cacioppo there are three conditions essential to the process of development:

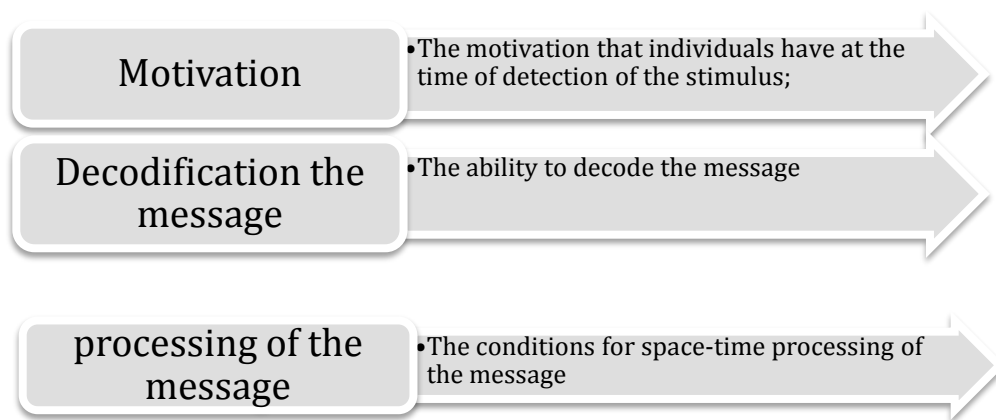


Figure 3- Stages of behavior change (Elaboration Likelihood Model)

The level of impact is inversely proportional of the relationship between the routes of the model. So, prior knowledge of the messages can generate partial transformation and counter-arguments against the issuer of communication as well as the temporal persistence of attitude is directly related to the level of cognitive effort and the needs of cognition (Castro & Franco, 2002). According to Castro e Franco (2002) in the Elaboration Likelihood Model the accumulated knowledge may form or develop attitudes, increasing the level of understanding.

Therefore, the acceptance of the message is the result of information processing by the central Elaboration Likelihood Model, according to the system of values, interests and motivations of the subject (visible in figure 4). In the mass media communication, for example, exposure of the subject is the message accidental and (ir)reflected, while in the interactive media can be (in)voluntary.

The exhibition is a voluntary provision, which involves knowing acts subject to control of the subject, as a result, memory or imagination.

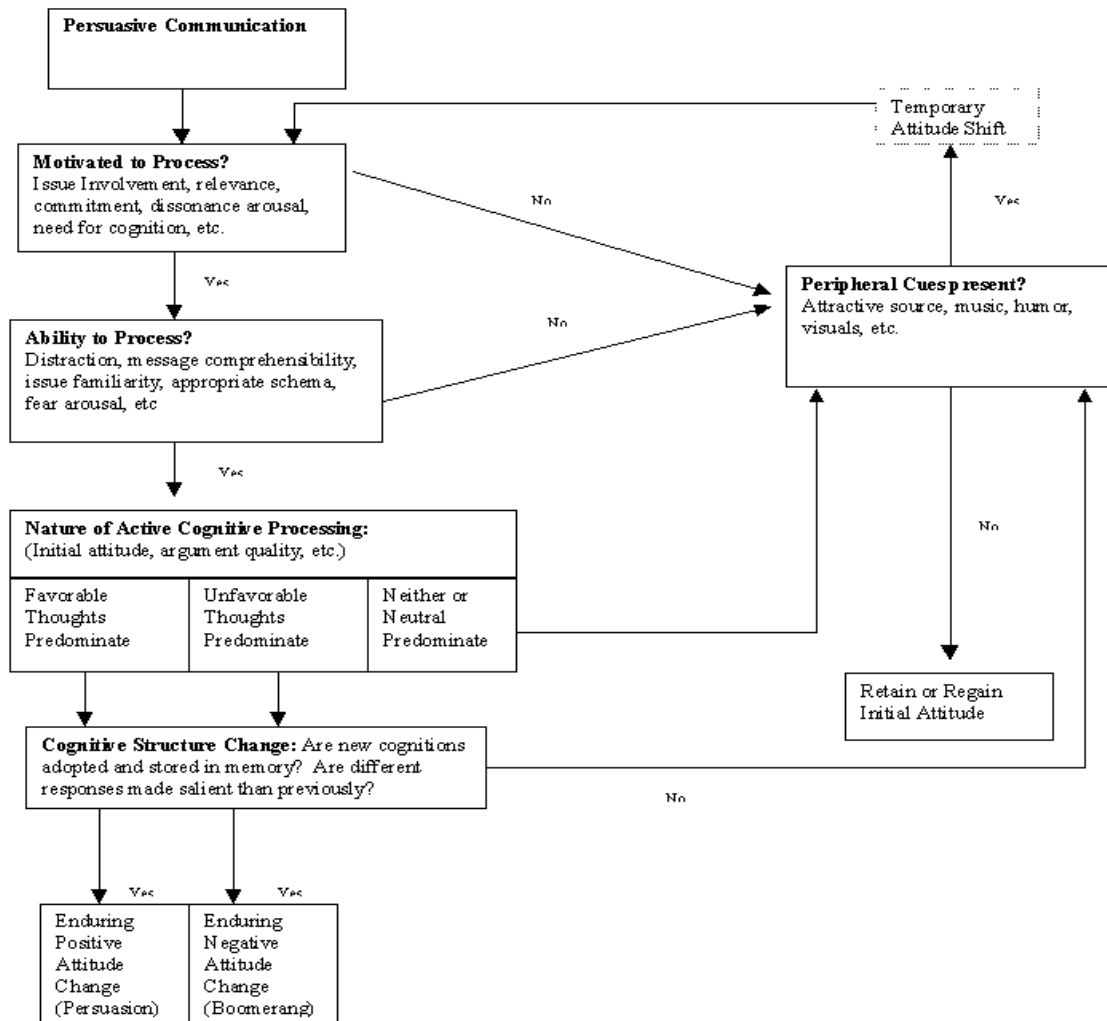


Figure 4 -Elaboration Likelihood Model of Persuasion<sup>5</sup>

<sup>5</sup> Retrieved from: <http://www.jou.ufl.edu/faculty/ccho/JCIRA/jcira.html> (February 29,2010)

### 4.3 Media Communication for Health Promotion

Many theoretical approaches emphasize the importance of communication sciences for understanding human behavior. For the field of health, the role of communication involves how the media influence contributes to health living increases and how the planned use of media effects influences the behavior change within the health promotion.

Nonetheless, the study of human behavior change through interaction with media messages used in therapeutical programs emphasizes measuring, explaining, and predicting communication effects on knowledge, perceptions, beliefs, attitudes, and public opinion. It is strongly influenced by scientific methods from the fields of psychology and social psychology.

According Flynn and Worden (1992) the use of communication to achieve health behavior change is now a staple of public health intervention methods, and will continue to be influential in the twenty first century. For example, health campaign planners may study the effects of persuasive messages to generate an interpersonal discussion. They might look at potential effects of a campaign about problems of second hand smoking, as alternative material used in health care treatment.

In a public health campaign, the development of appropriate messages for intervention strategies depend on an assessment and needs of audience. In this way, is interesting an analysis of role of media in health promotion. With that in mind, how does exposure to media messages can be used in health behavior change strategies? How does media can influence addictive behaviors in smoking cessation treatments?

The health belief model holds that individuals will be more likely to change their health-related behavior if they recognize a health risk or condition as important, if they view themselves as susceptible to the risk or condition and if they regard the benefits of change as outweighing barriers to making change (Flora & Wallack, 1990).

The consequences of media exposure on individuals, groups, institutions, and social systems are relevant. The focus is on major media effects hypotheses and their relevance to health behavior change.

There is a good reason about expect that news coverage, mass media programs and movie it may have an indirect influence, by setting the agenda for discussion about tobacco among



parents, teenagers, older siblings and friends, in schools or other community activities. News reports that bring attention to or complement anti-smoking efforts may act to increase interpersonal discussion about relevant issues and can provide additional benefit.

Researchers have studied learning hierarchies in which knowledge affects attitudes, which in turn affects behavior. More recent refinements within agenda-setting theory have encompassed the notion that media do have a significant impact on what we think. In the context of cigarette prevention, media messages placement on movies, television or campaigns it causes patients to raise the issue with their health care providers.

Taking a look anti smoking advertising for example, the media messages can provide information about smoking directly to audiences (Flora & Wallack, 1990, p. 74 - 75). In addition, the media effects causes patient raise the issue with their health care treatment. Antismoking campaigns may act to increase interpersonal discussion about relevant issues and can provide additional benefit in therapeutical treatments.

Since the 1960s, however, researches have emphasized cognitive processing of information leading to persuasion. This change occurred partly because of the interest Latin American scholars shown in developing new approaches to the use of mass communication in order to guide social change projects in developing countries.

Similarly, persuasion studies have focused on the chain of individual-level communication processes leading to behavior change. Early studies focused on opinion or attitude change in the context of such variables as the credibility of the information source, fear, organization of arguments, the role of group membership in resisting or accepting communication, and personality differences.

Evaluation of anti-smoking advertising campaigns provides a rich source of information about the effects of such advertising on teenagers, for example. However, it is acknowledged that the media campaign is only one part of the entire anti-smoking effort, which additionally encompasses community-based initiatives such as school smoking prevention programs to smoking cessation treatments.

The consequences of media dissemination of images, ideas, themes and stories are commonly discussed under the rubric of media effects. Media effects research encompasses the study of how the media influences knowledge, opinion, attitudes and behavior among individuals,

groups, institutions and communities, and also examines effects flowing in the opposite direction from audiences to media. Social structure has played an increasingly important role in the application of communication strategies to health behavior change. A continuing and perplexing issue involves the influence of social structure on communication and media use, and how this affects health behavior change (Rubin, 1993).

The emergence of new communication technologies also provides opportunities and challenges to public health. The World Wide Web, newsgroups, multimedia applications and other internet innovations offer information about smoking and an array of topics from diverse sources. The nature of the medium also permits information to be available "on demand" to users. Thus, it appears that users can exert a greater degree of control in obtaining the information they seek.

### 4.3.1 General media examples

#### A) Audiovisual

##### A.1) "No Smoking"

For a long time, films and commercials were considered a factor for smoking initiation, especially in teenagers. Currently, the audio being used as an important element in campaigns against smoking. Documentaries, movies and even commercials are launched aiming at promoting measures against smoking, especially among teenagers.

The film 'No Smoking', released in 2007, directed by Anurag Kashyap, from India, features actors John Abraham, Ayesha Takia, Paresh Rawal and shows the difficulties faced by patients in a health center to stop smoking.



Figure 5- No Smoking ScreenShot

The film it features text and audio as 'background' to portray the mortality caused by smoking. Design strategies to the conceptualization of the videos proposed in this research:

- Use of visual elements (audio, video, sound);
- Textual elements (narrative), data related to mortality and disease caused by smoking.

## A.2) “Stop Smoking”

The video 'Stop Smoking'<sup>6</sup> comically shows situations faced by a man who wants to quit smoking. The video was released by Brazilian television network Rede Globo, in 2007. It is 5 minutes long and has comedian Pedro Cardoso as the leading actor. Textual and visual aspects are the main features in this video. It features data on the diseases caused by smoking, number of addicted to tobacco and the benefits brought people who want to quit.



Figure 6- Stop Smoking Screenshot

Design strategies to the conceptualization of the videos proposed in this research:

- Use of visual elements (audio, video, sound), textual elements (narrative);
- Data related to mortality and disease caused by smoking.

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<sup>6</sup>Information available at [www.siticom.br](http://www.siticom.br)

## B) Multimedia interactive

### B.1) "CancerSpace: Virtual Clinic"

This application was developed by the National Cancer Institute of the USA in order to optimize cancer screening and care to patients in health centers. The created a virtual clinic 3D known as CancerSPACE<sup>7</sup>. A team works together through monitoring, management and communication with patients.

This software simulates\_challenges as a team to investigate the problems on the rise in cancer rates, in addition to evidence relating to making and problem solving. In the end, the patient reports what learned. Participants guided by avatars or pictures of people.

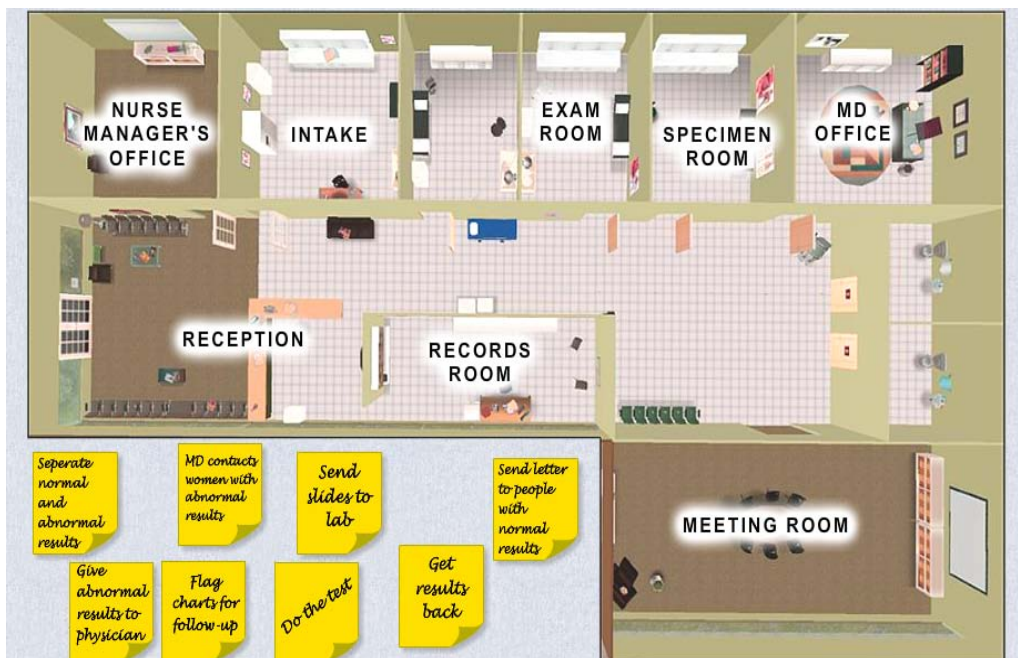


Figure 7 -Cancer Space: Virtual Clinic Screenshot

This experience online learning aim in the long run reduces the cancer screening and treatment in the U.S.A population in the health centers. The prototype is undergoing tests to improve the system for final delivery in health centers in the U.S.A. Design strategies to the conceptualization of the videos proposed in this research:

<sup>7</sup>Information available at <http://www.orau.gov/hsc/nci/>

- The use of 3D, animated simulation of team challenges;
- Evidence relating to make decision and problem solving by patients in treatment.

## B.2) “Antismoke Cd-Rom”

Antismoke<sup>8</sup> is a software for health re-education created by researchers from smoking research institutions in Greece. This software provides interactive features like 3D animations, videos and music.



Figure 8- Antismoke CD Rom Screenshot

Strategies to prevention and motivation to quit smoke used by historical data on tobacco consumption the world. The prototype developed in the Greek language is still undergoing usability testing in health centers in Greece. Design strategies to the conceptualization of the videos proposed in this research:

- 3D animations, videos and music;
- Historical data on smoking as a prevention strategy.

<sup>8</sup> Available only in CD Rom

## C) Multimedia application with visual components and interactive

### C.1) “Scenesmoking.org”

Scenesmoking.org<sup>9</sup> is multimedia application created by Breathe California of Sacramento-Emigrant Trails (USA) to promote stop smoking. Teachers, researchers and technicians were involved in multimedia conceptualization of this software. Through this multimedia software, are depicted numbers of deaths caused by tobacco, as well as research in this area.



Figure 9- Scenesmoking.org Screenshot

Users have available a simple interface and attractive, with graphics, audio and video (movies and videos), besides having interactive elements such as the use of an avatar to find out the diseases caused by smoking in humans. They also offered links to articles and scientific publications on smoking. Design strategies to the conceptualization of the videos proposed in this research:

- Audiovisual and animations elements in a videos, films, videos, Information of scientific publications on smoking;
- Attractive interface, graphics resources.

<sup>9</sup>Information available at <http://scenesmoking.org/>

# 5. FINAL COMMENTS

Having briefly contextualized and presented the state of the art associated to examples of media for health promotion it is necessary to test the capacity of audiovisual elements in therapeutical interventions to enhance the efficacy of smoking cessation programs.

To complete this intention, learning and behavior theories, as well the behavior change models presented in these chapters could be used for the elaboration and creation of audiovisual products (in short video format).

Strategies like this could be used to broaden and extend the impact of these programs and enhance their effect by adding elements of media intervention to a smoking cessation programs. For this case, the University of Thessaly's (Greece) Smoking Cessation Program by University was chosen for the context of this research.



# **PART TWO**

## **EMPIRICAL RESEARCH**

# 6. EMPIRICAL RESEARCH CONTEXT:

## CASE STUDY

The part one of this dissertation presents the theoretical literature relevant for this study; the following part two will present the development of empirical research, the results, their analysis and discussion.

This chapter 6 presents the conceptualization and development of the case study, following by an explanation of the video's evaluation method. The chapter is organized in 5 sections: study contextualization, characterization of the target group, contextualization of the study subject and video's development.

### 6.1 Study contextualization

The purpose of this study consists in the adaption of audiovisual materials to therapeutic treatments, specifically, smoking interventions programs. The research developed in this dissertation was produced in cooperation to Department of Physical Education and Sports Science - University of Thessaly, Greece, through a Smoking Cessation Program.

The Smoking Cessation Program is a therapeutic treatment program designed for people who wish to give up smoking. The treatment corresponds to psychotherapeutical counseling sessions for smoking cessation, including recommendations of exercises to change lifestyle and how to maintain this behavior (Theodorakis & Gourgoulianis, 2004). The sessions of this Program are based on five stages of behavior change, "Precontemplation", "Contemplation", "Preparation", "Maintenance", "Action" and "Termination" from Transtheoretical Model (TTM).

The use of communication messages included in the audiovisual products was tested as support of treatment sessions on Smoking Cessation Program. For this purpose, the combination of

communication theory (Persuasion theory) and Elaboration Likelihood Model focusing on communication message can be helpful for provide a direct reinforcement for motivate and persuade patients to change their attitudes (Petty & Cacioppo, 1981).

In addition, alternative materials (movies, videos, games, and others) have been used as enforcement for anti – smoking in smoking cessation intervention programs. Examples of multimedia applications and audiovisual products with media messages presented in the chapter 4, part one of this dissertation, reflect the results of strategies that can be used to broaden and extent the impact of the smoking cessation treatments worldwide.

The theoretical approach is based on the model of change behavior (Transtheoretical Model) Learning Theories (Behaviorism, Cognitivism, and Construtivism), Theory of Persuasion and Elaboration Likelihood Model. On the basis of this theories and models, the research is also focuses on the stages of the Transtheoretical Model and strategies of motivation and persuasive messages of Elaboration Likelihood Model and the Persuasion Theory.

The main goal of this dissertation was to develop videos with short duration, using a variety of message styles. The target-audience consisted in people who wanted to give up smoking and patients of the Smoking Cessation Program. All the videos were developed as a support material for behavior change through counseling treatment programs. The narratives were contextualized at time and place when the target-audience reported their highest use of cigarette. The aspiration is understand whether audiovisual elements are effective in interventions that aim to change behaviors.

Three videos were created, “Relaxation Techniques”, “Motivation to Practice Exercises” and “Passive Smoking”, with an approach to help smokers give up smoking in therapeutic sessions. A group of multi-disciplinary professionals on contributed the conceptualization of these videos. Specialists in the areas of smoking cessation treatment, such as psychology, physical education and media, discussed during meetings about the creation of the idea that should be present in each video.

The group of specialists participated in all phases of the video’s development and test. The duration, message and story of each video were initially defined. To construct it several ideas were used from learning theories, model of change behavior and elements of media communication, specifically, audio and visual elements. After to the development for presentation and discussion, each video received a postproduction treatment from software “Adobe After Effects”.

The project took place at the city of Trikala, Greece and the data were collected at the same place. The methodology used was an exploratory method through the elaboration of a case study. It was evaluated the use of audiovisual materials as a support for therapeutic programs with different samples (smokers, smoking cessation and media experts).

The samples watched the three videos: “Relaxation Techniques”, “Motivation to Practice Exercises” and “Passive Smoking” and evaluated each video separately. In terms of data collection process, two techniques were used, questionnaire and interview. After this procedure, the data collected were analyzed and discussed.

## **6.2 Characterization of the target – group**

According with WHO<sup>10</sup> (2009) during the 20th century the tobacco epidemic killed 100 million people worldwide. Recent studies suggested that in 21st century, it could kill one billion people worldwide, around 500 million people alive today will be killed by tobacco and by the year 2030 will be more than 8 million smoking-related deaths every year worldwide.

Within the EU, for example, there is wide variation in smoking prevalence from around 18% in Sweden to 42% in Greece. The average for the 25 countries of the EU was 32%.

In addition, in contrast to most of countries in the European Union (EU), where consumption has decreased, the annual consumption of cigarettes has risen steadily in Greece since the 1970s among adults and teenagers 15 years of age or older.

Researches have consistently shown that non-smokers are put at risk by exposure to other people’s smoke. This may be called passive or involuntary smoking and is also referred to as secondhand smoke (SHS) or environmental tobacco smoke (ETS).

Currently, around 40% of children worldwide are exposed to passive smoking at home. In the USA, for example, passive smoking causes 3400 lung cancer deaths and 46000 heart disease deaths a year.

Exposure to secondhand smoke is extremely high in Greece as well, both at home (89.8%) and in public places (94.1%). Exposure in the home and in public is high for both never smokers and current

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<sup>10</sup> Information available at [http://www.who.int/tobacco/mpower/2009/gtcr\\_download/en/index.html](http://www.who.int/tobacco/mpower/2009/gtcr_download/en/index.html)

smokers (over 9 in 10 students). In addition, the number of never smokers (90.1%) is significantly higher than current smokers (53.9%) to favor a ban on smoking in public places (2009).

Strategies have been used to decrease the proportion of smokers and passive smokers in Europe. Clinical intervention programs appear as objective to help individuals who regular smoking. These programs are a good attempt to incentivize people on their decision to stop smoking.

Smoking cessation interventions include intensive of multi-component programs and constant smokers' motivation in health care environments of actual practice. These strategies seem promising for increasing short and long-term abstinence rates.

The University of Thessaly, for example, implemented the Smoking Cessation Program in Trikala. It's an intensive program, which includes several visits during treatment and follow-up period, nevertheless there are also some sessions with available time to help on smoker's support and motivation to prevent relapse.

The target-audience of this research consists of people who wish to give up smoking and seek therapeutic support and patients of the Smoking Cessation Program implemented by the Department of Sport Science and Physical Education of The University of Thessaly. Information about effects of active and passive smoking was unnecessary. The most important aspect considered was the motivation to quit smoking.

The study considered the following characteristics of the target audience, age, gender, life style and literacy. This research was developed according with a smoking intervention program agenda, specifically, on Smoking Cessation Program - University of Thessaly, Greece. In this way, the videos were designed for smokers between 25 and 35 years old both male and female. The levels of motivation were considered according with the stages of behavior change of Transtheoretical Model, respectively, intention (in the present or future) and motivation to quit smoking. According the criteria adopted was included in the target audience people with less physically active lifestyle, high level of stress, low healthier life style and some knowledge of English language.

### 6.3 Conceptualization of the study subject

The conceptualization of the video considered that there are common objectives shared with a Smoking Cessation Program - University of Thessaly, Greece, and the impact of the media used for the health promotion. For this purpose, it was decided to test the contribution of audiovisual elements in smoking cessation interventions, through video's format with visual messages (text and images), under the guidance of psychologists in according with the sessions of Smoking Cessation Program.

The conceptual approach of the videos is linked directly to the approach of counselling sessions performed by the specialists of the Smoking Cessation Program of University of Thessaly, Greece. Three videos created were "Relaxation Techniques", "Motivation to Practice Exercises" and "Passive Smoking".

The videos presents short histories showing the dynamic relationship between tobacco addictive behaviours and anti-smoking messages with in between some daily scenes with shorts motivations messages to promote behavior change.

Some strategies been used to broaden and extend the impact of the videos. The main strategy was to increase the acceptance of audiovisual media messages by the target-audience.

The central idea for all the videos was to focus the action in a credible smoker character with a high level of stress behavior compared with a positive point of view of nonsmoking attitude with the goal of increase cigarettes rejection.

It was decided to create a narrative according to literature presented on chapters 3 and 4, particularly, based on a guide on steps of behavior change from Transtheoretical Model as well on the empirical studies of persuasive message and effects present on Persuasion Theory.

According with the general idea previously presented, the strategy to create the first video "Relaxation Techniques" was to present a real life environment, including a credible model of smoker and his/her real life situations.

All the scenes took into consideration features of an individual that intent to change behavior perhaps in the foreseeable or in the near future and show one of the alternatives to change, in this case, the relaxation techniques used during sessions of Smoking Cessation Program.

The strategy used on the second video “Motivation to Practice Exercises” was to present different types of situations and behaviors as purpose to give an immediate feedback to the audience. Positive examples and motivation messages were showing during the narrative as a strategy for give more emphasis to healthy life style.

Finally, the last video “Passive Smoking” was conceptualized with the focus in media intervention through of information. The strategy of this video was based in media ant-smoking campaigns, commercials and short movies.

For increase the level of persuasive messages and to make the videos sufficiently attractive to promote decision-making another mechanisms were included. All the videos, present shock and positive pictures as well as text messages with information about impact of tobacco addiction and positive health implications for changing.

After discussing the videos idea, it was necessary to transfer the history to a script format (Annexes 5). Through of creation of the narrative allied to audio and visual elements the main concern was to idealize a storytelling with short time with one and three minutes length.

The next step was to provide the scenarios as well as the actors for shooting the scenes. All the videos were produced with a regular camera. During this process specific elements were defined: scenario, background image, characters and camera positions. It was decided to include the scenarios according to smoker’s life style. Offices, streets, parks and bars were chosen to produce the scenes. In this process a background was designed through the development of storyboards and planning shoot.

The video’s production was idealized using a different camera angles and plans. It was necessary only two days for shoot all the scenes and had a totally of 20 people, including, actors and technical staff. For complete the conceptualization process, was added popular music on the videos, and postproduction.

## **6.4 Video's prototype development**

### **(A) Video 1 "Relaxation Techniques"**

The conceptualization of the video "Relaxation Techniques" focused in several recommendations on sessions of Smoking Cessation Program from University of Thessaly Greece. The central idea consists in describe the relaxation techniques exercises used on therapeutic treatment sessions through audiovisual elements with persuasive messages. To reach this goal, was necessary to attend the profile of smoker's behavior and life style.

These characteristics were demonstrated through the theoretical perspective of the five stages of behavior change from Transtheoretical Model previously described in section 3.2 1. According with this process, the individual's behavior is represented in specifics stages, from stage "Precontemplation" (not intention to change), "Contemplation" (intention to change but not convinced), and "Preparation" (intention to change in the near future), "Action" (decision-making), "Maintenance" (maintenance of this behavior) and "Termination" (complete change) (Prochaska & DiClemente, et al., 1986).

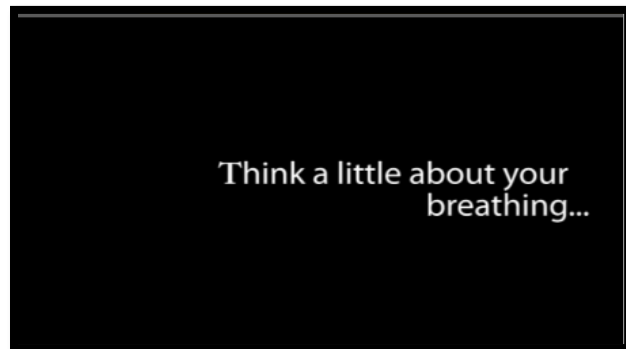
Through this perspective, the narrative explore some aspects of the individual behavior, focused among stages "Precontemplation", "Contemplation" and "Preparation" of the Transtheoretical Model, in other words, people who has no intention to stop smoking or people thinking about quit smoking perhaps in the foreseeable future or present. In addition, for imbue the video a history sufficiently attractive current approaches of learning and behavior theories were used for creation of storyline.

In short, learning theories combined with audio and visual messages could provide positive results and contribute to efficiency of the video message. Following these theories, immediate feedback, positive examples, examples and practice, learning process, participation promotion and motivation were indicators that could be used to broaden and extend the impact of the video. These aspects were relevant as it influences to give motivation that could be used to change behaviors and helpful to effort to use the techniques presented (Slovic et al. 1981, Weinstein 1984 apud Wakefield, M., B. Flay, et al. (2010)).

In this way, a script was developed to appeal the target audience for use the relaxation techniques. The initial part of the video presents some information to explain the subject. The



first frame shows a slogan “Think a little about your breathing”. This message (Figure 10) elucidates the importance of behavior change and the benefits come directly from the decision-making (Janis & Leon 1977) which is referential to create the basis of actions and decisions to the following scenes.



**Figure 10 - Relaxation Techniques Screenshot**

For learning process and participation promotion the narrative followed the idea of having a common place and only one character. Relevant aspects of smoker’s behaviour such as high level of stress and anxiety were included the narrative. The team of experts agreed this idea and the main aspects of the character were created.

The story starts with a woman working into the office and very stressed. The camera makes a Medium Shot plan (MS) of the character when she is speaking in a telephone and writing at the same time.

The figures 11 and 12 represent an image of the video scene developed. The usage of the visual plan (Medium Shot) can be quite effective, to obtain an immediate feedback with the audience. As previously mentioned in the section 6.1, this description aims to represent at time and place the smokers that reported highest consume of cigarette.



**Figure 11 – Relaxation Tecniques Screenshot**

After the initial frames, the narrative turned to be more complex. The images presented in figures 13 and 14 shows the camera sequence with a Close-up (CLOSE) in a cigarette and the inserted sound track tries to demonstrate the conflict of the character. At the individual level were introduced to emphasize the cognitive mechanisms by which individuals are attend to and interpret information about risk, and whether this influences their behavior and also how it influences (Slovic et al. 1981, Weinstein, 1984 apud Wakefied, M., B. Flay, et al. (2010)).



**Figure 12- Relaxation Tecniques Screenshot**

The last scenes show an alternative for what people can do instead of smoking when they are stressed at work. The alternative purposed was the use of simple relaxation techniques.

These were presented in short text messages. The importance of this scene was creating a real environment to obtain immediate feedback forcing the individual to repeat a certain kind of behavior (Taylor, Miller & Flora, 1994).

In this way, the stimulus for decode the message was the key component for promotion the process of behavior changing. As a stimuli for decode the message, other kind of music starts

synchronized with the techniques. The techniques are showed an easy way, demonstrating that changing behavior may be easy and the attainment of such goals seems possible (Burkholder & Nigg, 2002).



Figure 13 - Relaxation Tecniques Screenshot

The lettering font used to write the text messages in the video was "Tekton Pro Bold". It was selected because of its simplicity and uniformity, compared other fonts such as "Arial" or "Courier", for example. After some experiences with the lettering colour, some colours were also eliminated their contrasting was not good enough to present the text messages in the video with good visible conditions. The design of the many aspects of these frames was created from Adobe Premiere.

Besides text messages, some pictures was presented with the information about the subject. During the story, were presented to the audience motivation phrases like "Try to relax" and "you don't need to smoke" to provide direct reinforcement for give up smoking and use the relaxation techniques.

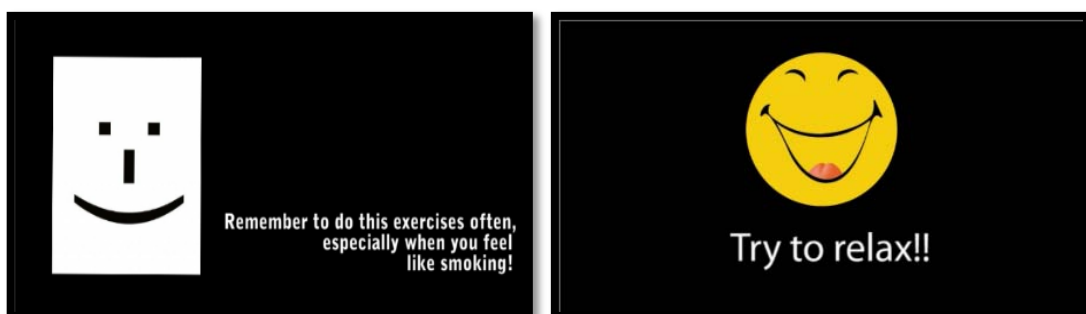


Figure 14 - Relaxation Tecniques Screenshot

This motivation messages intended to bring attention or complement an the anti-smoking message of the video to increase personal discussion about relevant issues, which can provide additional benefit to sessions of treatment.

## **(B) Video 2 “Motivation to Practice Exercises”**

The conceptualization of the Video “Motivation to Practice Exercises” presents similar approach according with the objectives of the Smoking Cessation Program and health promotion objective of the treatment sessions.

Comprehensive approaches reported that physical activity combined with exercise would help on smoking cessation and on preventing detrimental health habits. A research from Center of Behavioral and Preventive Medicine of University School of Medicine, USA, concluded that in women, for example, exercises facilitate short- and longer-term smoking cessation when combined with a cognitive-behavioral smoking cessation program (Marcus & Albrecht et e al., 1999, p. 1229-1234).

Based on this research, the purpose of this video was to intensify the relation between exercises and anti-smoking efforts. The storytelling created was focused on several recommendations to smokers, focusing their motivation as direct mechanism to reinforcement of change behavior.

Short stories were developed including the combination of media messages with exposure of images, situations and short text messages.

To introduce the first story, the initial scene shows a woman working into the office with general descriptions of her behavior highlighting of high levels of stress and anxiety. After that, in the next frame a pack of cigarette is presented as an alternative to solve the problem, to decrease the level of stress and anxiety.



**Figure 15– Motivation to Practice Exercises Screenshot**

As explained in the previous section of the video “Relaxation Techniques”, in this video the visual display of this scene propose also a relation according with the stages of Transtheoretical Model (TTM). In this case the stage of the TTM where the woman’s behavior is included was not specified, it was suggested just the intention to change behavior in the future or present. This type of behavior was intended to establish an immediate feedback to the audience. According Burkholder and Nigg (2002), most individuals intuitively know that some changes are necessary, but not apply them immediately in lifestyle. The next frame summarizes the lifestyle influences on behavior. Simple changes were suggested for give up smoking.



**Figure 16 - Motivation to Practice Exercises Screenshot**

In this way, according with ideas previously presented, the next stories present the same line of thinking: the positive messages as the key component for the promotion of the change behavior process, positive examples of attitudes, examples practice.

The strategy used was give suggestions for lifestyle changes in easy way. The principal message included on the next frames was to propose that the most people could change behavior; however, each one is in a different level of readiness to change (Burkholder & Nigg, 2002).



**Figure 17 - Motivation to Practice Exercises Screenshot**

In short, visual messages combined to attractive pictures could provide positive results and contribute to the efficiency of videos messages.



Figure 18- Motivation to Practice Exercises Screenshot

The idea to give several recommendations for healthy living increases in a good way, through text messages for target audience. This process by which the message is visualized has is a good reason for show of the arguments, and the results configure in positive attitudes. It presents an attractive visual approach with pictures and a pop soundtrack with a popular music group that could intensify a relationship between motivation and positive messages.

### **(C) Video 3 “Passive Smoking”**

The video “Passive Smoking” focuses in several recommendations on the session of Smoking Cessation Program. This Program has an important role in the risk to exposure to environmental tobacco smoke especially that people need to make a choice about whether or not smoke.

It was mentioned in the section 5.2 of this chapter that the exposure to secondhand smoking both at home and in a public place is extremely high worldwide. In addition, never smokers are significantly more likely than current smokers to favor a ban on smoking in public places.

The video aims to provide a review of the information pertaining to the problems of passive smoking, as emphasis on making decision, support for non-smoking and health care risks. To create a history sufficiently attractive was decided to show the problems of second hand smoking through visual messages with text and images, under a guidance of psychologists in agreement with the sessions of Smoking Cessation Program.

Some of the audiovisual material was planned as part of media strategy to support anti-smoking efforts. The frames refer to the context in the history is presented: elements such as place, personages and music. These elements bring attention to complement the history may act to increase interpersonal discussion about passive smoking.

The history starts with some groups of friends into a bar. As a strategy for persuade the audience during to introduction of the history is important to promote an immediate feedback. In this way, was created a real environment with a soundtrack of pop music.

Some groups of people talking and dancing are presented. In addition, the frames show people smoking in contrast to people that not smoking.



**Figure 19 – Passive Smoking Screenshot**



After introduce the history, the camera makes a close up (CLOSE) in a [person that takes a pack of cigarette and start to smoke. This frame was important because emphasize some features of the characters. The scene considered values and assumptions of a stage further, with a close up at the pack of cigarette and the boy smoking.



Figure 20 – Passive Smoking Screenshot

The history development process turned out to be more interesting than expected at beginning because the information about the subject is explains and presented to the target audience explaining the subject. The music included here, to give more emphasis is different.

For bring attention and to be clear the problems of second hand smokers the next frames shows two groups involved in the same context. Both of these groups present people that exposure messages about passive smoking promoting an interpersonal discussion about this problem.

In the first group, one of the people presents a preoccupation about the impact of tobacco. In another side, a bar woman presents the same attitude with refusal of cigarettes and more negative view of smoking.



Figure 21 – Passive Smoking Screenshot

Information of risk factors for passive smoking was included to improve the message effects. The design and implementation process used appeals higher scores reflected increased levels of smoking behavior and risk. It is presented to the audience photographs of cigarettes, people smoking and unhealthy lung. At the same time, small texts with general information about passive smoking and its dangers are showed. As an alternate approach for exposure risks of passive smoking, all the messages were showed through questions. The question “Could you believe” was presented into four frames combined to pictures and visual images.



Figure 22 – Passive Smoking Screenshot

Another alternative as enforcement to these messages was used. After each text message the audience is confronted with audiovisual images showing people exposures to smoking. In the last scenes, the message “You can help your friends to give up smoking and help yourself” appears between an image of a smoker and a non-smoker.



Figure 23 – Passive Smoking Screenshot

## **6.5 Videos prototype evaluation**

### **6.5.1 Setup for data collecting**

This research was developed in the city of Trikala, Greece, during the year 2010 at the University of Thessaly, Greece, and also at the University of Aveiro, Portugal. Data were collected using the questionnaires and interviews into a representative sample, aged 21- 38 years.

As mentioned previously, the methodology used during this research was an exploratory method. The data collection of this case study was obtained using qualitative and quantitative methods. This study used a sample with convenience selection and divided the sample into two groups: smokers and smoking cessation and media experts.

The sample considered the behavior index in the case of the smokers, knowledge in smoking cessation interventions index in the case of the smoking cessation experts and audiovisual use and effects in the case of media experts.

Data collection was performed on an individual and voluntary basis and the instruments were distributed for each person. Before the tests, the researcher briefed the objectives of the study explaining the whole process for data collection.

The questionnaires were elaborated to collect data about: the prevalence of cigarette, the perceptions and attitudes about tobacco, the availability of audiovisual products, the susceptibility of media messages, the exposure of second hand smoking, the smoking cessation as well as lifestyle information. The interviews were focused on four dimensions: learning and communication theories and models presented in the videos, evaluation of video's media messages, identification of problems and general items could be improved in the videos.

The tests sessions took place in the psychologist office for a 3 days period beginning on June 27, 2010. The average time of each session was 1 hour and 15 minutes (total) per person.

The sample responses were documented on standardized answer sheets and send to software packages SPSS 18.0 and N. Vivo 7 for further processing where they were transformed into electronic files.

### 6.5.2 Sample description

The categorization process considered the subject of this research. The individuals who participated in the test were 15 people from Greece. For the study purposes, the participants were separated in Groups A and B.

The smokers were included in the Group A and the smoking cessation and media experts were included in the Group B. The participant's ages of the Groups A and B were among 21 and 38 years, both male and female. Regarding to Group A, the sample was composed to 10 smokers. Six of them were female and 4 male.

Considering the number of years as a smoker, it was observed that the tobacco addiction average ranged among 4 and 17 years. The representation of the sample description (Group A) can be seen in Table 2.

The total of smokers sample was patients of Smoking Cessation Program by University of Thessaly, Greece. Before the test, six smokers had 3 sessions of treatment, 2 smokers had 5 sessions, 4 had 2 sessions and 1 smoker had 5 sessions. Eight participants smoked the day before the test and 2 did not. Two participants had smoke in the previous week. When asked how many cigarettes smoke per day, it may be noted that the participants reported between 2 to 40 cigarettes per day.

Regarding to smoking behavior prevalence, the five stages of Transtheoretical Model were considered. Four smokers were in "Precontemplation" stage, two in "Contemplation" stage, one in "Preparation" stage and three in "Maintenance" stage.

Sample description	Smokers	Age	Gender	Number of a years as a smoker	Sessions before the test	Smoke Before the test	Stages Of TTM	Cigarettes per day
	A1	27	M	10	3 sessions	The day before	Precontemplation	10
	A2	33	M	15	5 sessions	The day before	Maintenance	20
<b>Group A</b>	A3	34	M	15	4 sessions	No	Preparation	15
	A4	29	F	12	3 sessions	The day before	Contemplation	8
	A5	34	F	15	1 session	The day before	Precontemplation	10-12
	A6	39	M	15	3 sessions	The day before	Maintenance	40
	A7	36	F	10	4 sessions	no	Precontemplation	2
	A8	32	M	7	5 sessions	The day before	Maintenance	18
	A9	25	M	4	3 sessions	In previous week	Contemplation	10
	A10	29	F	17	4 sessions	In previous week	Precontemplation	15

**Table 2 - Smokers sample description**

In the Group B, were included psychologists and media experts divided according to their specialization. All of experts were selected to evaluate the research in general and some specific aspects of the three videos. The inclusion of the specialists in this test was through the knowledge of technological literacy and professional experience.

The sample description (can be seen in Table 3) was distributed with a total of 3 psychologists experts (females), included in the area of smoking cessation therapy (therapeutical sessions). All of them use clinical intervention strategies similar to smoking cessations programs. Both are

familiar with the main learning and behavior theories and models of change behavior, mainly, Transtheoretical Model, during the clinical sessions.

The media experts, with a total of 2 specialists (1 female and 1 male), participate in research programs, which use the audiovisual techniques similar to the used on the videos.

One of the experts is assistant professor of the Department of Physical Education and Sports Science of University of Thessaly and a researcher in the areas of sound, image and video art. Another expert is specialist in visual effects and postproduction. Both are familiar with media messages, audiovisual effects and theory of persuasion used to develop the videos.

Sample description	Experts	Age	Gender	Specialization	Theories and models used to develop the videos	
	E1	Psychologist expert	31	F	Smoking cessation therapy	Familiar
	E2	Psychologist expert	38	F	Smoking cessation therapy	Familiar
<b>Group B</b>	E3	Psychologist expert	27	F	Smoking cessation therapy	Familiar
	E4	Media expert	31	F	Sound, image and video art	Familiar
	E5	Media expert	34	M	Visual effects and postproduction	Familiar

**Table 3- Experts sample description**

### 6.5.3 Data acquiring instruments

The data were collected through questionnaires and interviews instruments. The questionnaires and interviews were distributed by the researcher to a representative sample of smokers (Group A) and specialists in smoking cessation interventions and media (Group B).

What concern to first instrument for data collection, different kinds of questionnaires were presented to the samples. The Group A (smokers) answered 4 questionnaires distributed according with the following indicators:

Questionnaires	Sample	Goals
Q1	Smokers	Sample description: target audience, smoking prevalence and behavior index
Q2	Smokers	Video 1 "Relaxation Techniques: pre sessions (questions 1 and 2) and post sessions (questions 3, 4, 5 and 6).
Q3	Smokers	Video 2 "Motivation to Practice Exercises": pre sessions (questions 1 and 2) and post sessions (questions 3, 4, 5 and 6).
Q4	Smokers	Video 3 "Passive Smoking": pre sessions (questions 1 and 2) and post sessions (questions 3, 4, 5 and 6).

Table 4- distribution of the questionnaires (smokers sample)

Regarding to Group B (smoking cessation and media experts), 4 questionnaires were present and answered according with the indicators:

Questionnaires	Sample	Goals
Q5	Smoking cessation expert	Video 1 "Relaxation Techniques": evaluation (questions 1, 2, 3 and 4)
Q6	Smoking cessation expert	Video 2 "Motivation to Practice Exercises": evaluation (questions 1, 2, 3 and 4).
Q7	Smoking cessation expert	Video 3 "Passive Smoking": evaluation (questions 1, 2, 3 and 4).
Q8	Media experts	Videos 1, 2 and 3: evaluation ( questions 1, 2, 3 and 4)

Table 5 -distribution of the questionnaires (smoking cessation and media experts samples)

Before the experimental procedure, each participant was briefed about the objective of the study including the questions they would answer. The purpose of each question was also explained to the interviewer. The measures were included in the questionnaires coded according with Dicothomic Scale (“Yes” or “No”) and Likert Scale (“Definitely yes”, “Maybe yes”, “Maybe No” and “Definitely No”) as can see in the following sections.

The interview was another data acquiring instrument used during the process of data collection. During this process, the interviewer could explore in particular aspects of the three videos. For interview purposes, four dimensions were taken into consideration: learning and communication theories and behavior models presented on videos, classification of media messages, identification problems and what the videos could have more. On the semi-structured guide presented in Annexes 9 and 10, the smokers (Groups A) and the smoking cessation experts and media experts (Group B) answered 4 questions.



## (A) Questionnaires for Group A

### (A.1) Questionnaire 1 - Sample description

This section presents the Questionnaire 1 (can be seen in Annexes 1) for characterize the sample description (previously presented in the section 6.5.2). Before watched the videos, the sample (Group A) answered 5 questions organized in: gender, age, sessions of intervention, if smoked the day before the test (if “yes”, how many cigarettes? or if “no”, when was the last time that smoked) and how long have been a smoker.

Also, as part of this procedure were presented questions about smoking behavior prevalence and physically lifestyle. The expectative was to identify the five stages of Transtheoretical Model<sup>11</sup> (“Precontemplation”, “Contemplation”, “Preparation”, “Action” and “Maintenance”). The correlations established can see in tables 6 and 7.

The first phrases of the tables referred to first stage of the TTM, called “Precontemplation” (T1). The sentences were: “I am a smoker and I am not thinking to give up smoking at least the next 6 months” and “I am not practice exercise and not think to start exercising the next 6 months”.

The second phrases were: I am smoking but I am thinking to give up smoking within the next month” and “I do not exercise but I am thinking to start exercising within the next month”. This sentence characterizes the second stage of TTM, the “*Contemplation*”, that the individual will have begun to examine the consequences of he or she behavior.

Moving on the third, the smoker should mark if he or she is smoking but the last 6 months he or she is trying to give up smoking and if do not exercise systematically but the last 6 months have not tried to exercise sometimes. These phrases characterize the third stage of the TTM, “*Preparation*”.

The fourths phrases were: “I was a smoker in the past but I am not smoking anymore (for less than 6 months)” and “I do exercise systematically but for less than 6 months”, the respondents should mark this sentence if is in an “*Action*” stage.

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<sup>11</sup>The Termination stage was excluded because characterized 100% of self- efficacy for the behavior change and not follow the purpose of this research.

The lasted sentences were “I was a smoker in the past but I am not smoking anymore (for more than 6 months)” and “I do exercise systematically for more than 6 months”. The purpose of these sentences was to know if the participant was included in the “Maintenance” stage.

<b>Representative phrases about Smoking Behavior Prevalence</b>	<b>Stages of TTM</b>
I am smoking and I am not thinking to give up smoking at least the next 6 months	(T1)precontemplation
I am smoking but I am thinking to give up smoking within the next month	(T2) contemplation
I am smoking but the last 6 months I am trying to give up smoking	(T3) preparation
I was a smoker in the past but I am not smoking anymore (for less than 6 months)	(T4) action
I was a smoker in the past but I am not smoking anymore (for more than 6 months)	(T5) maintenance

Table 6 - representative phrases about Smoking Behavior Prevalence and stages of TTM

<b>Representative phrases about Physically Lifestyle</b>	<b>Stages of TTM</b>
I do not exercise and I am not thinking to start exercising the next 6 months	(T1)precontemplation
I do not exercise but I am thinking to start exercising within the next month	(T2) contemplation
I do not exercise systematically but the last 6 months I have tried to exercise sometimes	(T3) preparation
I do exercise systematically but for less than 6 months	(T4) action
I do exercise systematically for more than 6 months	(T5) maintenance

Table 7- representative phrases about Physically lifestyle and stages of TTM

## **(A.2) Questionnaire 2 - Video 1 “Relaxation Techniques”**

The Questionnaire 2 (Annexes 2) corresponded to the Video 1 “Relaxation Techniques”. It was presented for the Group A, 6 questions to evaluate these aspects: knowledge’s level concerning of the subject presented, quality of general aspects of the video, level of convincement of the video message and contribution level’s of video to smoking cessation attitude.

Before watching the video 1, the participants answered the questions 1 and 2. These questions considered the sample knowledge’s level concerning of the relaxation techniques presented. The participants answered “Yes” or “No” for the first question: “Have you ever used relaxation or breathing techniques as an aid to your effort to give up smoking?”. Regarding to second question “Were these techniques helpful in your effort to give up smoking?”, the participants answered “Definitely Yes” “ Maybe Yes”, “Maybe No” or “ Definitely No”.

After watching the video, the sample answered the questions 3, 4, 5 and 6. The third question looked to understand the participant’s opinion of the quality of the videos (in general). The answered “Definitely Yes” “Maybe Yes”, “Maybe No” or “Definitely No” for the question: Did you like the quality of this video? After this question, the sample answered about image, audio and storytelling qualities.

The question number four “Should this video convince you to use these techniques as an aid to give up smoking and maintain this behavior?” concentrated on level of convincement of the video message. Once again, the participants answered “Definitely Yes” “Maybe Yes”, “Maybe No” or “Definitely No”. This question asked the participants if the video convinced them to use the techniques as an aid to give up smoking and maintain the behavior. The main purpose was to realize if the message showed influenced to change their behaviors.

Moving on to five question, the sample answered “Yes” or “No” if ever used the relaxation techniques presented in the video before. This question explored the existence of feedback with specifically the techniques showed on the video.

Finally, the sixth question “Is this video helpful for you in applying these techniques?” perceived the contribution level’s of video to smoking cessation attitude. Again, the participants answered “Definitely Yes” “Maybe Yes”, “Maybe No” or “Definitely No”.

### **(A.3) Questionnaire 3 - Video 2 "Motivation to Practice Exercises"**

The Questionnaire 3 for assessment of Video 2 "Motivation to Practice Exercises" (Annexes 3) followed the same procedures of the questionnaire 2. The sample answered 6 questions distributed among knowledge of the subject presented, quality of video, convincement of the video message and contribution to smoking cessation attitude.

The procedure consisted in, before watching the video 2, the participants of Group A answered the questions 1 and 2. The options "Yes" or "No" were presented for first question: "Have you ever tried to shift to a healthier and more physically active lifestyle as an aid to your effort to give up smoking?". The question number two "Did it had any help you in your effort to give up smoking?" presented the following options: "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No".

After view the video, the smokers answered the questions numbers 3, 4, 5 and 6. The third question concentrated in general audiovisual elements. The participants were asked to consider the answers "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No" for image, audio and storytelling video qualities.

Moving to the fourth question, the sample was asked the video convince to adopt a healthier and more physically active lifestyle. Once again, each participant answered "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No".

The next question "Have you ever find the information presented in this video before in another context?" and presented the answers "Yes" or "No". Moving on to last question, the participants choose "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No" if the video was helpful to effort to change their lifestyles.

#### **(A.4) Questionnaire 4 - Video 3 "Passive Smoking"**

Finally, the Questionnaire 4 (Annexes 4) corresponded to the Video 3 "Passive Smoking". As questionnaires 2 and 3, this questionnaire presented 6 questions distributed according knowledge of the subject, quality of video, convincement of the video message and contribution to smoking cessation attitude.

The procedure consisted in answered the questions 1 and 2 (before to watching the video) and 3, 4, 5 and 6 questions (after watched the video). The answers corresponded to same scales presented in questionnaires 2 and 3, namely, Yes or No and "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No".

In this way, before watch the video 3, the participants answered "Yes" or "No" for the question numbers 1 and 2. The question one was: "Have you ever concerned about the problems that your smoke may cause to non- smokers?". This question looked to understand if the participants were concerned about the problems that their smoke may cause to non-smokers. Regarding to the question number two "Did it affect your effort to give up smoking?", the sample had the options "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No".

After watched the video, the participants answered the next questions (3, 4, 5 and 6), that explored their opinions about quality of the video and level accepted of the message.

What concern the third question "Did you like the quality of this video?", the participants answered "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No". After answer this question, audio, image and storytelling qualities were evaluated. Once again, the options "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No" were presented.

Moving on to the question number four "Should this video convince you to stop causing problems to no smokers?" the participants choose "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No". The fifth question, the participants answered "Yes" or "No" for the question: "Have you ever heard the information presented in this video before?". Finally, the participants considered the answers "Definitely Yes" "Maybe Yes", "Maybe No" or "Definitely No" for the question: "Is this video helpful for you in your effort to give up smoking and maintain this behavior?"

## **(B) Questionnaire for Group B**

### **(B.1) Questionnaire 5 - Video 1 “Relaxation Techniques” (smoking cessation experts)**

The Questionnaire 5 (Annexes 5) was presented for smoking cessation sample with 4 questions corresponded to Video 1 “Relaxation Techniques”.

The procedure consisted in answered the closed questions “Yes” or “No” and supplemented to two questions with open answer to highlight what did or didn’t like more. The questions were distributed according quality of video messages, efficiency of video’s for activate decision, persuasive messages and video’s contribution for smoking cessation program.

The question number one “Did you like the quality of this video?” concentrated in expert’s feedback about the general quality of the video. The question number two “Do you think this video might activate people to fulfill their decision to stop smoking?” concentrated if the video might activate decision to stop smoking.

Moving on to third question “This video was designed to convince the smoker to use relaxation techniques in order to avoid smoking. Does it achieve this goal?”, the specialists were asked if the video convince to avoid smoking.

Finally, the question number four “Do you think this video might contribute to the efficiency of your smoking cessation program” concentrated on video’s contribute of Smoking Cessation Program.

### **(B.2) Questionnaire 6 - Video 2 “Motivation to Practice Exercises” (smoking cessation experts)**

The Questionnaire 6 (Annexes 6) considered the same procedure applied in the questionnaire number 5. The smoking cessation experts answered 4 questions distributed among quality of video messages, efficiency of video’s for activate decision, persuasive messages and video’s contribution for smoking cessation program. Once again, after watched the video, the experts answered the closed questions “Yes” or “No” and supplemented to two questions with open answers to highlight what did or didn’t like more.

The first question “Did you like the quality of this video? ” was designed to evaluate the video’s message in general. Moving on to second question “Do you think this video might help people to prepare themselves for a more physically active lifestyle?”, the participants evaluated the video’s efficiency for activate decision.

The third question “This video was designed to convince the smoker to adopt healthier and more physically active lifestyle patterns. Does it achieve this goal? ”, considered the efficiency of video’s persuasion.

Finally, for evaluation of the video’s contribution for smoking cessation program, the experts answered the fourth question: “Do you think this video might contribute to the efficiency of your smoking cessation program?”.

### **(B.3) Questionnaire 7 - Video 3 “Passive Smoking” (smoking cessation experts)**

The Questionnaire 7 (presents in Annexes 7) was composed for 4 questions about Video 3 Passive Smoking. As the questionnaires previously presented, after watched the video, the smoking cessation experts answered “Yes” or “No and highlighted what did or didn’t liked more. Again, quality, efficiency, message and video’s contribution for smoking cessation program were evaluated.

The experts answered about the general quality of video 3 in first question “Did you like the quality of this video?”. In the second question “Do you think this video might help people to prepare themselves for a healthier, smoke - free life?”, the participants evaluated the videos efficiency for healthier life without smoking.

Moving on to third question “This video was designed to convince the smoker that his behavior causes serious health problems to people that choose a healthier life style. Does it achieve this goal? ” the specialists were asked if the video convince about choose of a healthier lifestyle. The last question was: “Do you think this video might contribute to the efficiency of your smoking cessation program? ” and concentrate in video’s contribution for smoking cessation program.

#### **(B.4) Questionnaire 8 - Video 1, 2 and 3 (Group B – media experts)**

The Questionnaire 8 (can be seen in Annexes 8) was designed for media experts. Three questionnaires were composed for evaluated the videos 1, 2 and 3. The questionnaires presented the same questions (total of 4 questions each one), taking into consideration the following aspects: quality general aspects of the videos, quality of visual plans, quality of narrative structure and quality of technique dimensions of the videos. Once again, after watched each video, the experts answered “Yes” or “No and highlighted “why do you think so?”

The first question “Did you like the videos?” evaluated the video’s quality. The purpose of this question was to evaluate in general the quality of the videos. The next question Did you like the Visual Plans?, asked about Visual Plans quality. Aspects like scenario, storyboard, camera movements and visual language.

The question number three “Did you like the Narrative Structure?”, focuses in the Narrative Structure. The expectation of the answers was collecting their opinions about history and script. Finally, the last question “Did you like the Technique Dimensions?” asked about the Technique Dimensions. This question concentrates on the various technical elements present of the video. The quality of shooting, editing of footage and post-production was evaluated.



### **(C) Interviews - Groups A and B**

The interview was another data acquiring instrument for data collection process. During this process, the interviewer could explore in particular aspects of the videos “Relaxation Techniques”, “Motivation to Practice Exercises” and “Passive Smoking”. For interview purposes, two semi-structure guides were created and four dimensions were taken into consideration: learning and communication theories and behavior models presented on videos, classification of media messages, identification problems and what the videos could have more.

The guide of Interview 1 (Annexes 9) was designed to smoking cessation and media experts (Group B) and presented 4 questions. Considering that both experts resort to learning theories, models of change behavior and persuasion theory was interesting to explore their opinions to compare with the videos presented.

In this way, the first question was: “Are you familiar with learning and persuasion theories and models of behavior change, namely, Transtheoretical and Elaboration Likelihood Models, included on conceptualization of the three videos?”. The second question presented was: “What do you think about the media messages included on videos?”.

The third and fourth questions of the interview explored problems, mistakes, errors and suggestions of the experts for the three videos.

The third question was: “Did you find errors, mistakes or problems in the videos? If yes, please, tell us what problems you found.” Followed to fourth question, that was: “What do you think that the videos Relaxation Techniques, Motivation to Practice Exercises and Passive Smoking should have more?”.

The guide of Interview 2 (Annexes 10) was designed to smoker’s sample. It were presented 2 questions for explore problems, mistakes, errors and suggestions of the three videos. The question 1 “Did you find errors, mistakes or problems in the videos? If yes, please, tell us what problems you found” and question 2 “What do you think that the videos Relaxation Techniques, Motivation to Practice Exercises and Passive Smoking should have more?” were the same questions presented for smoking cessation and media experts.

To make the correlation with the answers, it was decided by the group of synonyms. This procedure has an intention of understand a whole text, by passing it through the categorization

process, according to the frequency of certain meaning identified by the subject (Bardin, 2004). The answers are filtered using the group of synonyms, analyzing the context where the words belong into. Through this method it was possible to create the group of synonyms that are presented:

- Good: satisfactory, acceptable, great, good enough, agreeable;
- Bad: Insufficient, unsatisfactory, unacceptable, not good enough;
- Persuasive: credible, inducing, conclusive;
- Convincing: make believe, confidence, certainty, conviction;
- Motivating: stimulate, instigate, propel, provoke.

All the interviews were recorded into audio format and notes were taken during the interview. The files were transcribed into digital format using Microsoft Office – Word and then processed QSR N Vivo 8.

#### 6.5.4 Setup of Presential Context

The empirical study consisted in participants answer questions about the videos “Relaxation Techniques”, “Motivation to Practice Exercises” and “Passive Smoking”. The participants of Group A and B had 20 minutes to respond each questionnaire and 20 minutes to answer each interview.

The process consisted to show video per video for each participant separately. After answered the questionnaire and interview about the first video, for example, the respondents had a break time of 5 minutes to restart the process. Primarily, the participants evaluated the video number one, after video number two e finally, video number three. The idea was realize the immediately feedback of the samples. The test’s sessions took place on office for a 3 days period beginning on June 27, 2010. The office had sessions of 2 hour and 15 minutes (total) made in person.



Figure 24 - Participant with the psychologist during the data collection

The smoker’s evaluation process consisted in divide the data collection in two steps divided between 10 minutes each one. The first step consisted in, before watching the video 1 ; the smokers had 10 minutes for answer the questions 1 and 2 of the questionnaire presented. After watched the video, the participants had more 10 minutes for answer the questions 3, 4, 5 and 6.

The procedure for evaluation process of videos 2 and 3 was the same as video 1. As a part of the sample evaluation process, the smokers also answered questions about smoking behavior prevalence and behavior index.

It was soon found necessary to provide the assistance of psychologist to answer some questions *in loco*. The presence of the psychologist presented in Figure 37 was helpful to the structure of the process, fact that may not influenced the final results.

During this stage, the participants gave specific feedback about changing behavior. The expected was realized the behavior associated to level of motivation to change. The fact of there was a specific objective in compare the first to the second step allowed the interviewer collected indicators of satisfaction and intention of change behavior.

The second evaluation process was the questionnaires for Group B. Participants of this group, specifically, psychologists and media experts, answered questions 4 questions about specific aspects of the videos.

The method consisted that each participant had 20 minutes to answer the questions. Firstly, the experts watched the video number one. After watched, the questionnaire was distributed to the respondent and another video was prepared to restart the process.

Before to start the test, each expert was briefed on the objective of the study including the questions they would answer. This process was then repeated for all experts.

The last evaluation process was the interview for Groups A and B. After watched the three videos, the participants were asked about theories and models presented on videos, classification of media messages, identification problems and what the videos could have more. Each participant had 20 minutes for answer a set of questions made in person, whose answer was recorded in audio format and notes.

There were a total of 15 sessions provided. The participants for group A and B answered a range from 10 questions (questionnaires and interviews). No participants dropped out of the study. The sessions were provided in a quiet, dimly lit room. Before each day's session, each participant consumed a glass of water. Each participant got into a comfortable sitting position on a chair for the test session.

All analysis were performed using SPSS 18.0 and N. Vivo 8, software packages for statistical analysis for correlated data, in order to compute standard errors of the estimates and 95% confidence intervals.

# 7. RESULTS & DATA ANALYSIS

The results of the data concerning to the objectives of this study will be presented in this chapter. For clarity are shown the structure analysis and data collection instrument, considering the variables in research. The chapter presents three sections: 7.1, 7.2 and 7.3.

The section 7.1 “Presentation of Collected Data” is organized in:

- 7.1.1 Questionnaire of quantitative data: smokers sample
- 7.1.2 Questionnaire of quantitative data: smoking cessation experts and media experts
- 7.1.3 Interviews of quantitative and qualitative data

The section 7.2 “Analysis of the Questionnaire and Interview” is organized in:

- 7.2.1 Analysis of quantitative and qualitative data results
- 7.2.2 Analysis of interview data results
- 

## **7.1 Presentation of Collected Data**

### **7.1.1 Questionnaire of quantitative data >> smokers sample**

A total of three questionnaires were presented to smokers’ sample. To facilitate the presentation of the collected data, the questionnaires will be represented through of the correlations: Questionnaire 1 - Sample Description, Questionnaire 2 - Video 1 “Relaxation Techniques”, Questionnaire 3 - Video 2 “Motivation to Practice Exercises” and Questionnaire 4 – Video 3 “Passive Smoking”.

The questions of the Questionnaire 1 (as seen in section 6.5.1) focused on target audience, smoking prevalence and behavior index, taking into account indicators of age, gender, sessions of

treatment, how long have been a smoker, number of cigarettes per day and if smoked the day before the test or the last time that smoked.

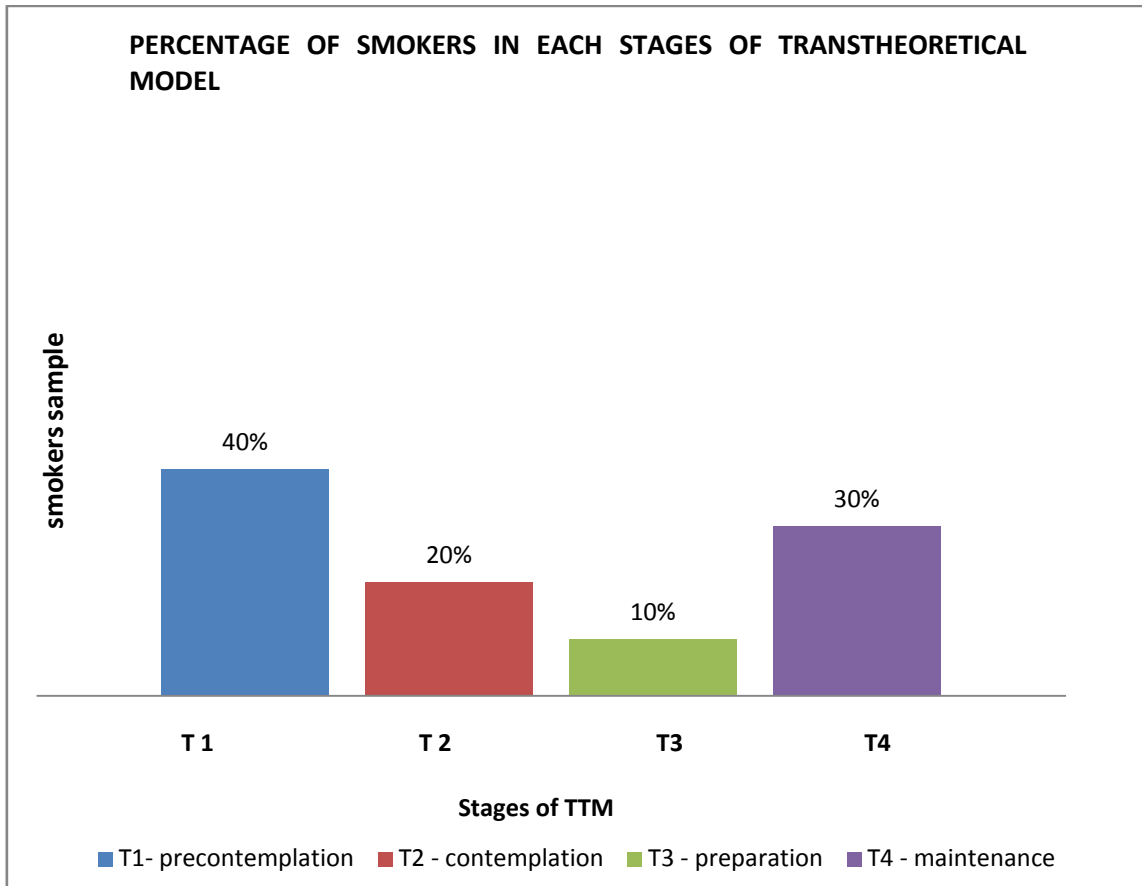
Considering the acquired results, the smokers sample (Group A)<sup>12</sup> was composed with 10 smokers among aged 21- 38 years, 4 smokers were female and 6 were male. All of these individuals were included on treatment sessions of Smoking Cessation Program.

Based on the methodology and research protocol established in the Questionnaire 1 and presented in section 6.5.1, which considers the correlations between the Transtheoretical Model stages (T1, T2, T3, T4, T5 and T6), the data collected and analyzed is presented in Graph 1 which demonstrate some distribution of participants' answers:

- 40% of the smokers were included in the "*Precontemplation*" stage (T1) and have no intention of changing their behaviour;
- 30% is in the "*Maintenance*" stage (T5), in this case, where the change behaviour has already happened and there is greater stability for the maintenance of behaviour obtained;
- 20% of smokers were included in the stage "*Contemplation*" (T2), where there is already an understanding of the sample there is a problem, but not a change in behaviour occurs.
- 10% of the participants was classified as stage "*Preparation*" (T3), which are already convinced that there is a problem and have tried to change their behaviour but without success.

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<sup>12</sup> The table of smoker's sample description can be seen in section 6.5.1



**Graph 1 – Percentage of smokers in each stages of Transtheoretical Model**

The next questions of the Questionnaires 2, 3 and 4 considered the sample evaluation of the following aspects: the knowledge’s level concerning of the subject presented in each video, quality of general aspects of the videos, level of convincement of the video’s messages and contribution level’s of each videos to smoking cessation attitude.

According the methodology for analysis of data presented in the section 6.5.1, the participants answered “Yes” or “No” for the first questions and “Definitely Yes”, “Maybe Yes”, “Maybe No” or “Definitely No” for the next questions of the questionnaires.

Regarding to the first and second questions of the Questionnaires 2, 3 and 4, the results are presented in Graph 2 and 3 and demonstrated the follow distribution of answers on the three videos.

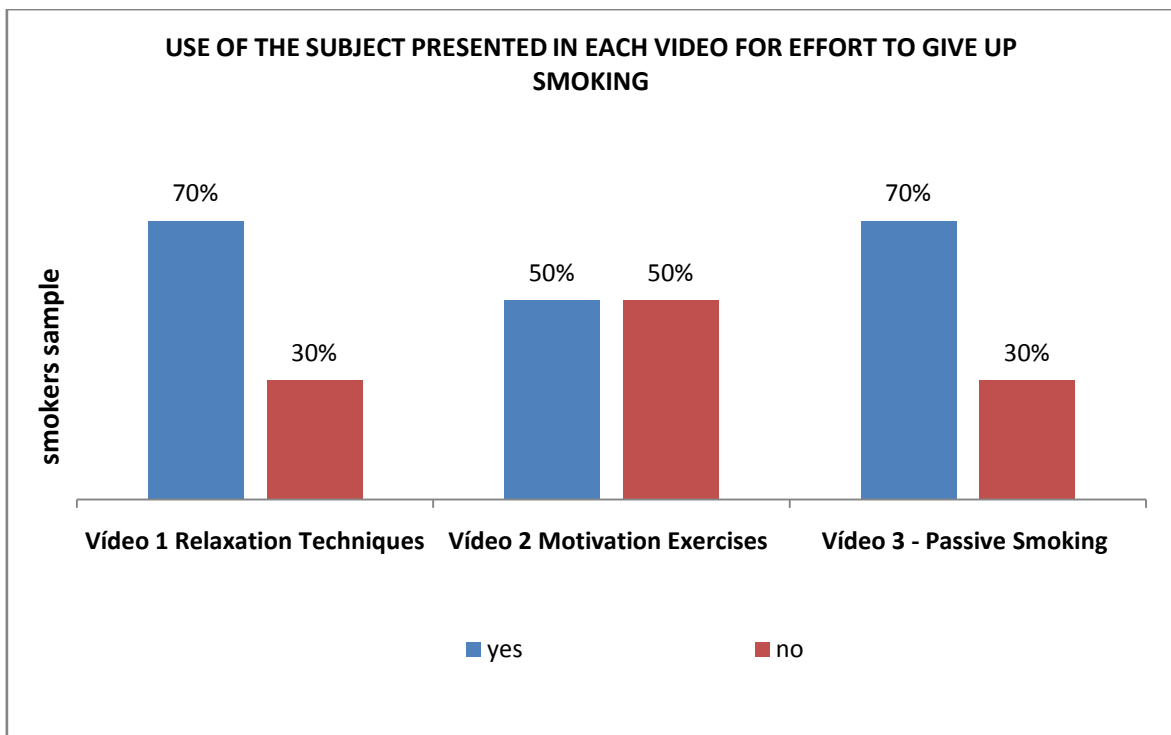
Considering firstly the Questionnaire 2 (Video 1 “Relaxation Techniques”), when was asked if the smoker used relaxation or breathing techniques as an aid to your effort to give up smoking, 70%



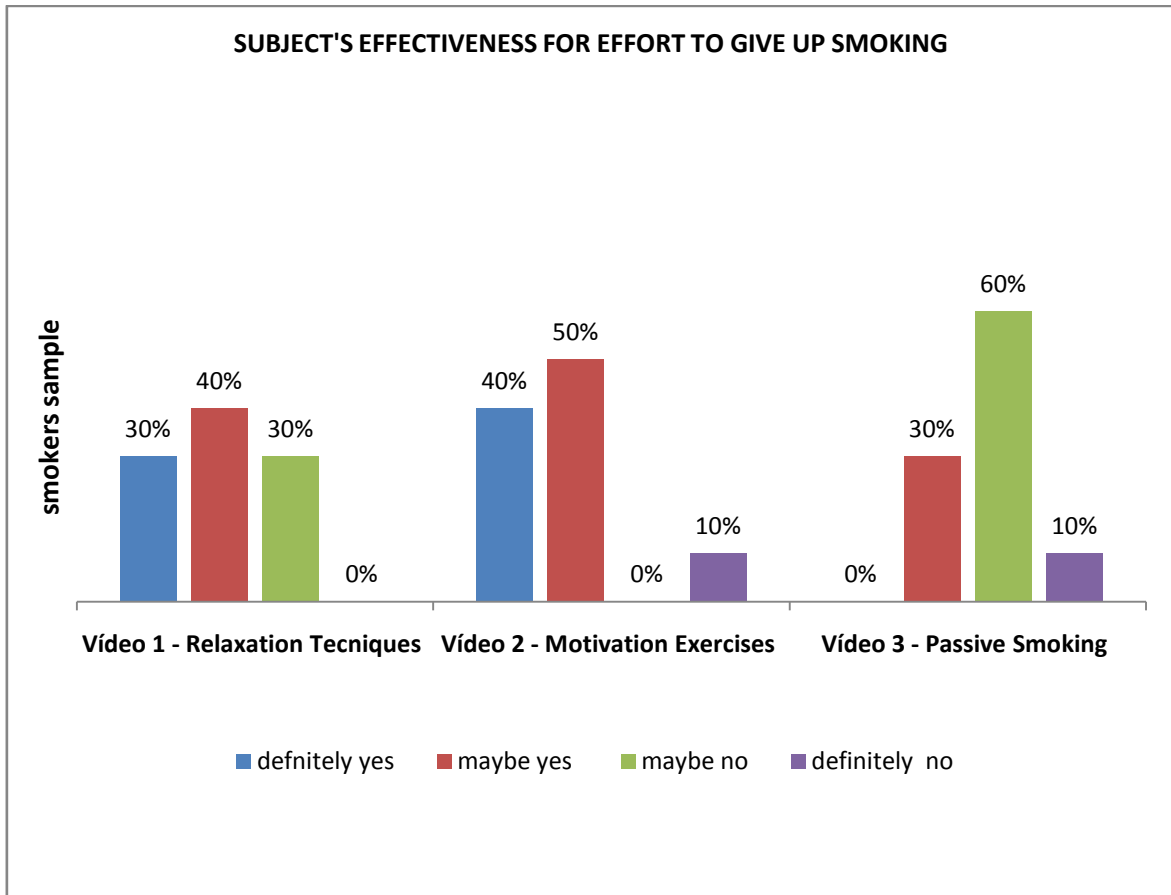
of smokers said “Yes” and 30% said “No”. Regarding to the second question, when asked if the techniques were helpful for effort to give up smoking, 40% of smokers answered “maybe yes”, 30% answered “maybe no” and 30% answered “definitely yes”.

Moving on to Questionnaire 3 (Video 2 “Motivation to Practice Exercises”), the 50% of smokers answered “Yes” and 50% answered “No” when asked if ever tried to shift to a healthier and more physically active lifestyle as an aid to your effort to give up smoking. For the second question (Did it help you in your effort to give up smoking?), 50% answered “maybe yes”, 40% answered “definitely yes” and 10% “maybe no”.

Finally, looking at answers of Questionnaire 4 (Video 3 “Passive Smoking”), when asked if ever concerned about the problems that your smoke may cause to non- smokers, 70% of smokers said “Yes” and 30% said “No”. Moving on to second question (Did it affect your effort to give up smoking?), 60% of smokers said “maybe no”, 30% “maybe yes”, 10% “definitely no”.



Graph 2 - Use of the subject presented in each video for effort to give up smoking by smokers



**Graph 3- Subject's effectiveness for effort to give up smoking (Videos 1, 2 and 3)**

The question number 3 of the Questionnaires 2, 3 and 4 asked about general elements of the videos. The question was: "Did you like the quality of the videos?". After answer this question, image, audio and storytelling qualities were evaluated. The smokers answered "Definitely Yes", "Maybe Yes", "Maybe No" or "Definitely No".

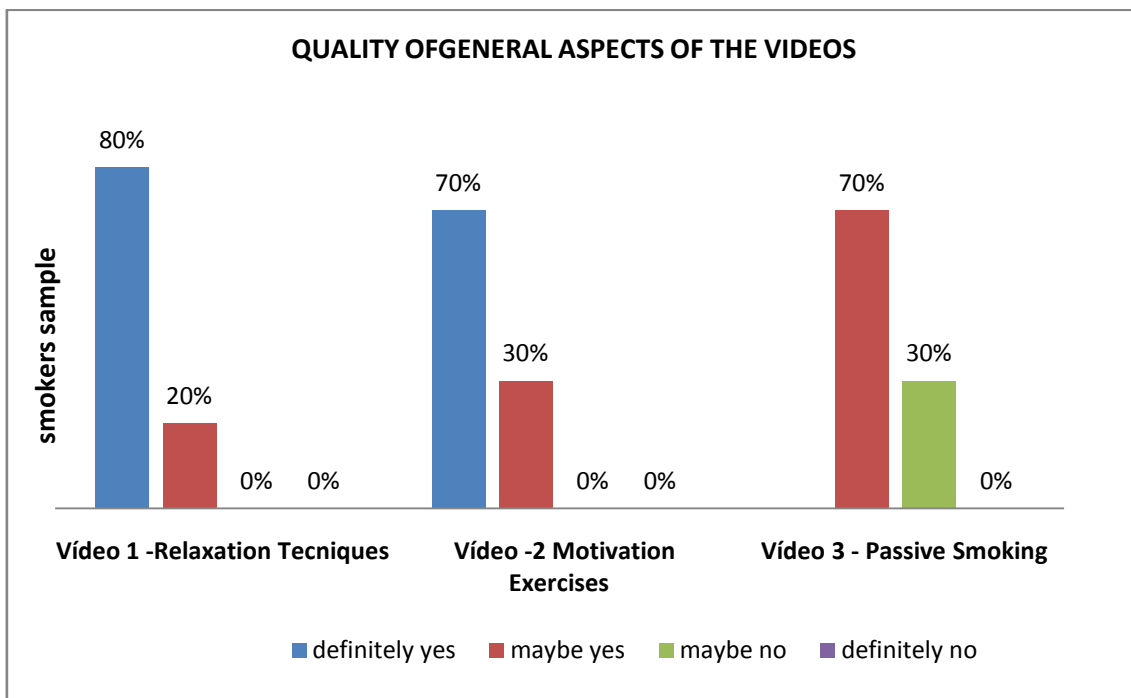
The data collected and presented in Graphs 4 and 5, regarding to the previous question 3, demonstrated a positive evaluation of the general quality of the three videos. Regarding to the Questionnaire 2 (Video 1 "Relaxation Techniques") that referred to the video's quality, 80% of participants answered "Definitely Yes" and 20% answered "Maybe Yes".

In this same question, the smokers were asked about the image quality, to which 70% responded "Definitely Yes" and 30% responded " Maybe Yes " and audio quality, to which 60% responded " Definitely Yes " 30% "good" and 10% ' Maybe No".

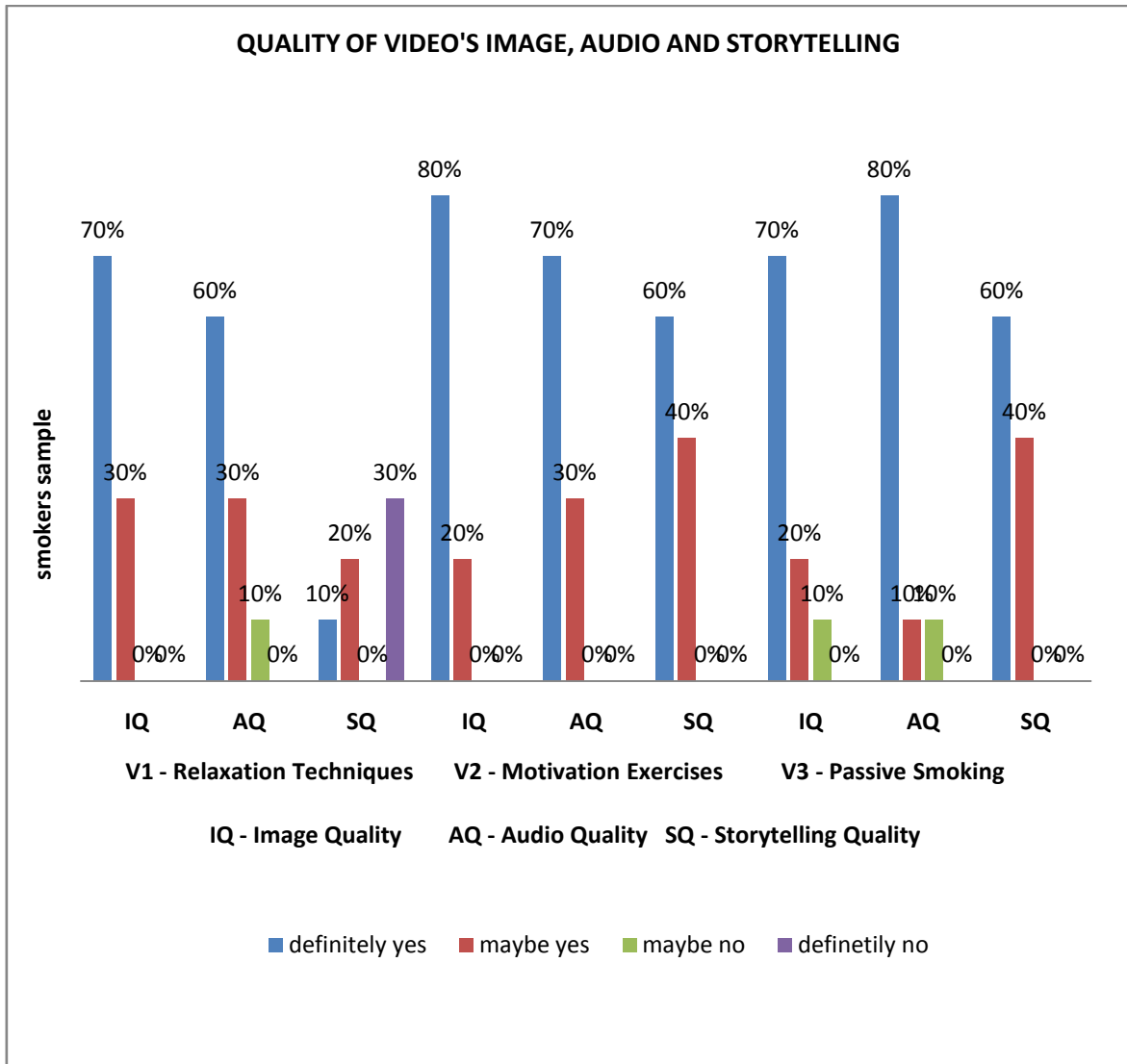
Finally, questioned about the storytelling of video "Relaxation Techniques", 80% of the smokers answered "Definitely Yes "10%" Maybe Yes "and 10%" Maybe No".

Moving on the Questionnaire 3 (Video 2 “Motivation to Practice Exercises”) the participants demonstrated a positive feedback as well. The results were 70% for "Definitely Yes" and 30% for "Maybe Yes" for general quality of this video. The participant’s evaluation about the image quality were 80% "Definitely Yes" and 20% "Maybe Yes", about the audio quality, 70% responded "Definitely Yes" and 30% "Maybe Yes". The last issue of this stage was related to the storytelling quality, 60% responded "Definitely Yes" and 40% responded "Maybe Yes."

Moving on Questionnaire 4 (Video 3 “Passive Smoking”) when asked “Did you like the quality of this video?”, 70% of the smokers answered “Maybe Yes” and 30% “Maybe No”. In a total of 70% of participants responded "definitely yes" for the assessment on the quality of images, the following responses were 20% "Maybe Yes" and 10% "Maybe No." When asked about the audio quality, 80% responded "Definitely Yes" while 10% responded "Maybe Yes" and 10% "Maybe No." In the last question, participants rated the storytelling quality, 60% said "Definitely Yes" and 40% said "Maybe Yes".



Graph 4- Quality of general aspects of the videos 1, 2 and 3 by smokers



**Graph 5 Quality of video's image, Audio and Storytelling by smokers (Videos 1, 2 and 3)**

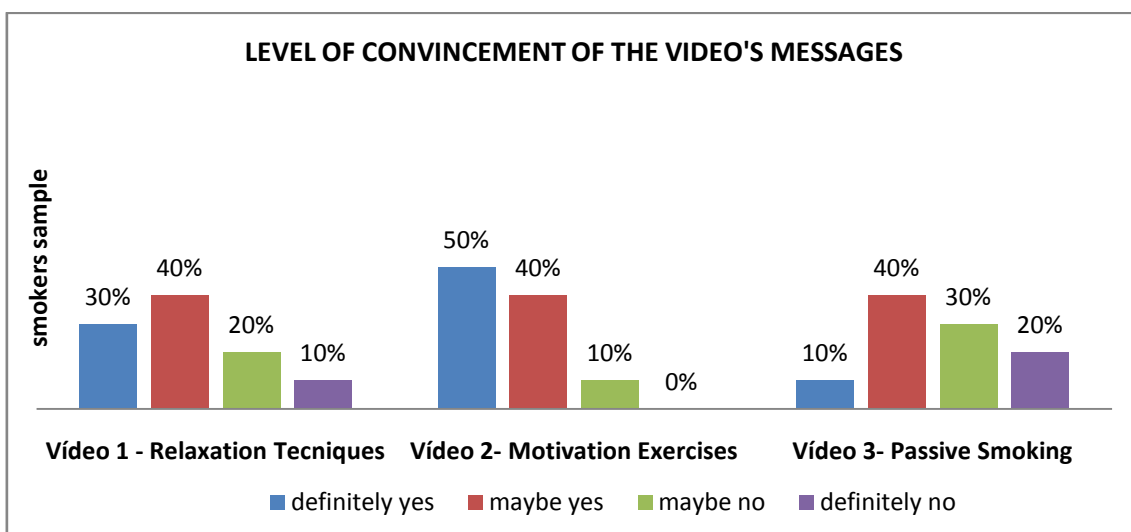
The questions number four of the Questionnaires 2, 3 and 4 asked about the level of convincement of the video's messages.

The fourth question of the Questionnaire 2 (Video 1 "Relaxation Techniques") was: "Should this video convince you to use these techniques as an aid to stop smoking and maintain this behavior?". For this question, 30% of the smokers answered "Definitely Yes," 40% "Maybe Yes", 10% "Definitely No" and 20% "Maybe No".

Considering the Questionnaire 3 (Video 2 "Motivation to Practice Exercises"), the fourth question was: "Should this video convince you to adopt a healthier and more physically lifestyle?". The

results obtained demonstrated a tendency favorable to positive answers with: 50% of the smokers said "Definitely Yes," 40% answered "Maybe yes" and 10% "Maybe No."

Regarding to the fourth question of the Questionnaire 4 (Video 3 "Passive Smoking") that was: "Should this video convince you to stop causing problems to people that choose not to smoke?". The results demonstrated some distribution of the answers: 40% answered "Maybe Yes", 30% answered "Maybe No," 20% said "Definitely No" and 10% "Definitely Yes". These results (Questionnaires 2, 3 and 4) can be seen in Graph 6.



Graph 6- level of convincement of the video's messages by smokers (Videos 1, 2 and 3)

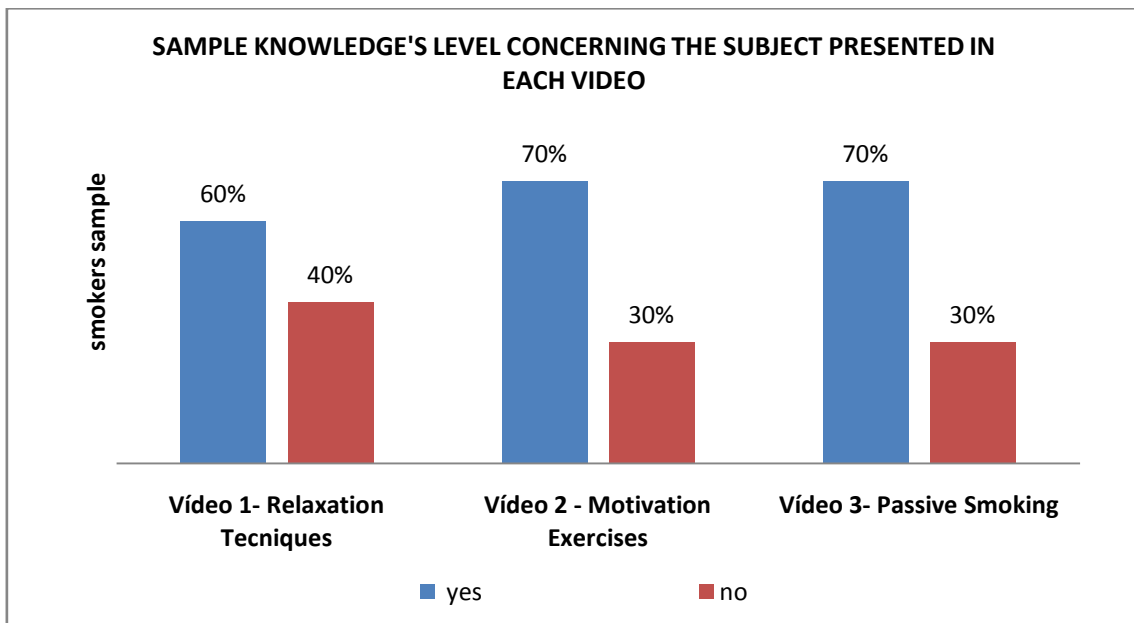
The fifth and sixth questions of the Questionnaires 2, 3 and 4, intend to evaluate the sample knowledge's level concerning the subject presented in each video and the contribution's level of each video to the smoking cessation attitude. Considering the results presented in Graphs 7 and 8, once again, the participants agreed on the positive options.

Regarding to Questionnaire 2 (Video 1 "Relaxation Techniques"), the fifth question was: "Have you ever used the relaxation techniques presented in this video before?" and the sixth question was: "Is this video helpful for you in applying these techniques?". The analysis of the fifth question presented the following answers: 60% of the smokers answered "Yes" and 40% answered "No" and for the sixth question, 70% of the sample answered "definitely yes", 20% answered "maybe yes" and 10 % "definitely no".

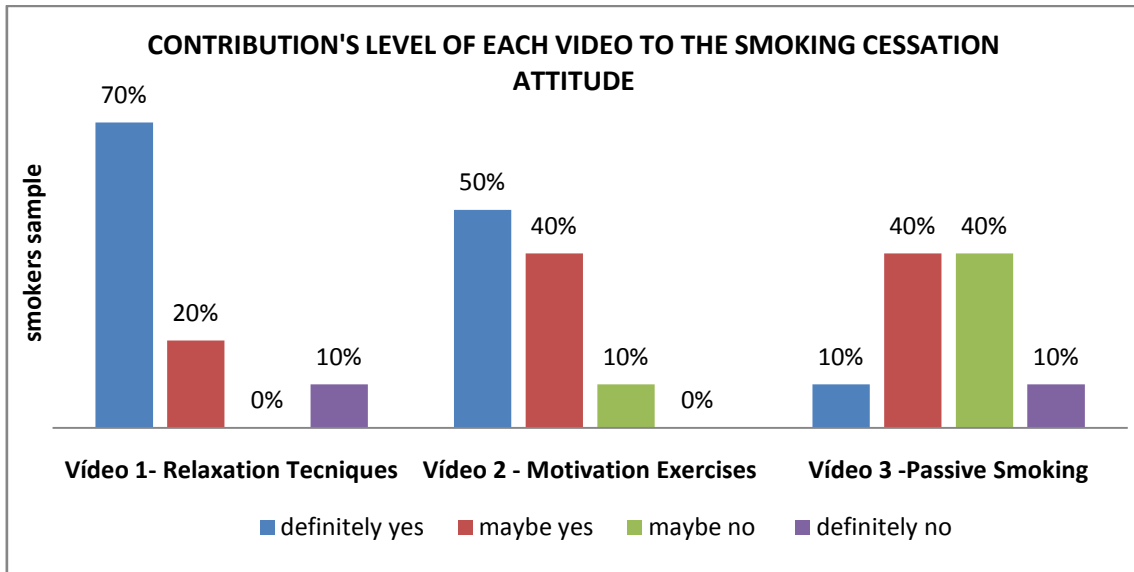
Regarding to Questionnaire 3 (Video 2 “Motivation to Practice Exercises”), the question number five was: “Have you heard the information presented in this video before? “. The sixth question was: “Is this video helpful for you effort to change lifestyle?”. It was found that 70% said “Yes” and 30% said “No” for the fifth question and to the sixth question, 50% of the sample said "definitely yes" 40% "maybe yes", while 10% said "maybe no".

Considering the question number five of the Questionnaire 4 (Video 3 “Passive Smoking”), the smokers answered if have heard the information presented in this video before. The sixth question was: “Is this video helpful for you in your effort to give up smoking and maintain this behavior?”. What concern to fifth question, it was observed that 70% of smokers answered “Yes” and 30% answered “No”.

Regarding to sixth question, 40% of the sample responded "maybe yes" and the same percentage was obtained in response "maybe no". The remaining participants, 10% of the sample responded "definitely yes" and also 10% "definitely no" for this question.



Graph 7- sample knowledge's level concerning the subject presented in each video



**Graph 8- Contribution's level of each video to the smoking cessation attitude by smokers**

### **7.1.2 Questionnaire of qualitative data >> smoking cessation experts and media experts**

Following the methodology for data collection of qualitative data presented in the section 6.5.1 were chosen two different samples, included in Group B: three smoking cessation experts and two media experts. Since both individuals resort to treatment programs, cigarette smoking prevention and media use and effects is interesting to analyze their answers to compare the videos with current intervention programs.

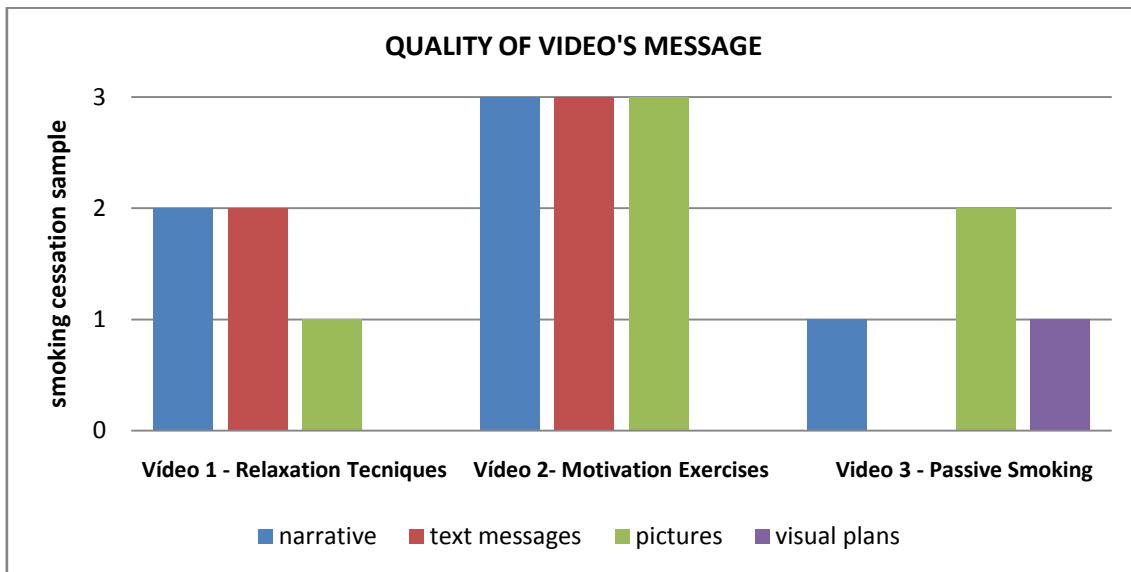
To the process of data collection were presented two different questionnaires for the samples and assessed their opinions on various aspects of the tree videos. The questionnaire for smoking cessation experts covered to the general evaluation of the videos, messages feedback and contribution for smoking cessation program. The questionnaire presented to media experts explored their opinions on general quality of videos, audiovisual plans, narrative structure and technical dimensions of the videos.

The results presented in this section followed the order of questionnaires presented to the participants, respectively, data collected with smoking cessation experts and the data collected with media experts. As seen previously in section 6.5.3, the questionnaires for smoking cessation sample were represented through correlation: Questionnaire 5 (Video 1 "Relaxation Techniques"), Questionnaire 6 (Video 2 "Motivation to Practice Exercises") and Questionnaire 7 (Video 3 "Passive Smoking"). The questionnaires presented to media experts sample were represented through Questionnaire 8 (Videos 1, 2 and 3).

Moving on smoking cessation experts, the first questions of the Questionnaires 5, 6 and 7 focused on the quality of video's message. The results demonstrated that all smoking cessation experts said "Yes" for this question. When were asked "What did you like more?", the results presented ( can be seen in Graph 9) the follow answers:

- Two smoking cessation experts indicated "narrative" and "text messages" and one indicated "pictures" for the Video 1 "Relaxation Techniques".
- Three smoking cessation experts indicated "pictures", "narrative" and "text messages" for the Video 2 "Motivation to Practice Exercises".
- One smoking cessation expert indicated "narrative" and "visual plans" and 2 indicated "pictures" for the Video 3 "Passive Smoking".



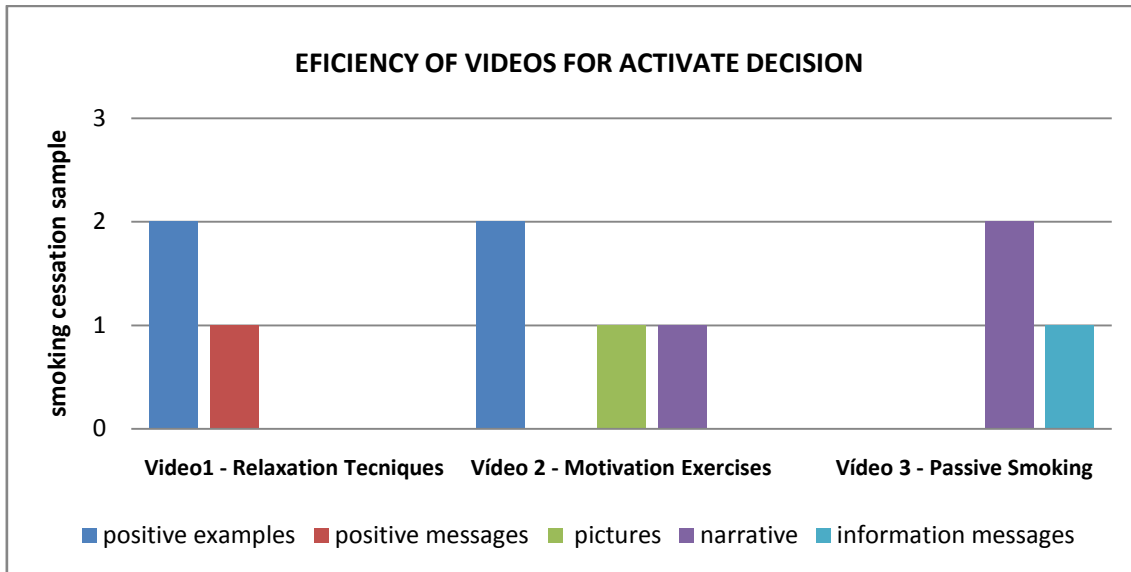


Graph 9 –Quality of video’s message by smoking cessation experts (Videos 1, 2 and 3)

Looking at second question of Questionnaire 5 (Video 1 “Relaxation Techniques”), the participants answered “Yes” or “No” for the question: “Do you think this video might activate people to fulfill their decision to stop smoking?”. In the same question, the participants answered “Why do you think so?”. As the first question, the tendency was favorable to the positive answers in terms of activate decision efficiency. One of the answers indicate “positive message” and two answers indicate “positive examples” as an important points to activate decision.

Moving on Questionnaire 6 (Video 2 “Motivation to Practice Exercises”), the question number two was: “Do you think this video might help people to prepare themselves for a more physically active lifestyle?”. The results demonstrated again that all the experts answered “Yes”. When asked “Why do you think so?”, two experts indicated “positive examples” and one indicated “attractive narrative and pictures” as a key points of this video.

Finally, the second question of Questionnaire 7 (Video 3 “Passive Smoking”) was: “Do you think this video might help people to prepare themselves for a healthier, smoke – free life?”. The answers also were “Yes” for this question. Two of experts indicated the “narrative” and one indicated “information messages” as an important contribute to prepare a healthier life. These values can be seen in Graph 10.



Graph 10- Efficiency for activate decision by smoking cessation experts (Videos 1, 2 and 3)

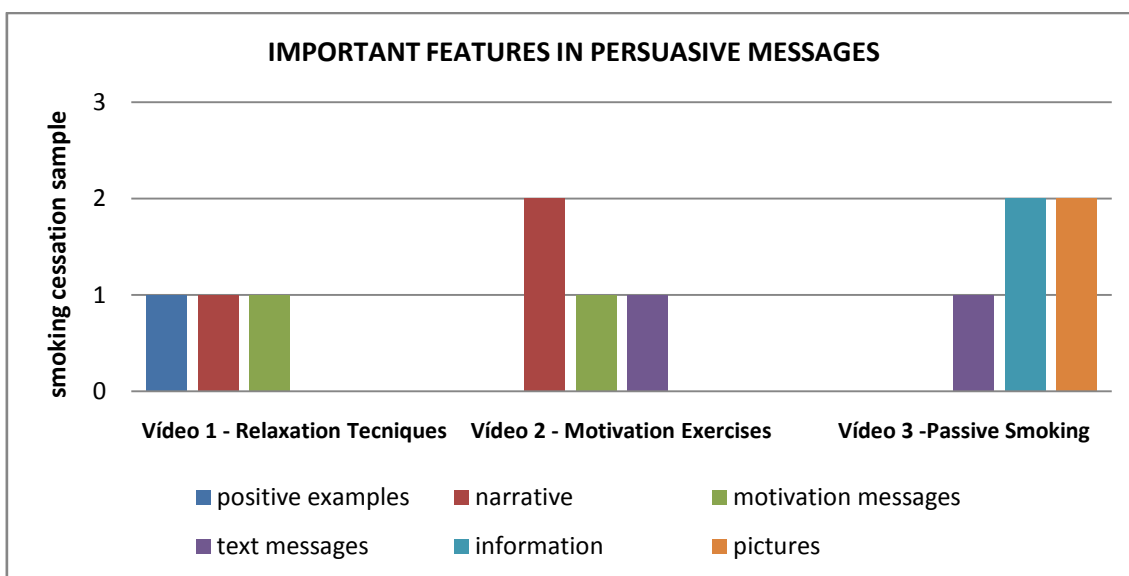
The questions number three of the Questionnaires 5, 6 and 7 explored the efficacy of the persuasive messages on the videos. The participants answered “Yes” or “No” and again explained their answers.

What concern to Questionnaire 5 (Video 1 “Relaxation Techniques”), the third question was: “This video was designed to convince the smoker to use relaxation techniques in order to avoid smoking. Does it achieve this goal?”. The question number three of the Questionnaire 6 (Video 2 “Motivation to Practice Exercises”) was: this video was designed to convince the smoker to adopt healthier and more physically active lifestyle patters. Does it achieve this goal?”. Finally, the same question of the Questionnaire 7 (Video 3 “Passive Smoking”) asked: “This video designed to convince the smoker that his behavior causes serious health problems to people that choose a healthier life style. Does it achieve this goal?”

The results presented in Graph 11 demonstrated a general agreement among the three smoking cessation experts. All the experts gave positive answers for the third questions. When asked “Why do you think so?” were presented the following answers:

- One smoking cessation expert indicated “positive examples”, one mentioned “attractive narrative” and one indicated “motivation messages” for the Video “Relaxation Techniques”.

- One smoking cessation experts indicated “motivation messages”, one indicated “narrative” and another indicated “narrative and text messages” for the Video “Motivation to Practice Exercises”.
- One smoking cessation expert indicated “text messages” and two mentioned “information” and “attractive pictures” as important features of Video 3 “Passive Smoking”.



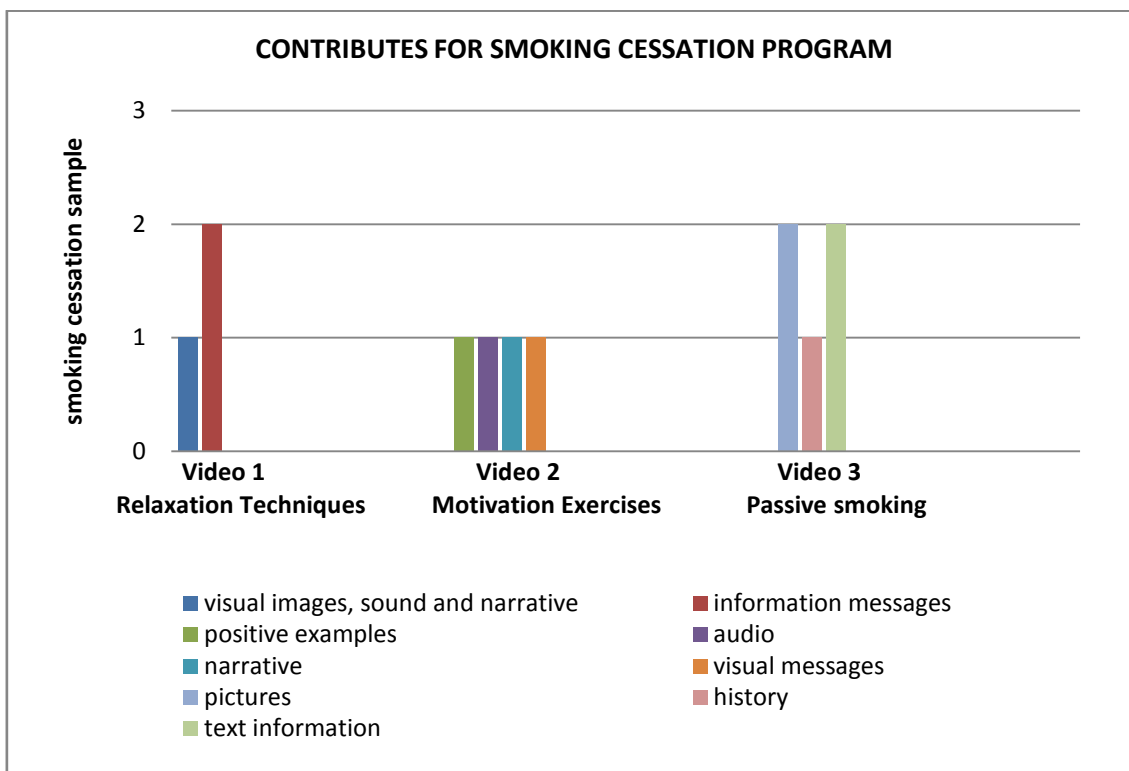
**Graph 11- Important features in persuasive messages by smoking cessation experts (Videos 1, 2 and 3)**

The last questions of the Questionnaires 5, 6 and 7 focused on video’s contribute for Smoking Cessation Program. The smoking cessation experts answered “Yes” or “No” for the question: “Dou you think this video might contribute to the efficiency of your smoking cessation program?”. After answered this question, the experts indicated relevant aspects included on the videos for smoking cessation program. The results (can seen in Graph 12) demonstrated a positive feedback from the experts.

What concern the Questionnaire 5 (Video 1 “Relaxation Techniques”), one of then found that a combination among “visual images”, “sound” and “narrative” is helpful for the treatment sessions. Two smoking cessation experts indicated “positive examples”, “information messages” presented in this video as a contributed for smoking cessation program.

Regarding to the Questionnaire 6 (Video 2 “Motivation to Practice Exercises”), the smoking cessation experts mentioned that the elements “positive examples” “examples and practice”,

“audio”, “attractive visual images” and “narrative” showed in an audiovisual video can be helpful during the treatment. Finally, taking a look the smoking cessation answers of Questionnaire 7 (Video 3 “Passive Smoking”), relevant aspects from this video were indicated. Two experts mentioned “text information” and “pictures” and one expert mentioned “attractive history”. The distribution of these results can be seen in Graph 11.



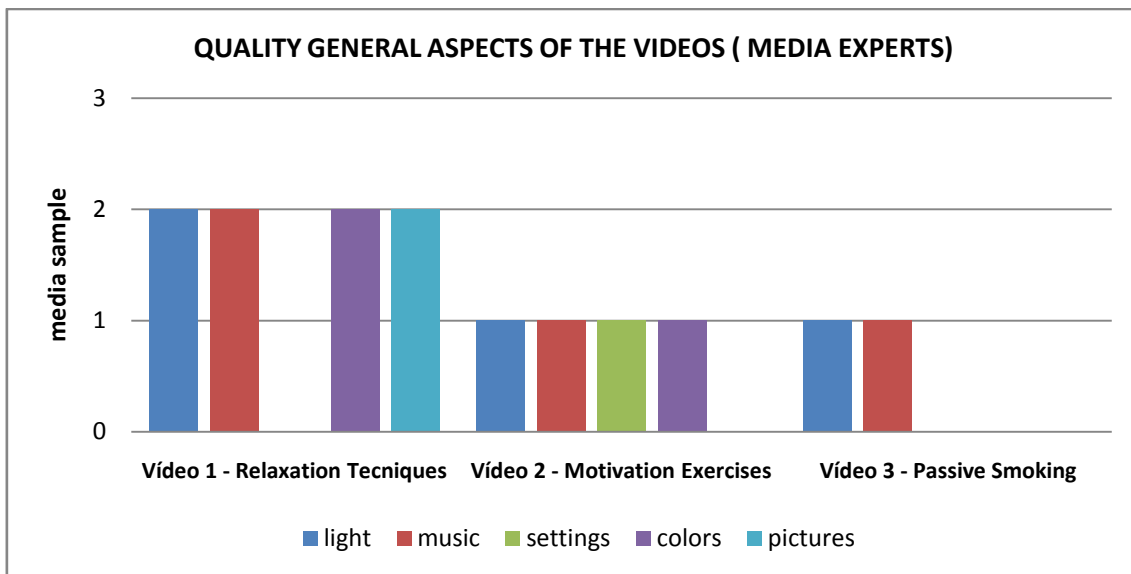
**Graph 12- Contributes for smoking cessation program by smoking cessation experts ( Videos 1, 2 and 3)**

Moving on media experts’ sample, the Questionnaire 8 (Videos 1, 2 and 3) focused in four categories: quality general aspects of the videos, quality of visual plans, quality of narrative structure and quality of technique dimensions of the videos.

The first question of the Questionnaire 8 (Videos 1, 2 and 3) was: “Did you like the quality of this video?”.The experts answered “Yes” for this question and indicated what they liked more. The results present in Graph 13 demonstrated there was a consensus of the answers:

- Two media experts indicated “good and clear light”, “good colors” and “clear picture” for the Video 1 “Relaxation Techniques”.

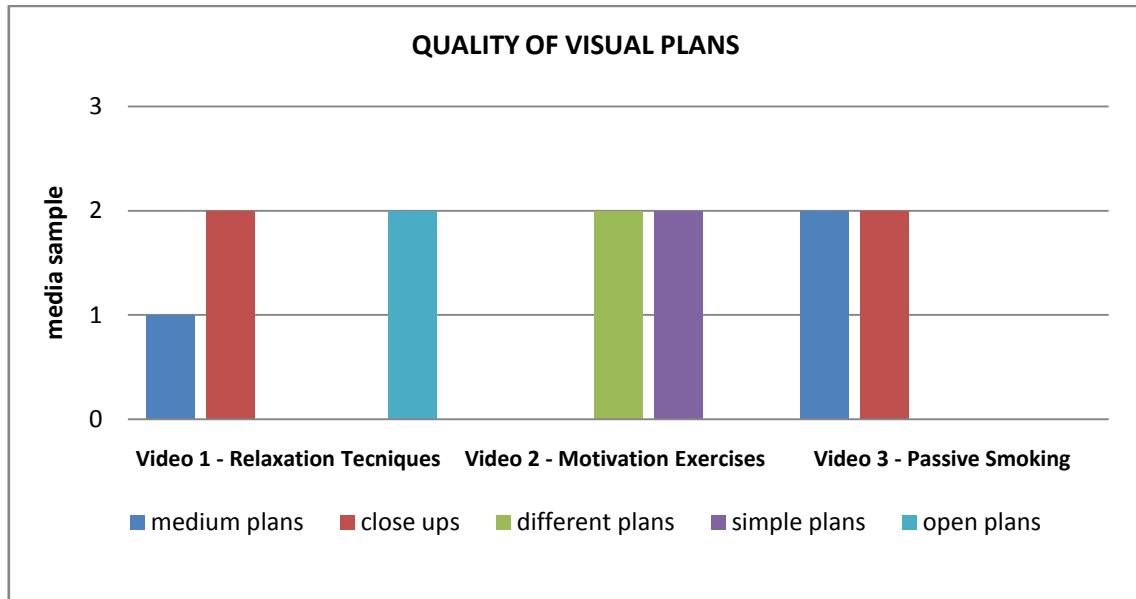
- One media expert mentioned “good music and variety of settings” and another mentioned “colors and light” as the aspects that they liked more on Video 2 “Motivation to Practice Exercises”.
- The media experts indicated once again the elements “good and clear light” and “good music” for the Video 3 “Passive Smoking”.



**Graph 13- quality of general aspects of the videos by media experts (videos 1, 2 and 3)**

Regarding to the second question of Questionnaire 8, the experts were asked if their liked the Visual Plans of the three videos. The results presented in Graph 14 demonstrate that all of media experts answered “Yes” and indicated the following answers that their liked more:

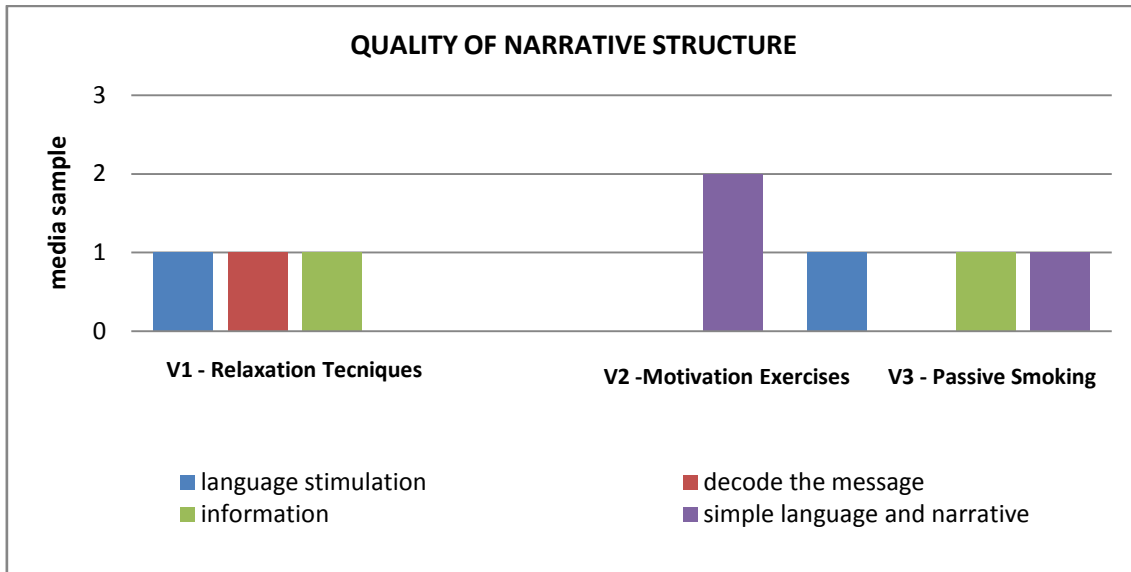
- Two experts indicated “close ups” and one indicated “open plans” for the Video1 “Relaxation Techniques”.
- Two experts mentioned “use of different and simple plans” for the Video 2 “Motivation to Practice Exercises”.
- Two experts indicated “close ups and medium plans” for the Video 3 “Passive Smoking”.



**Graph 14- quality of Visual Plans by media experts (Videos 1, 2 and 3)**

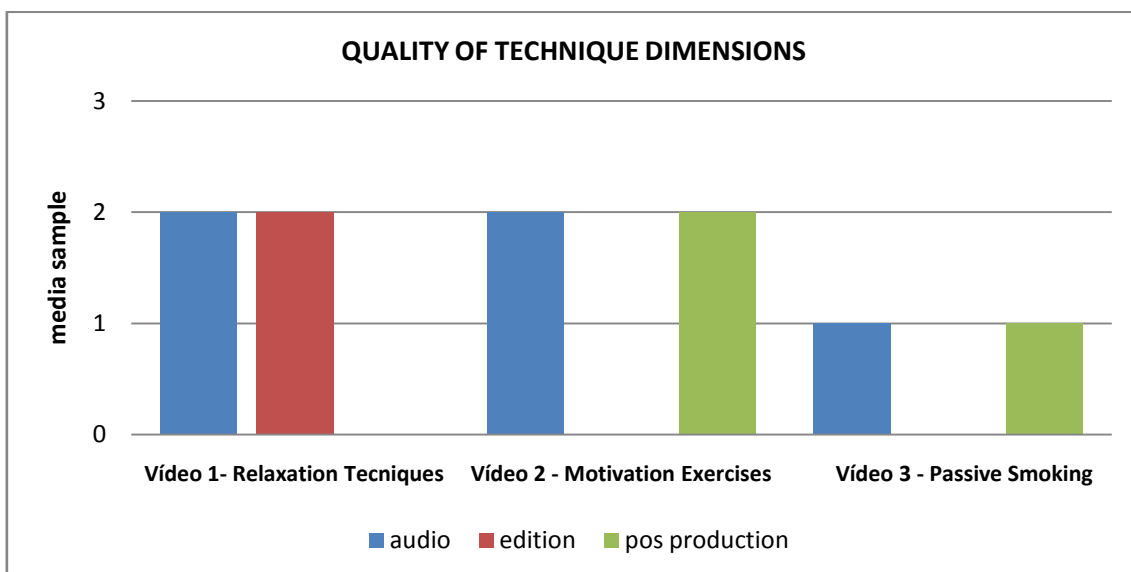
The third question focused on the quality of narrative structure. The results (can seen in Graph 15) demonstrated once again convergence on positive answers. The media experts considered some aspects of the narrative on the videos.

- One expert mentioned “language stimulation and use similar stories” and another mentioned “decode the message contained in the storytelling” as a positive elements of Video 1 “Relaxation Techniques”.
- Two experts indicated also “simple language used on script” for Video 2 “Motivation to Practice Exercises”.
- One expert indicated the “simple narrative” and another mentioned “usage of information during the narrative” for Video 3 “Passive Smoking”.



**Graph 15 - quality of narrative structure by media experts (Videos 1, 2 and 3)**

Finally, the last questions of the Questionnaire 8 was: “Did you like the technique dimensions?”. Considering the results presented in Graph 16, was observed some distribution of the answers. The experts evaluated the videos positively but mentioned some negative aspects. Regarding to Video 1 “Relaxation Techniques”, all media experts indicated that the “edition” had a good technical quality but the “audio” was mentioned as regular quality. Moving on to Video 2 “Motivation to Practice Exercises”, “audio” and “pos production” qualities were evaluated in a good way for all the experts. The same answers were found on Video 3 “Passive Smoking”. One expert mentioned “audio” and another mentioned “pos production” as good technical elements.



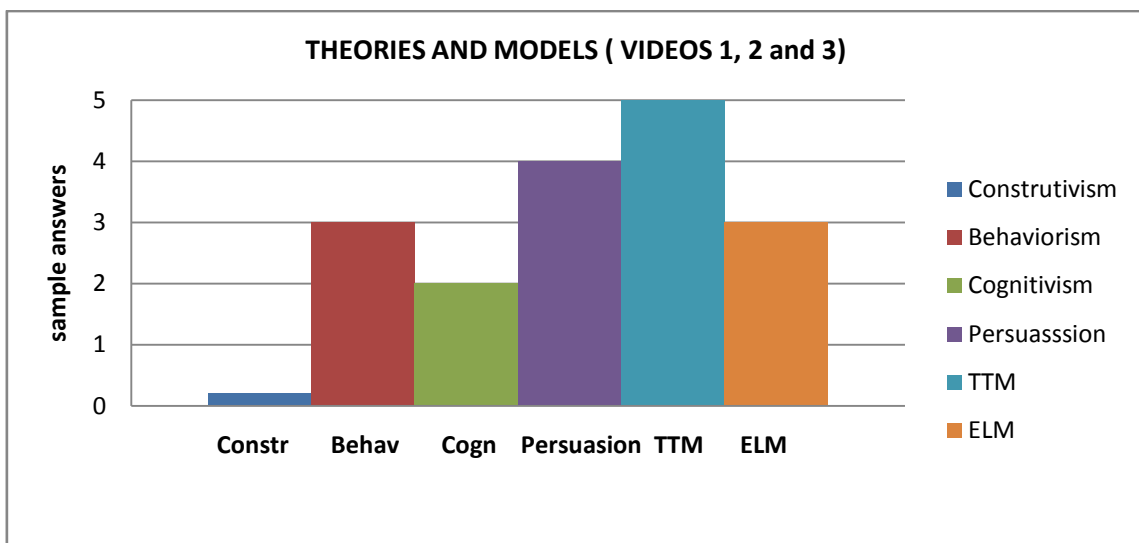
**Graph 16- quality of technique dimensions by media experts (Videos 1, 2 and 3)**

### 7.1.3 Interviews of quantitative and qualitative

According to the methodology previously presented in section 6.5.2, the interview was another data acquisition used for data collection. Quickly recapitulating the research protocol established for the interview purposes, two semi-structured interview guides were created and four dimensions were taken into consideration: learning and communication theories and behavior models presented on videos, classification of media messages, identification problems and what the videos could have more.

The guide of interview 1 presented four questions for smoking cessation and media experts. The first question presented was: "Are you familiar with learning (Cognitivism, Constructivism, Behaviorism) and communication theories (Persuasion theory), and models of behavior change, (Transtheoretical and Elaboration Likelihood Models), included on conceptualization of the three videos?"

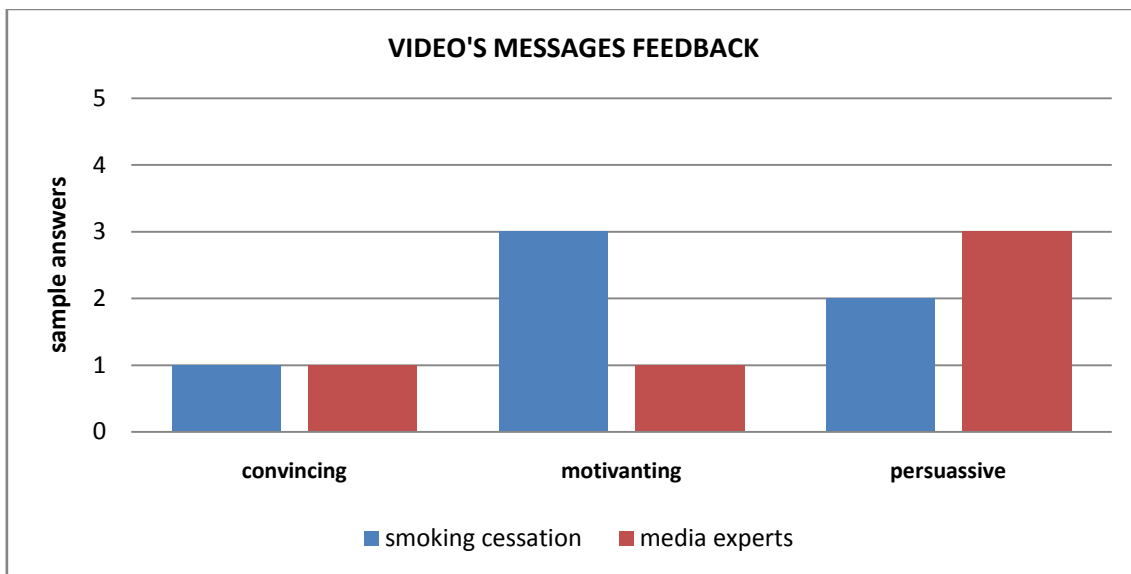
The distribution of the answers presented a general tendency to favor the prevalence of Persuasion Theory and Transtheoretical Model, followed by Behaviorism, Elaboration Likelihood Model, Cognitivism and Constructivism. These values can be seen in Graph 17.



Graph 17- Theories and Models present in Videos 1,2 and 3 by smoking cessation experts and media experts



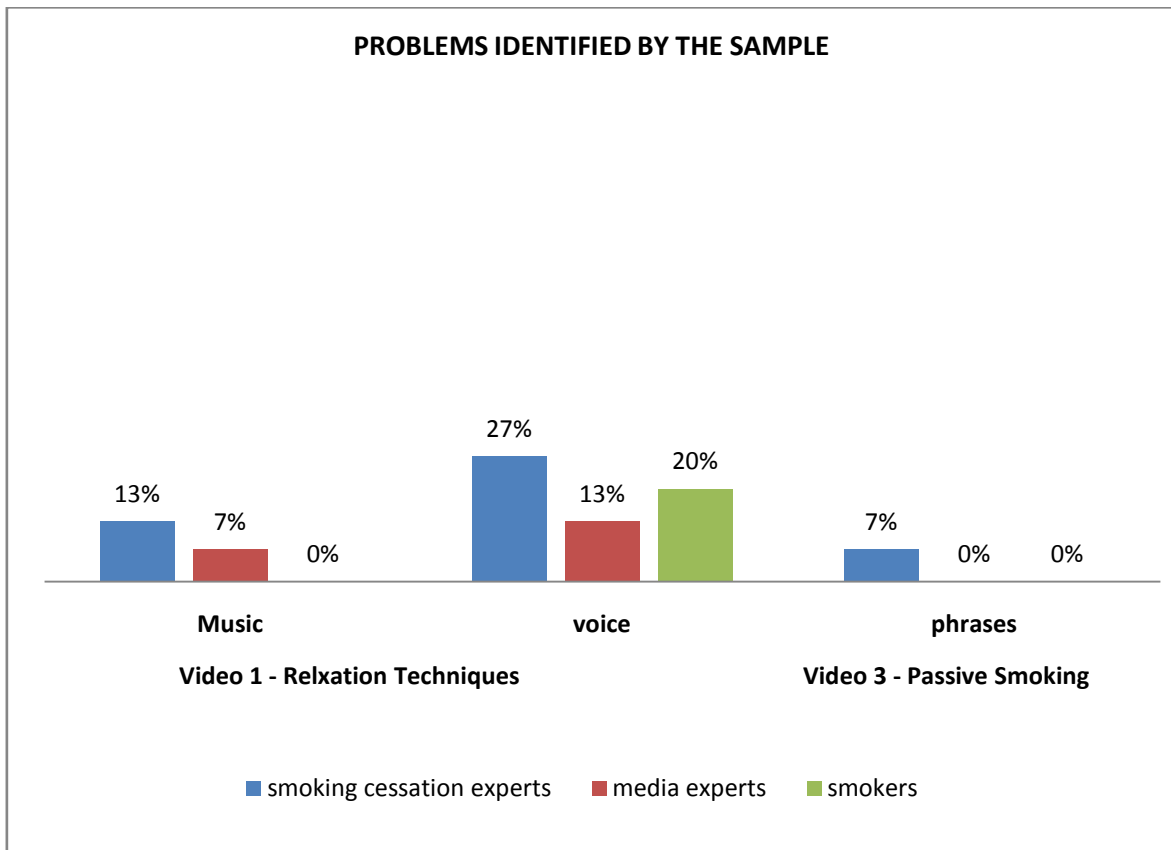
Moving on second question of interview, when asked “What do you think about the media messages included on videos?”. The experts also gave a positive feedback and the three videos were rated more than one adjective. The smoking cessation and media experts considered the videos “motivating”, “persuasive” and “convincing”. The results are presented in graph 18.



**Graph 18- Messages feedback perceptions by smoking cessation experts and media experts**

The next questions of interviews (guides 1 and 2) asked the smoking cessation and media experts and smokers. The results presented in Graph 19, represent the problems, mistakes or errors found by the experts and smokers. In the video "Relaxation Techniques", two smoking cessation and one media expert felt that music used should be changed because does not give to the patient-relaxing stimulus.

Another problem reported for smokers, smoking cessation and media experts, was the absence of voice over during the presentation of the relaxation techniques. It's observable; that smokers also criticized the Video "Passive Smoking". The main problem was the size of the sentences with passive smoking information. The smokers mentioned that the sentences were too large and ended up confusing the number of submitted information. As a result, some of the individuals did not understand the information presented and the video had to be shown a second time.



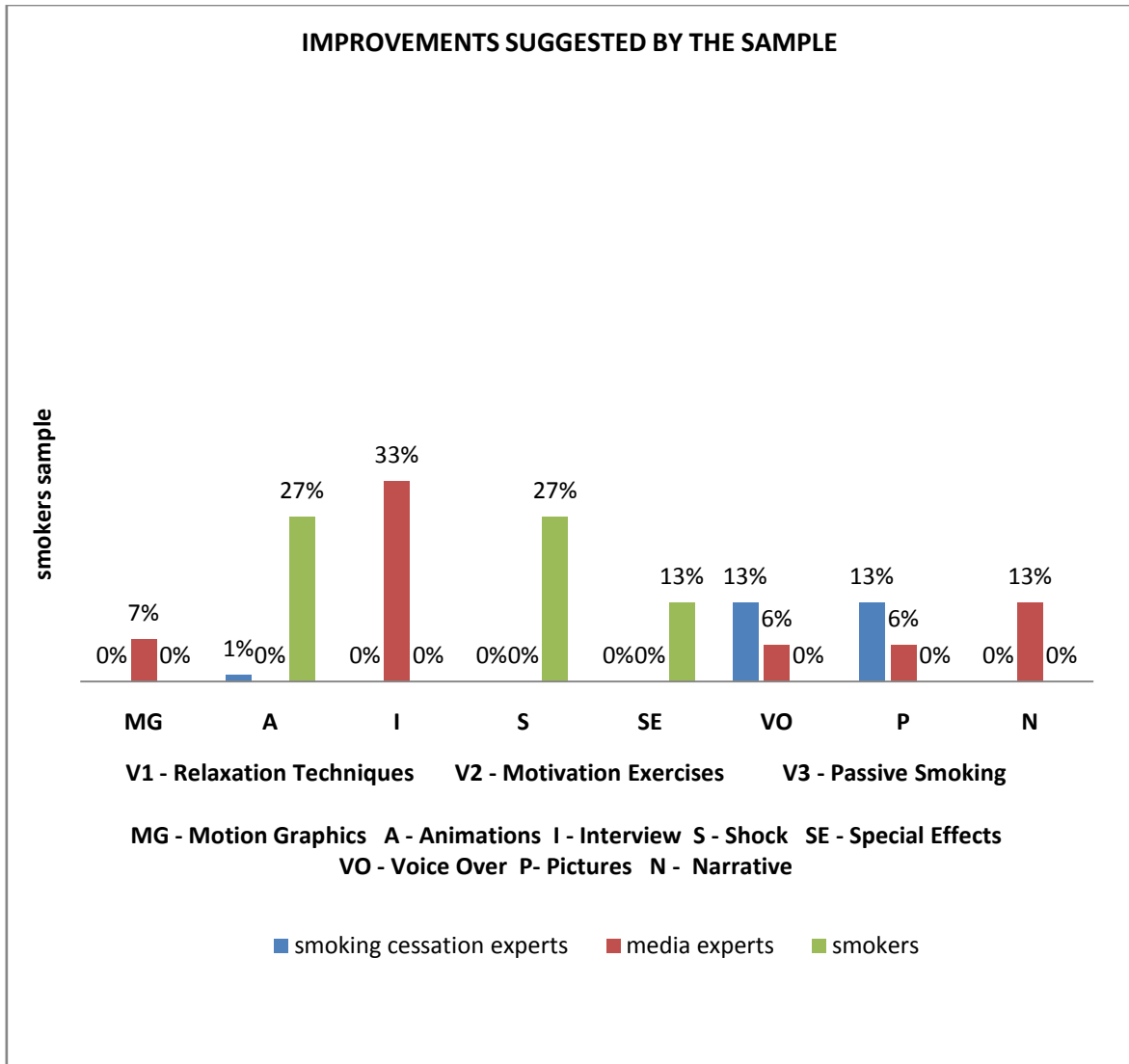
**Graph 19 - Problems identified by smokers, smoking cessation and media experts (Videos 1, 2 and 3)**

The data collected during interviews with experts and smokers also presented suggestions about what the sample should have more on videos. The fourth questions asked the samples: “What do you think that the videos “Relaxation Techniques”, “Motivation to Practice Exercises” and “Passive Smoking” should have more?”.

According to media experts the videos could show more animations and special effects. Specifically on video “Relaxation Techniques”, was suggested by the media experts the use of motion graphics for the demonstration of the techniques. It was also mentioned by the media experts to include some kind of narrative and music in video “Motivation to Practice Exercises”. One smoking cessation expert suggested the use of pictures and animations with voices over in all videos.

Two smokers also suggested that videos could have more animations and special effects. Three smokers suggested that video “Passive Smoking” could have pictures with shock value. Five of

them suggested interviews with doctors and stories of real people with problems caused by smoking in the same video. These results can be seen in Graph 20.



**Graph 20- Improvements suggested by smokers, smoking cessation experts and media experts (Videos 1, 2 and 3)**

## **7.2 Result analysis of questionnaires and interviews**

The previous section 7.2 presented the various results generated by the samples through the questionnaires and interviews. These obtained results will be analyzed and discussed. Starting with the questionnaires, the results acquired via this instrument will be the first to be analyzed, followed to interview results analysis.

### **7.2.1 Analysis of questionnaires**

#### **(A) Analysis of quantitative data results**

The questionnaires 1, 2, 3 and 4 were applied with purpose to evaluate the follow aspects: stages of behavior change (Transtheoretical Model), quality of videos (audio, image and storytelling), media messages and contribute to smoking cessation.

The analyses of the questionnaires start by issues that define the stages of behavior change (Transtheoretical Model). According to the results, participants were included on stages "Precontemplation", "Contemplation", "Preparation" and "Maintenance". In these stages, individuals are still under treatment for smoking cessation. Variations in behavior are among the non-intention to quit smoking, understanding about the problem, take action to change behavior in the near future and maintenance of behavior change for a extend period of time (Nigg & Gary, 2002).

It was observed that most individuals still on "Precontemplation" stage, (e.g. the initial step of the model). At this stage the patient still has no intention of quitting, another part of the sample, 30% of smokers already are in the Maintenance phase, (e.g. there has been a change in behavior and there are now only to give stability to maintain behavior obtained).

In this way, were concluded that the smokers presented different behaviors among the non-intention and intention to make and willingness to continue the same behavior. After identifying the stage of change behavior of the sample, as part of methodology proposed, was necessary evaluate the persuasive messages of the videos.

The results of tests performed on these indicators in videos "Relaxation Techniques" and "Motivation to Practice Exercises" demonstrated a positive feedback by the sample. One of the possible culprits for the acceptance and conviction about the messages used in these two videos would be the theme proposed for these videos.

When asked about the relaxation techniques demonstrated, the most of participants said they already knew or was using this type of technique. Observing this result, the only concern about this video would be if the video could be used as an aid to treatment or not. Again the sample responded positively to this aspect, most of participants would be completely convinced about this aspect. .

Towards the video 2 "Motivation to Practice Exercises", the sample also responded positively. The patients of this survey were also asked about their behavior and lifestyle. Most participants present changes in behavior regarding the quality of life. This was one of the aspects of the responses obtained in the level of convincing the participants about the message. The acceptance of the video as an aid to smoking cessation treatment has made the point that participants positively evaluated the quality of video, audio, image, video storytelling presented.

The third video "Passive Smoking" demonstrated regular levels of evaluation. An interesting fact about the results presented in this video 'and patients positively evaluated the video quality, as 70% of respondents to excellent. When asked if they would be convinced about the message of the video, most participants responded that not convinced. The other question was about the use of video as an aid to smoking cessation treatment, most participants also said they would not convince.

To answer this question, it is believed that one reason for the low level of acceptance and conviction of this video would be the theme of the video "Passive Smoking". To explain this assumption, assumed that the test was performed and the Greek people that according to data from WHO, `Greece and one of the countries where there are more smokers.

In Greece there are laws that prohibit people from smoking in closed environments such as bars, clubs and restaurants, but in most cases, people do not follow this law. In this way, it is believed that the sample is not convinced and neither willing to accept the problems related to passive smoking.

## **(B) Analysis of qualitative data results**

Considering the answers of smoking cessation experts, the three videos had a good evaluation. Narrative, pictures, text messages, positive examples and information were considered as differential elements on the three videos.

According to smoking cessation experts, the use of these elements on videos is an important contribution to activate people to decision to stop smoking and more physically active lifestyle as well as to prepare for a healthier life.

Regarding to efficiency of persuasive messages presented on the videos, once again, the audiovisual elements, namely, pictures, text messages and positive examples were cited as helpful for to convince and activate decision in smokers.

Comparing the use of these audiovisual elements for contribute to convince, activate and decision making in smokers, it was observed a consensus to smoking cessation experts. The experts referred that the use of the audiovisual elements would be a strategy successful with smokers. Once again, the combination of the positive examples, text messages, narrative and pictures were evaluated in a good way to promote behavior change.

When asked if the videos contribute to the efficiency of the Smoking Cessation Program, the experts said that it would be positive to include the use of videos during the sessions. Both smoking cessation experts referred that a combination among different audiovisual elements (the elements previously mentioned) can be helpful for the treatment sessions.

Moving on the analysis of collected data by media experts will be presented the aspects of audiovisual components evaluated in the videos. About the visuals plans used on the videos, the experts considered excellent. The strategies used for the conceptualization of plans such as close ups, medium shots were evaluated positively by the experts for the transmission of the message used in the videos. The narrative structure of the videos also evaluated positively.

The use of the script with stories similar to the daily lives of ordinary people was considered an excellent instrument for transmitting the message you choose to persuasion. And great way of persuasion and conviction about the message conveyed to smokers. In making an overall assessment of the videos, the experts responded positively to all aspects considered. The videos were considered of excellent quality to meet the proposed target for this study.

### **7.2.2 Analysis of interviews (quantitative and qualitative data results)**

Considering the analysis of interviews with smoking cessation experts, all of them use the theories of learning and behavior therapy in treatment programs that help smokers to quit. The same strategy used in treatment programs was used in the design of video, through the inclusion of theories and models of behavior in the conception of the message offered in three videos.

Inquired about the identification of these theories and models of behavior change in the videos, the experts were able to identify the same theories and models used by them in smoking cessation program. They found interesting and relevant to this study.

There was a preponderance of the Transtheoretical Model and the Persuasion Theory in the videos. Asked if the videos were motivating, convincing and persuading the experts answered “Yes”. Most of them believe that the media messages present on three videos promote persuasion and can get good levels of motivation in smokers. In this sense, the use of videos can be helpful as an aid to convince and promote a behavior change in individuals with tobacco addiction.

During the conceptualization of the process of data collection were also considered the problems and suggestions for the entire sample to know what the videos should have more. All aspects indicated by the sample were considered interesting in this process. In video “Relaxation Techniques”, the whole sample felt that the music chosen do not encourage the patient to relax. In fact, the music used in this video was chosen for another aspect. The song was used to give rhythm to the narrative of the video that is, showing the stress and routine of the central character. Despite the music to change during the second part of the video, (i.e. the presentation techniques), the sample considered the sound tracks insufficient and disappointing to promote relaxation.

Another problem identified by the sample was the absence of a voice over narration with the techniques presented. The use of text with the same description was insufficient. About this issue, the problem was due to lack of technical resources for recording and editing this video, since there was a recording studio available and the quality of the microphones were not considered good.

The media experts criticized the second video “Motivation to Practice Exercises”. The main problem identified was related to the size of the phrases used for the transmission of information reported in this video.

The criterion for the size of the sentences was due to the amount of information that should be shown in this video, as statistical data, for example. In fact, the relationship between the amount of information and length of frames is unsatisfactory for transmitting the desired message. The sample must watch the same video two times so that the information had been fixed.

After the analysis of videos, about the results of the suggestions were also considered. It was suggested the use of special effects, interviews, images with higher shock. In one video, for example, multimedia experts suggested the use of one type of special effect called motion graphics. In fact, this type of effect's is widely used as a technique to facilitate understanding, presentation and explanation on series and movies. Use of this would be a technical resource to facilitate the explanations of the relaxation techniques shown in this video.

Along with this technical resource, it was suggested to use other types of music to get the rhythm needed to demonstration techniques. The smoking cessation experts suggested the use of animation, another technical resource used in audiovisual products, in every video.

According to these experts, the animations would make the videos more interesting and attractive to patients. It was suggested the use of voice over narration as a way to facilitate the understanding of the videos.

Smokers also made the same suggestions, specifically about the inclusion of animations and special effects in all the videos. It was suggested the use of figures with shocking pictures and interviews with patients with real stories to give more shock transmitted information.



# **PART THREE**

## **STUDY CONCLUSIONS**

# 8. FINAL COMMENTS

This chapter will present the final conclusions of the empirical study accomplished considering the analysis of the achieved results.

## 8.1 Confrontation of the objectives and hypothesis with the results

The research was based on three objectives:

- (1) Research the use of learning theories in designing of videos for Smoking Cessation Program;
- (2) Understand how model of behavior change Transtheoretical Model, Persuasion Theory and Elaboration Likelihood Model, can be include for conceptualization of audiovisual materials;
- (3) Perceive the potential of use of audiovisual elements on treatment sessions for therapeutical purposes.

And, the hypotheses were:

- (1) The learning theories (Behaviourism, Construtivism, Cognitivism) and behavior model (Transtheoretical Model) combined to Persuasion Theory and Elaboration Likelihood Model can be include in the conceptualization of videos for a smoking cessation program;
- (2) The models are chosen to promote behavior change and become relevant to the conceptualization of the videos. On videos, the union of the elements (the process of learning, participation, motivation and persuasive messages) present in these models and audiovisual elements provide immediate feedback with smokers; and
- (3) The visual language and narrative, as well as technical dimensions (audio and video) are used as a stimulus to decode the message (persuasion theory) present in audiovisual products.

Considering the collected data presented and analyzed on chapter 7, the results obtained via both questionnaires and interviews can respond to the objectives and hypothesis referred. It is possible that audiovisual products (in video formats), can be used as alternative materials on smoking cessation treatments.

Regarding to research of theoretical approach relevant in designing of videos for Smoking Cessation Program, the results demonstrated that the learning theories (Behaviorism, Constructivism, Cognitivism) used during of the conceptualization of the videos were identified and considered adequate by smoking cessation experts.

The models behind the videos, Transtheoretical and Elaboration Likelihood, also were identified through of the usage of strategies according to the model step on which the smoker was inserted.

The second objective implicated was understands how these theories and models of behavior change can be included on the conceptualization of audiovisual materials. The results demonstrated that the union of process of learning, participation, motivation and persuasive messages from learning theory, models of behavior change and persuasion theory can provide a positive feedback with smokers.

The model of behavior change Transtheoretical Model is important in mediating and perception of the prevalence of tobacco addiction and may reinforce decision-making providing insights about health risks of smoking.

As seen in sections 4.1 and 4.2 the Persuasion theory and Elaboration Likelihood Model applied through the exposure to persuasive messages about problems of smoking on videos also was referred provides direct reinforcement for not smoking and can influence behavior change. Hence, learning and persuasion theories and models of behavior change associated to the use of the audiovisual products as an alternative material was adequate and necessary.

The third objective of this research was to perceive the potential of audiovisual elements (visual language, narrative and technical elements) as a stimulus to decode the persuasive messages in treatment sessions.

According with the results presented the addition of text messages combined to attractive pictures was favorable to increase motivation levels and contributed to efficiency of videos messages. Also, the positive answers during the evaluation process demonstrated that the use of

simple narrative on conceptualization of the videos contributed to immediate feedback and stimulus to decode the message.

The usage of positive messages for behavior change promotions was extremely necessary and can consider a key component for the success of the videos. These messages presented through visual language, narrative and technical elements can promote interpersonal discussion about smoking, which in turn affects ultimate impact on attitudes and behavior contributing to smoking cessation treatment. With their appeal to smokers the audiovisual elements provide a particularly effective way to deliver antismoking messages.

In conclusion, the theoretical approach allied to audiovisual elements used in this project, provides a vast quantity of results related to behavior change purposes when included in smoking cessation treatments.

The combination of narrative, visual images, text messages, pictures, examples (positive view of nonsmoking) and sounds used in persuasion and motivation messages is a helpful resource for convince and activate decision in smokers. Therefore, via the analysis of audiovisual elements for treatment purposes, translates in the combination of these elements used for promote behavioral changes.

## 8.2 Limitations and problems

The development of this research had some limitations and problems. One of the limitations referred was the technological limitation, although this scenario was predicted, the lack of audiovisual professional equipments and appropriate staff influenced the development of the research.

During the recording of the videos, none of actors spoke English as main language, which turned communications a bit difficult. As result some of actors presented some problems in understanding the screenplays.

In addition, an unprofessional camera was used for to do a preliminary test recording. In the preliminary evaluation of this video material, the team members considered that had a poor quality of material and the structure of the recordings needed a full transformation in all aspects; equipment and location.

The absence of recording studio had a significant impact for the development of the video "Relaxation Techniques" affecting the quality of this video. This provoked a deep re-structure influenced negatively the amount of time dedicated to postproduction process. Also, the complexity of working methods resulted in a more complicated record of videos influencing the development of the project.

However, to resolve these technical problems, the final choice led to make a new version of video Relaxation Techniques, with voice over and some minor changes. What concerns to technical limitations of this video, the principal problem found was the absence of voice over (VO).

Quickly recapturing, the Video 1 "Relaxation Techniques" was conceptualized to attend recommendations on treatment sessions of Smoking Cessation Program (University of Thessaly, Greece). The video showed the relaxation techniques (used on treatment sessions) through shorts text and provides a demonstration of the corporal exercises by a character. The fact of absence of voice over (VO) to explain the techniques turned communication of message a bit difficult. During the video evaluation process some of smokers and experts referred that a negative point and should be taken into account.

As an alternative solution for attends the recommendations of the Program, a second version of this video was suggested. On this version was supposed to have relaxation sound tracks and narration

explaining the techniques presented. Considering the inclusion of these elements, the second version of the video “Relaxation Techniques” was developed. Two changes were made: i) a voice over (VO) was inserted to turn the video more effective as audiovisual support for treatment sessions, ii) new sounds tracks (meditation songs and relaxation) were selected and inserted to provide the presentation of techniques more attractive for audience (smokers).

The process of voice recording was made at University of Aveiro, Portugal. During the recording were used professional equipments and staff (microphones, studio and technical). All the material was assembled and pos-produced using Pro Tools 9.

### 8.3 Future research

Based on the previous discussion, some suggestions to continue this project were highlighted in order to encourage further research of the issues raised. In this way, for development of audiovisual products with a focus in therapeutical treatments some aspects would be taken into consideration. Therefore, many possibilities for future work can be explored.

The development of documentaries with real histories and shock pictures would contribute for the discussion of the tobacco addiction problem. Also, other kinds of narratives with a different mode media message could have produce completely different results on the video. Considering this perspective, would be possible to develop a video with large length, examining the effects of more positive view of nonsmoking and more negative view of smoking.

Another possibility for future researches could be the use of animation and technical resource on videos for therapeutical purposes. The combination of animation images in 2D or 3D and persuasive messages, for example, advocating protection for second hand smokers can explore this problem. Regarding to technical resources, the development of videos with special effects like motion graphics and special sounds tracks also can be helpful for the visual plans increasing the impact of narrative.

Also, it's interesting to test the ability of audiovisual elements in multimedia applications. Some of multimedia applications previously presented in section 4.3.1 ("Scenesmoking.org", for example) already use the combination of audiovisual products and interactive elements as strategy to turn the software's more dynamic and motivating. However, the inclusion of interviews, animations, documentaries and short videos, for example, are some of other alternatives that could be used to broaden and extend the impact of the multimedia applications.

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# 10. ANNEXES

## Annexes 1 – Questionnaire 1 (sample description)

Male  Female  Age \_\_\_\_\_ Sessions in intervention \_\_\_\_\_

Did you smoke yesterday? Yes  No

If Yes, how many cigarettes? \_\_\_\_\_ If No, When was the last time you smoke?

\_\_\_\_\_

For how long have you been a smoker? \_\_\_\_\_

**Please note  the most representative phrase for you:**

- I am smoking and I am not thinking to give up smoking at least the next 6 months
- I am smoking but I am thinking to give up smoking within the next month
- I am smoking but the last 6 months I am trying to give up smoking
- I was a smoker in the past but I am not smoking anymore (for less than 6 months)
- I was a smoker in the past but I am not smoking anymore (for more than 6 months)

**Please note  the most representative phrase for you:**

- I do not exercise and I am not thinking to start exercising the next 6 months
- I do not exercise but I am thinking to start exercising within the next month
- I do not exercise systematically but the last 6 months I have tried to exercise sometimes
- I do exercise systematically but for less than 6 months
- I do exercise systematically for more than 6 months

## Annexes 2 – Questionnaire 2 (Video 1 Relaxation Techniques)

### Video 1 Relaxation Techniques

1. Have you ever used relaxation or breathing techniques as an aid to your effort to give up smoking?

Yes  No

2. Were these techniques helpful in your effort to give up smoking?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

Show the 1st video

3. Did you like the quality of this video?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

Image quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>
Audio quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>
Storytelling quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>

4. Should this video convince you to use these techniques as an aid to give up smoking and maintain this behavior?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

5. Have you ever used the relaxation techniques presented in this video before?

Yes  No

6. Is this video helpful for you in applying these techniques?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

## Annexes 3 – Questionnaire 3 (Video 2 Motivation to Practice Exercises)

### Video 2 Motivation to Practice Exercises

1. Have you ever tried to shift to a healthier and more physically active lifestyle as an aid to your effort to give up smoking? Yes  No

2. Did it had any help you in your effort to give up smoking?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

Show the 2nd video

3. Did you like the quality (message) of this video?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

Image quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>
Audio quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>
Storytelling quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>

4. Should this video convince you to adopt a healthier and more physically active lifestyle?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

5. Have you ever find the information presented in this video before in another context?

Yes  No

6. Is this video helpful for you in your effort to change lifestyle?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

## Annexes 4 – Questionnaire 4 (Video Passive Smoking)

### Video 3 Passive Smoking

1. Have you ever concerned about the problems that your smoke may cause to non-smokers?

Yes  No

2. Did it affect your effort to give up smoking?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

Show the 3rd video

3. Did you like the quality of this video?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

Image quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>
Audio quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>
Storytelling quality	Definitely Yes <input type="checkbox"/>	Maybe Yes <input type="checkbox"/>	Maybe No <input type="checkbox"/>	Definitely No <input type="checkbox"/>

4. Should this video convince you to stop causing problems to no smokers?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

5. Have you ever heard the information presented in this video before?

Yes  No

6. Is this video helpful for you in your effort to give up smoking and maintain this behavior?

Definitely Yes  Maybe Yes  Maybe No  Definitely No

## Annexes 5 – Questionnaire 5 ( Video 1 Relaxation Techniques)

### Video 1 Relaxation techniques

1. Did you like the quality of this video?

Yes  No

Please tell us, what did you like more:

.....  
.....

Please tell us, what you didn't like most:

.....  
.....

2. Do you think this video might activate people to fulfill their decision to stop smoking?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

3. This video was designed to convince the smoker to use relaxation techniques in order to avoid smoking. Does it achieve this goal?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

4. Do you think this video might contribute to the efficiency of your smoking cessation program?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....



## Annexes 6 – Questionnaire 6 (Video 2 Motivation to Practice Exercises)

### Video 2 Motivation to Practice Exercises

1. Did you like the quality of this video?

Yes  No

Please tell us, what did you like more:

.....  
.....  
.....

Please tell us, what did you didn't like most:

.....  
.....  
.....

2. Do you think this video might help people to prepare themselves for a more physically active lifestyle?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

3. This video was designed to convince the smoker to adopt healthier and more physically active lifestyle patterns. Does it achieve this goal?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

4. Do you think this video might contribute to the efficiency of your smoking cessation program?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

## Annexes 7 – Questionnaire 7 (Video 3 Passive Smoking)

### Video 3 Passive Smoking

3 Did you like the quality of this video?

Yes  No

Please tell us, what did you like more:

.....  
.....  
.....

Please tell us, what did you didn't like most:

.....  
.....  
.....

4 Do you think this video might help people to prepare themselves for a healthier, smoke - free life?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

5 This video was designed to convince the smoker that his behavior causes serious health problems to people that choose a healthier life style. Does it achieve this goal?

Yes  No

If yes, please tell us why do you think so:

.....  
.....  
.....

If no, please tell us why do you think so:

.....  
.....  
.....

6 Do you think this video might contribute to the efficiency of your smoking cessation program?

Yes  No

If yes, please tell us why do you think so:

.....  
.....

If no, please tell us why do you think so:

.....  
.....

**Annexes 8 – Questionnaire 8 (Video 1, 2 and 3)**

A/A \_\_\_\_\_

7. Did you like the videos?

Yes  No

Please tell us, what did you like more:

.....  
.....  
.....

Please tell us, what did you didn't like most:

.....  
.....  
.....

8. Did you like the Visual Plans?

Yes  No

If yes, please tell us why do you think so:

.....  
.....  
.....

If no, please tell us why do you think so:

.....  
.....  
.....

9. Did you like the Narrative Structure?

Yes  No

If yes, please tell us why do you think so:

.....  
.....  
.....

If no, please tell us why do you think so:

.....  
.....  
.....

10. Did you like the Technique Dimensions?

Yes  No

If yes, please tell us why do you think so:

.....  
.....  
.....

If no, please tell us why do you think so:

.....  
.....  
.....

## **Annexes 9 – Interviews guide for smoking cessation and media experts in empirical study**

Name:

Specialization:

1-“Are you familiar with learning and persuasion theories and models of behavior change, namely, Transtheoretical and Elaboration Likelihood Models, included on conceptualization of the three videos?”.

2- What do you think about the media messages included on videos?

3- Did you find errors, mistakes or problems in the videos? If yes, please, tell us what problems you found.

4 - What do you think that the videos Relaxation Techniques, Motivation to Practice Exercises and Passive Smoking should have more?

## **Annexes 10 – Interviews guide for smokers in empirical study**

Name:

1 - What do you think that the videos Relaxation Techniques, Motivation to Practice Exercises and Passive Smoking should have more?

2 - Did you find errors, mistakes or problems in the videos? If yes, please, tell us what problems you found.

## **Annexes 11 – Script used in Video1**

### **Video RELAXATION TECHNIQUES**

#### **OPENING TITLES**

**“RELAXATION TECHNIQUES”**

#### **FADE IN – INTO OFFICE**

#### **WIDE SHOT (SLOWLY) – SHOW THE WOMAN**

The woman gets office very fast. She opens the door and seat in your chair. After that, she opens your computer.

#### **MASTER SHOT (CUT FRAME)**

She looks be stressed and anxious and at the same time, she speaks by phone, write and check her emails.

#### **CLOSE UP (WOMAN’S FACE AND CIGARETTE)**

The woman appears much stressed and confuse. She thinks for a moment and takes a cigarette. The camera makes a close up in her face and cigarette at the same time.

#### **CUT FRAME AND MEDIUM PLAN (IN FRONT OF TABLE)**

She gives up and takes a music phones and starts to relaxation techniques.

#### **SERIE OF PLANS (MEDIUM PLAN, CLOSE UPS, MASTER SHOT)**

The woman continues seating in her and makes a series of techniques. The techniques will present through medium plan, close ups and master shot.

#### **(INSERT TEXT – POST PRODUCTION)**

A set of text messages and pictures are inserted during the demonstration of techniques (POST PRODUCTION RESOURCE).

#### **BACK SCREEN/FADE OUT**

SHOW SLOGAN

## **Annexes 12 – Script used in Video2**

### **Video MOTIVATION TO PRACTICE EXERCISES**

#### **OPENING TITLES**

**“MOTIVATION TO PRACTICE EXERCISES”**

#### **FADE IN**

#### **WIDE SHOT (INTO OFFICE)**

A woman gets in the office very fast. She looks stressed and anxious. She seat in her chair.

#### **MEDIUM SHOT (CONTINUE INTO OFFICE)**

She takes a glass of water and thinks.

#### **EXT. MORNING - FULL SHOT (PARKING)**

She walks and takes a bike. She leaves and looks better.

#### **CUT FRAME**

#### **EXT. MORNING - FULL SHOT AND MEDIUN SHOT (STREET)**

A man waits the bus in a bus stop. He looks stressed.... He waits for a short time and gives up.

#### **C OVER SHOT (STREET)**

The man appears in his bike and looks better....

#### **CUT FRAME**

#### **WIDE SHOT (INTO BUILDING)**

The man waits the elevator for few minutes. He gives up and go to next floor by stairs.

#### **CUT FRAME**

#### **EXT. MORNING - Full shot, Medium shot, close ups (PUBLIC PARK)**

The girl practice exercises ... She runs around the park, walks....

#### **BACK SCREEN/INSERT SLONG (POST PRODUCTION)**

**FADE OUT.**

## **Annexes 13 – Script used in Video3**

### **Video PASSIVE SMOKING**

**FAD IN OPENING TITLES**

**“PASSIVE SMOKING”**

**OFF (SERIES OF VOICES OFF AND MUSIC – SUGGESTION MEETING GUYS INTO THE BAR)**

**“Hi baby!” “Do you like this song?” “Nice to see you!” “Garcon! Coffee!!!” “hi!! How are you” hi guys!!hi!!**

**FADE IN - INTO BAR**

**OPEN CAM (SLOWLY) – SHOW THE MEETING**

Five people talking in a bar. Drink, listen music, smile... They talk happily drink. They are celebration. The camera shows each. The movement for a very young boy and he smokes a cigarette

**CLOSE THE YOUNG MAN**

He smokes many cigarettes and mirrors smoke in every room. The friends are still talking happily ...

**SPLIT SCREEN (2 PARTS)**

**SERIES OF CLOSEUPS (HANDS, MOUTH, FACE, CIGARRETE...)**

**SPLIT SCREEN (4 PARTS)**

**Now show the boy smoking and the smoke going up to friends.**

**SERIE OF CLOSEUPS (YOUNG MAN SMOKING, TWO GUYS TALKING, ONE PERSON DRINKING, ANOTHER PERSON HAPPY)**

**(OFF VOICE) “Would you believe that cigarettes includes carbon monoxide which during active and passive smoking replaces the oxygen in blood which means less oxygen for energy ?”**

**SPLIT SCREEN (6 PARTS)**

**SERIE OF CLOSEUPS(YOUNG MAN SMOKING, GUYS TALKING, PEOPLE DRINKING, PEOPLE SMILING, HAPPY)**



**(OFF VOICE) "Would you believe that exposure to passive smoking increased prevalence of chronic obstructive pulmonary and respiratory symptoms? That means not enough air for your lungs."**

**SPLIT SCREEN (8 PARTS)**

**SERIE OF CLOSEUPS (VERY FAST NOW)(YOUNG MAN SMOKING,CIGARRETE,SMOKE,MUSIC,DRINKS,GUYS TALKING, PEOPLE DRINKING, PEOPLE SMILING, HAPPY,TALKING...)**

**(OFF VOICE):"Would you believe that nicotine is three times more dangerous from arsenic which is one of the most dangerous poisons for the human? Nicotine is a drug! Do you want nicotine in your blood?"**

**(PAUSE)STOP MUSIC**

**BACK NORMAL SCREEN**

OPEN CAN – INTO BAR: Flash back to the first scene, when they were together at the bar chatting and smiling. Shows the young man smoking.

The friend get the cigarette from the mouth of a young boy and says "I DONT WANT"!

FADE OUT: OPEN CREDITS AND **OFF VOICE**

**"SMOKING... THIS IS YOUR CHOISE... NOT MY!"**

**FADE OUT.**

