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SOCIAL MARKETING - AN APPROACH TO IMPROVE BYSTANDER CPR?

Master Thesis

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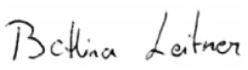

II. ACKNOWLEDGMENT

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VI. Abbreviations

AED	Automatic external defibrillator
AHA	American heart association
AMS	Achievement motive scale
CD	Cardiovascular disease
CM	Commercial marketing
CPR	Cardiopulmonary resuscitation
EMS	Emergency medical service
e.g.	for example
IHCA	In-hospital cardiac arrest
NCD	Non-communicable disease
OHCA	Out of hospital cardiac arrest
OH-SCA	Out of hospital sudden cardiac arrest
SCA	Sudden cardiac arrest
SM	Social Marketing
PSE	Picture story exercise
PVQ	Personal values questionnaire
TRA	Theory of reasoned action
TPB	Theory of planned behavior
MODE	Motivation and opportunity as determinants

VII. ABSTRACT

Motivation

Out of hospital cardiac arrests (OHCAs) is a major health burden in the developed world. Its consequences could be prevented easily without expensive investments by performing cardiopulmonary resuscitation (CPR). Even though, the community is aware of the importance bystander CPR remains low. The aim of this study is to analyze if social marketing is an appropriate approach to facilitate its performance and reduce unnecessary deaths.

Methodology

The Austrian population was chosen to generate an understanding of the main behavior determinants regarding CPR performance. A self-administrated online questionnaire was designed to ask about their knowledge, beliefs, traits, and motives that might influence their decision-making process and motivations to learn CPR.

Most important findings

The questionnaire was answered by 212 Austrians. The majority of the participants practiced CPR at least once. However, only approximately half feel confident enough to perform it in case of an emergency. Regular training strengthens the accessibility to the conscious mind. This increases the likelihood to act when witnessing a sudden cardiac arrest. The key to facilitating training is to ensure that the individuals have the right motivation and opportunity to practice. Social marketing can help to offer the right incentives to create an immediate benefit when participating in CPR training. For the establishment of a successful intervention in Austria, a transparent system with integration of all relevant stakeholders is fundamental.

1 INTRODUCTION

One of the major healthcare challenges of the 21st century is noncommunicable diseases (WHO 2014; Griebler et al. 2015). Diabetes, chronic respiratory diseases, cancer and cardiovascular diseases are the most common NCDs and are responsible for more than 65 % of the worlds death in 2002 (WHO 2014). Each year more than 17 million people die because of consequences of cardiovascular diseases (CD). CDs can be ischemic heart diseases, cerebrovascular diseases or peripheral vascular diseases (Griebler et al. 2015). Key risk factors for CDs and a possible cardiac arrest as its consequence are smoking, high blood pressure, diabetes, and overweight (Markenson et al. 2016). The direct and indirect costs due to CDs in Europe amount to 169 million euros per year. In the USA coronary heart diseases caused one out of every six deaths, about 63.500 Americans have a new coronary attack per year and 280.000 suffer from a return attack. The total direct and indirect costs amount at 312,6 billion USD (Go et al. 2013).

> *"Out-of-hospital cardiac arrest (OHCA) is a major health problem in Europe and in the United States. The numbers of patients who have OHCA annually in these two parts of the world have traditionally been reported to be 275,000 and 420,000 respectively. This corresponds with an incidence rate of approximately 38.0–55.0 all-rhythm OHCAs per 100,000 person-years with resuscitation attempted by Emergency Medical Services (EMS)." (Gräsner et al. 2016)*

The successful rescue of patients experiencing an OHCA is a long-term public health issue in most jurisdictions in the majority of countries even though consequences could easily be avoided by performing first aid. (Markenson et al. 2016; Yasunaga et al. 2010). First aid is defined as the instant help to a sick or injured individual until professional help is available. Further, it comprises not only physical assistance but also, psychological support for victims who were, for instance, living through a traumatic event. It aims to reduce suffering and promote recovery. *"First aid interventions seek to preserve life, alleviate suffering, prevent further illness or injury and promote recovery" (Markenson et al. 2016, p.3).* The Utstein formula (compare figure 1) of survival illustrates a guideline indicating how to encourage taking up pro-active be-

havior. It is based on three factors to increase survival: (1) medical science, (2) educational efficiency and (3) local implementation as a foundation to establish interventions. Key theories that need to be considered to promote pro-social behavior include

Figure 1. Utstein formula for survival (Markenson et al. 2016 p. 26)

the bystander effect, the integrative model of behavior prediction (to understand individual's response behavior), transtheoretical model of behavior change (a guideline to support behavior change), feedback and reflection. First aid education can happen using various means like online courses, classes or public health campaigns that consider possible demographic and cultural differences. In case of a cardiac arrest, first aid means performing immediate cardiopulmonary resuscitation (CPR) rises the chance of survival. Even though society is aware that CPR makes a difference willingness of bystanders to perform CPR remains low in most societies. This is due to various reasons occurring during the decision-making process like fear of causing harm, the complexity of the task or simply panic (Markenson et al. 2016). Therefore, it is essential to understand the societies wants and needs, what thrives their decision-making process, their attitudes/beliefs towards bystander CPR to increase their willingness to help and motivate them to act. The training of the general population could be done by using the internet to teach or training in schools to improve the quality of CPR, also, knowing that they receive immediate help through an emergency dispatcher could increase confidence and therefore, CPR performance itself (Resuscitation Academy 2014; Markenson et al. 2016).

To increase the rate of bystander CPR and decrease unnecessary death due to OHCAs different actions have been taken in different communities. The WHO, for instance, introduced the program "Kids save lives". It is a worldwide initiative that focuses on training school children to perform CPR. As the earlier CPR is learned and trained the more sustainable the innovation will be (van Aken and Böttiger 2015b). In Singapore, the "SAVE-A-LIFE" initiative was introduced in 2015. This program consists of a software solution which is called "myResponder". It is an app designed to notify first responders of cardiac arrests within 400 meters. The application also includes an emergency call option to immediately call the emergency and automatically send the current geographical location (Singapore civil defense force 2015). In

Austria, different health promotion campaigns to educate and inform society about the importance of CPR have been implemented. One of the most recent attempts is called “Schock fürs Herzilein” (“shock for the heart”). It was initiated in 2016 to inform about the importance of CPR and use of defibrillation. In addition, “Defi-Säulen” (stations for public defibrillators) were installed in the city of Vienna. These defibrillators can be used in case of an emergency similar to a fire extinguisher. As soon as someone takes the defibrillator an emergency call is made (Verein Puls 2016).

Summing up, previous works show that even though many people are aware that CPR saves lives, society is not prepared well enough to act in case of emergency. Worldwide different measures have been taken but death due to OHCAs is still a major problem. It is important to keep searching for ways to increase bystander CPR performance as it is a necessary determinant for the survival of an SCA. More patients of an OHCA need to receive the correct treatment and it must be performed effectively regardless of who is performing. It is an inexpensive and available treatment with the means to save lives. Consequently, the number of citizens trained in CPR has to grow and the quality of the performance improved (Abella et al. 2008). Future promotion of first aid and CPR performance needs to be developed carefully, considering, on the one hand, all the stakeholders and on the other hand individual behavior to promote voluntary change in behavior. Planning such a campaign based on the principles of social marketing could be a successful way to increase pro-social behavior sustainably. As social marketing (SM) is based on the principles of customer orientation and thrives for a solution that increases the benefits for all stakeholders using methods of commercial marketing to promote a voluntary change of behavior (Grier and Byrant 2005).

The goal of this master thesis is to examine if social marketing is an effective tool to inform, educate and train society to perform CPR. The research will discuss what benefits can be created by using social marketing, stress the importance of high-quality CPR training and performance, explain the behavioural determinants that create barriers to CPR participation and finally recommends how social marketing could help to create a community that is actively willing to train and perform basic life support in order to reduce death to out of hospital cardiac arrests.

2 Review of Literature

In order to develop a deeper understanding of the topics, a detailed literature research was conducted. The relevant literature contents included literature on social marketing, cardiac arrest, cardiopulmonary resuscitation and behavior determinants. The books, articles, and surveys were collected using the databases of Pubmed, Emerald Insight, Elsevier, Springer Link and Google Scholar. Additional data was gathered from the databases of the OECD, WHO, national ministries of health and organizations for improving public health.

2.1 Social Marketing

Societies are always confronted with various problems as hunger, poverty, crime, diseases or in the developed countries road rage, child pornography or drunk driving. However, they are also seeking solutions to overcome these challenges and improve their lives. Moreover, communities want to prevent people from developing certain behavior, like exploitation of women, teenagers to smoke, businesspeople to act unethically or journalists to support fake news. The broad concept of promoting or preventing behavior change is social marketing (Andreasen 2006). Social marketing uses traditional marketing principles and techniques to promote voluntary change in behavior. It seeks to develop integrative concepts to change the behavior of individuals for a greater social good. Additionally, it does not focus on the product/service but on people, their desires, their lifestyle, their aspirations and respects their freedom of choice (Lefebvre 2011; Grier and Byrant 2005b; Jeff French 2017).

> *"Social Marketing practice is guided by ethical principles. Social Marketing seeks to integrate research, best practice, theory, audience and partnership insight, to inform the delivery of competition sensitive and segmented social change programs that are effective, efficient, equitable and sustainable." (Jeff French 2017, Introduction.)*

Social change starts with an individual, or many individuals to bring attention to a certain topic. It is people who are responsible for making change happen or prevent change from happening. In all the stages of social changes, it is necessary to motivate and empower society to make a difference. Social marketing has the means to create an environment to enable this change and influence behavior in the right direction. Of course, there are many different techniques of how behavior can be shaped such as education, law, lobbying or personal persuasion. However, social marketing can offer

more flexible ways and concepts, as it can be applied everywhere, were a target audience and a behavior that needs to be changed is present (Andreasen 2006). It can be used for all kinds of health-related behaviors, environmental issues, community involvement, financial behavior as well as to prevent injuries (Lee and Kotler 2011).

This chapter provides an overview of the most important concepts of SM, the planning, implementation, and evaluation process and addresses ethical dilemmas arising with it.

2.1.1 Definition

The concept of social marketing to influence behavior was already used for the prohibition of child labor, recruitment of women or even freeing of slaves. Philip Kotler and Gerald Zaltman first used the term in the 1970s as an approach that uses marketing principles to advance social benefits. Later, more researchers saw the potential of SM. In the 1980s organizations including the World Bank, World Health Organisation or Centres for Disease Control started using and promoting SM to reach their goals. With the rising popularity academic programs were established and the first world social marketing conferences took place (Lee and Kotler 2011).

Despite these efforts, the term itself is still misunderstood and confused with others like socialism, social media, sales or behavioral economics. Also, it is sometimes misinterpreted as a tool that is tied to the development and promotion of distribution systems of products or services benefiting society (Lefebvre 2011). Hence, it is important to create a clear definition and clarify how it differs from e.g. commercial marketing, non-profit marketing or public education. Over the decade's many different approaches on how to define SM have been developed. Still, all have some common elements. It is certain that it involves influencing the decision-making process to change behavior, utilizing a systematic planning process, applying basic marketing principles and techniques, focuses on priority target audience segments and delivers a positive outcome for society (Lee and Kotler 2011). Lee, Rotschild, and Smith (2011) e.g. developed a definition summarizing the essential aspects.

> *“Social Marketing is a process that uses marketing principles and techniques to influence target audience behaviors that will benefit society as well as the individual. This strategically oriented discipline*

> *relies on creating, communicating, delivering, and exchanging offerings that have positive value for individuals, clients, partners and society at large." (Lee and Kotler 2011, p. 7)*

More detailed the focus on behavior initiates that the objective is to influence the desired behavior. Using SM, the aim is either to want the target group to accept the new behavior, reject undesirable behavior, modify current behavior or dismiss an undesirable behavior. Whereby it could refer to either establishing a habit or only affecting a single decision. The basis is to increase knowledge, but it is measured to what extent the change is adopted. The difficulty is that instead of "punishing bad behavior" it seeks to "reward good ones". Additionally, a direct benefit or immediate response cannot be guaranteed. Hence, the strategic planning process is essential. One that centers the wants, needs, and preferences of the target population and includes deliverable and contemporary benefits. A systematic planning process in marketing is defined as *"the activity, set of institutions, and processes for creating, communication, delivering, and exchanging offerings that have a value for customers, clients, partners, and society at large" (Lee and Kotler 2011, p.8).* It relies on the fundamental principle of the application of customer orientation and will be explained more detailed in the next part (Lee and Kotler 2011).

The SM approach relies on the basic principles of the exchange theory, the audience benefit, the target behavior and the marketing mix. The exchange theory suggests that "*individuals or groups have resources that they want to exchange for perceived benefits*" *(Lefebvre and Flora 1988, p. 302)*. This exchange or transaction can occur in many different forms. In marketing it refers to the implementation of ideas, products or services including information dissemination, PR, lobbying and advocacy causes with a buy and sell intention. A marketing transaction exists on four levels. Society can be (1) forced to exchange, (2) pressed to exchange, (3) instructed to exchange, or (4) offered an incentive to exchange voluntarily. The intention of marketing is to facilitate voluntary transactions between buyer and seller (Lefebvre and Flora 1988). The available resources for transactions in health promotion are mainly money, time, the physical and cognitive effort associated with the change (quit smoking, participate in an exercise program, attend a first aid course), lifestyle, psychological factors (self-efficacy, coping abilities etc.) and social contacts. The health agencies resources comprise money, technical expertise, ideas, products, and services. These resources

represent at the same time the costs to each party (Lefebvre 2011). Another key element of SM is the audience benefit. It explains that the target audience must realize the advantage that brings the product or service in their minds even though it is not tangible. Benefits *"satisfy an underlying motivation of the target segment" (Lefebvre 2011, p.58).* The difficulty is, that for the motivation of the target audience usually does not include e.g. better health, better environment, access to a service or even money. For instance, Kansas did not promote the reduction of fossil fuels with the reduction of climate change but focussed on being more energy-efficient. They planned a competition between towns and the result was a saving of more than six million kWh during the first year (Lefebvre 2012). Benefits for the target audience could be a better quality of life, higher self-esteem, increase of well-being or better self-image. The advantage of offering a health promotion program includes meeting organizational goals or increase the probability of funding. Often, interventions only consider the monetary costs without promoting other possible resources and benefits. Reasons for this could be that the costs of the consumers are only constructed in economic terms and that there is no recognition of the importance of the exchange process when establishing health programs. The ambition should be to maximize benefits of all parties rather than reducing the costs for only one. Furthermore, the target behavior is an essential aspect of SM. The population-based behavior represents the hallmark of social marketing activities. It must discuss (1) the most commonly used theories (TRA, Health believe model…) to understand the main determinants of behavior, what SM campaigns focus on and their outcomes, (2) comprehend the context to target for change like poverty, housing conditions, literacy, public policies, and (3) address the consequences of current and alternative behaviors (understand the intrinsic and social regards, know what punishment exists or can be created to promote change). The last feature determining social marketing is as in conventional marketing the marketing mix. The determination of the behaviors, creation of products of services and products are necessary but not sufficient to generate health improvement. It is crucial that people use these products and services and change their behavior to have an impact. Sales figures cannot measure the success but the behavioral outcome defines if the

intervention was successful. Better health or other social outcomes then follow. Behavioral change is only happening if the target audience agrees that the topic is relevant, possible that they believe that they can combine it with everyday life. In the developed world it is necessary to empower people to engage in certain types of behavior. Price and access issues may significantly influence the abilities to change. These issues could be how the information is retrieved and displayed or if clean water or point-of-use treatment products are available. Social marketers also need to distinguish whether the intervention to change the ultimate target behavior or a service product that supports the change in behavior. This is where the ideas of branding, image, and positioning are important. At that point, it essential understand the competition, similar programs or competing behaviors. Thereby it needs to be realized that branding covers more than the appearance of an organization. It is how the program or behavior is perceived by the society. The behavior change needs to be a part of the core competencies of the product and services that are developed. (Lefebvre 2011) The "4Ps" of the marketing mix will be explained more detailed in later in this chapter. Generally, the marketing concept experiences a shift from a "make and sell" to a "sense and respond" orientation. Especially the holistic marketing concept (21st-century approach) realizes the requirement to go beyond traditional applications of the marketing concept and focusses more on the relationship, internal and integrated marketing (Lee and Kotler 2011). Also, in SM it is essential to integrate all aspects of the marketing mix as illustrated in figure 2.

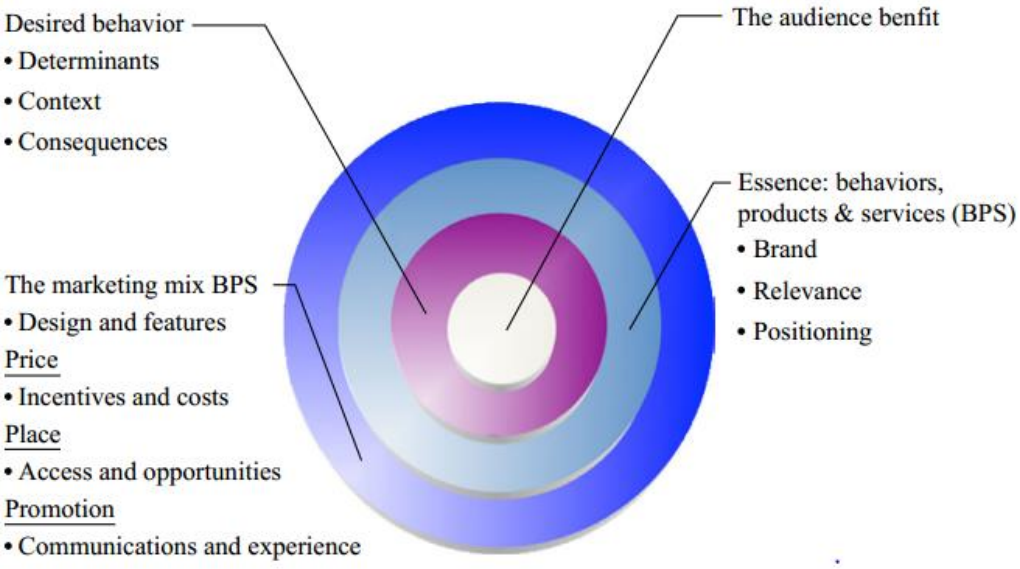

Figure 2. The integrated social marketing mix (Lefebvre 2011, p.7).

SM is an integrated and a shared concept with unique characteristics. Its centerpiece is the assumption that it needs more than promotion and regulations to be successful and builds upon consumers perceptions and beliefs. Its unique value is to increase benefits that matter and motivate people to act. The values of SM are that it respects the dignity of the target audience and the choices made focussing on emotions that lead to actions instead of reasons that lead to conclusions. The change that should be promoted includes an increase of well-being, social determinants, networks and relationships, community indicators and policies. Also, it should consider changes in organizational relationships and the physical environment. SM should serve groups of people to improve their overall sense of well-being, social capital, collective efficacy and equity (Lefebvre 2012).

> *"Social marketing is about making the world a better place for everyone – not just for investors or foundation executives…The same basic principles that can induce a 12-year-old in Bangkok or Leningrad to get a Big Mac and a caregiver in Indonesia to start using oral dehydration solutions for diarrhoea can also be used to influence politicians, media figures, community activists, …and other individuals whose actions are needed to bring about widespread, long-lasting positive social change." (Lee and Kotler 2011, p.25)*

The difference to other marketing approaches evolves because of the primary aim, the target audience and the nature of the competition. For instance, in contrast to SM commercial marketing (CM) focuses on financial gain instead of behavior change. On the other hand, non-profit marketing, public sector marketing or cause-promotion have a more similar approach but are mainly concentrating on support utilization of the organization's services like e.g. volunteer recruitment, fundraising, governmental agency products or aim on raising awareness for social issues like global warming. Additionally, in CM the target audience is based on the population that is able to generate the highest volume of sale not on the prevalence of a social problem and the readiness for change. Further, the competition aims attention at companies offering the same products, in SM the competition is current behavior or organizations selling competitive behavior. Nonetheless, there are also some similarities. For all the concepts the customer orientation, the exchange, marketing research, segmented audience and the feedback mechanisms to improve interventions serve as a basis (Lee and Kotler 2011). The main contrast to education is that it informs and persuades people to e.g. adopt a healthier lifestyle by creating awareness. Individuals still have a free choice in how they respond. Also, implementing a law differs in the way that it

uses pressure or threats of punishment to motivate behavior change (Grier and Byrant 2005).

To summarize, SM is an attempt to influence a change in behavior by offering an alternative, incentives or/and consequences in a surrounding that invites voluntary exchange. The exchange theory reminds that for a successful change a benefit must be offered that the target audience truly values and that recognizes the intangible costs related to the change as well as acknowledge that every party involved in the process must receive benefits in return (Grier and Byrant 2005).

2.1.2 Social marketing planning

The SM process is a continuous and iterative process. As illustrated in figure 3 it starts with an environmental scan and a situation analysis. Initial planning is necessary to gather information to identify fundamental behavioral objectives, distinguish target markets, and recognize potential behavioral determinants and strategies. Then continues with the selection of the target audience and establishing behavior goals and

Figure 3. Summary of marketing planning steps and research input (Lee, Kotler 2011; p.51)

objectives including primary research to identify barriers and benefits as well as the competition. Afterward, the marketing mix to influence the target group can be considered. In the end, an evaluation methodology, the budget, and the implementation plan need to be developed. As soon as the plan was carried out the results need to be monitored and evaluated (Lee and Kotler 2011; Grier and Byrant 2005).

First, a purpose of the intervention must be clarified. Depending on it an analysis of the current situation and the environment is needed. The assessment of the current situation is used to determine what segment and which behaviors are best to target (Lee and Kotler 2011).

> *"Thinking about where, how, and with whom to compete is important — you might do that analysis and decide not to compete because the foe is too formidable...We need to have the courage not to compete. We may also decide to compete for specific population segments in which we can provide better value than the competition." (Grier and Byrant 2005, p.322)*

It also comprises the examination of the competition. As already mentioned in CM products and companies try to satisfy very much alike demands whereby SM competes with public recommendations and services. To develop some competitive advantage social marketers, need to determine what competing products are on the market and how the benefits of these products differ. As a next step, it is necessary to discover the target audience. Formative research should be conducted to investigate the factors identified in the initial planning process. (Grier and Byrant 2005; Lee and Kotler 2011). The audience analysis represents a direct expression of the consumer orientation philosophy of SM as it is based on current behavior like lifestyle, focusses on people, their wants and needs, their aspiration and considers the freedom of choice. Hence, it represents the backbone to make behavior change happen successfully (Lefebvre and Flora 1988). Once the target audience is defined the objectives and goals need to be specified. These goals should be SMART (specific, measurable, achievable, relevant and time based) to be able to assess if the goals are achieved. The core concept of social marketing planning is, as in commercial marketing, the "4Ps" (price, place, promotion, product). It represents the key elements of an integrated marketing strategy. However, the elements of the marketing mix are interpreted differently in the field of SM. The product refers to the additional value that is created with the desired behavior or the use of a certain service. It distinguishes

between the core of the product (the gained benefit) and the actual product (the desired behavior). To establish a successful intervention social marketers face the task to provide solutions for the consumers that are essential to them. Accordingly, it is necessary to research people's desires and preferences additionally, to the basic needs. The price is the sacrifice exchanged for the promised additional value. It comprises besides monetary assets also, psychological, social or other rewards and punishments. The costs accruing in the exchange process are always seen from the consumer's perspective as they are usually intangible, like reduced pleasure, embarrassment, and loss of time or the general hassle that comes with change. Only if the consequences of the behavior and the change of it are understood completely it can be started to search for various types of pricing for current and alternative behavior. The place represents the actual physical location where the product is available. It may be thought of the location in which the target market is encouraged to perform the desired behavior. It also includes operating hours, accessibility and comfort like the possibility to park or easy reachable by public transport. It is a key element between wanting to change behavior and being able to do so. Further, the place includes intermediaries. They can be organizations or people who provide information, goods or perform other functions to promote change. Social marketers recommend identifying life path points (places people visit routinely) and provide the product at these points. The distribution channels must allow the target audience to make informed choices. Social marketers need to take the choice of the place as serious as the message it produces as it has the power to reduce inequities among social groups. Promotion represents the most visible part of the marketing mix as it is used to convey the benefits and associated objects and services including components of the pricing and place strategy. It encompasses communication objectives, the guidelines for designing an effective message and the identification of the appropriate communication channels. The activities can consist of advertising, public relations (PR), sales promotion, special events, personal selling or entertainment media. In public health, activities could also include policy changes, community-based activities or skill building. An integrated approach, where every element has been planned systematically to achieve a specific goal and all marketing activities are consistent with each other, is essential for reaching a sustainable change in behavior. Additionally, the use of modern communication channels like social networks and dynamic, reciprocal communication patterns allow providing multiple possibilities to spread information (Grier and Byrant 2005a; Lefebvre 2011, 2012a; Grier and Byrant 2005). As soon as the intervention is planned an outline of

an evaluation and monitoring plan should be established. Overall, the process tracking should already begin at the outset of the planning process. Each step requires monitoring and assessment of effectiveness to be able to decide if the intervention can be sustained or requires adjustment. After that, the budget, as well as funding sources, need to be developed. The last step is then to complete and implement the plan (Lee and Kotler 2011; Grier and Byrant 2005). However, as in commercial marketing, there is a shift to a more consumer-oriented approach of the "4Ps" towards a more service-dominant logic. This logic puts the emphasis on skills and knowledge instead of products as the fundamental part of the exchange. For instance, a hammer is not only a product but represents a way for people who would like to hang pictures on their walls. The consumers should be perceived as collaborators in creating values and adopting new or quitting old behavior. Additionally, it should consider shared values as e.g. to respect people's dignity and choices and believe in future possibilities – because emotions lead to acting instead of concluding (Lefebvre 2012).

To conclude, there are four main stages of the implementation process, (1) the literature research (2) the formative research, (3) the pre-test and (4) the internal assessment. Finally, the marketing intervention should represent an approach to social innovation that makes the market more sufficient and promotes the well-being of society. It should offer innovative solutions creating value for and offer solutions for complex problems of the society through the integration of research and use of social behavior theories (Lefebvre 2012).

2.1.3 Challenges

Lefebvre identifies six challenges facing SM including equity, social networks as determinants of behaviors, critical marketing, sustainability, scalability and comprehensive programming or the total market approach (TMA).

The major obstacles using SM are creating equity in health status and social justice. There is not enough discussion about how these issues can be addressed by using marketing principles. Hence, research and practice must improve to guarantee the same treatment for everyone. The second challenge arises due to the shifting frame of determinants between individuals and organizations. The use of social networks offers possibilities to develop concepts and practices that have a bigger influence on

society. Another difficulty in SM is countering the prevalent perception of CM practices to just create wants and needs. Thus, try to raise awareness of critical, ethical and social issues. Through SM a deeper insight into public health and commercial sector is given and therefore can contribute to achieving overall social goals. This includes assessing how marketing influences actions, how the intervention harms or benefits different population segments, analyzing the market, develop suggestions to improve the benefits and reduce costs. Nevertheless, critical marketing requires to not only focus on behavior change but as well as to analyze the consequences of the interventions. Another issue that social marketers face is the creation of a long-term effect. A major task is to stress the desire of society to be part of the changing process to achieve a long-lasting improvement. Hence, to develop a sustainable intervention a change of the business model for SM is required. Hereby, the obstacle is that social marketers usually are not empowered to restructure the markets and therefore, are rarely able to establish a sustainable strategy. In addition, there is the need to create scaling up programs. This means providing evidence-based marketing programs, spread adoption and increasing the number of successful programs. The process can start by conducting customer research with potential customers or designing sustainable distribution channels and thereby serve a bigger amount of people with similar benefits. The TMA faces the problem of possible negative impacts of SM interventions that provide subsidized products or services on the private sector. It enables to bridge or even close the gap between the public, NGOs, and the private sector and supports the idea that beneficial products exist in many different settings. Additionally, the TMA recognizes the need for protection of vulnerable populations of diverse market failures (Lefebvre 2011).

However, the major difficulty that social marketers are facing is ethics. It is defined as *"the study of standards of conduct and moral judgement (Andreasen 2011, p. 2)."* In marketing ethical dilemmas occur frequently and are a result of situations were ethical guidance would be needed. Unfortunately, there is not enough discussion about ethics in SM yet. Ethical guidance is necessary to resolve conflicts in standards or moral judgments, in situations where it is difficult to make the right choice between right and what is wrong as well as when two right principles are in contradiction. Also, ethical standards are important to realize how morals and ethics relate. To e.g. be able to distinguish between moral offensive and politically incorrect decisions. Centerpieces of SM are often very sensitive and controversial products or

services that are not very well understood and often involves deeply held beliefs and moral judgments like death, pain, reproduction and sexual topics. Hence, these issues have a higher possibility to offend society. The hallmark of ethical behavior is to be truthful, protect the privacy, do not promote inappropriate behavior, do not be offensive, do not stereotype and protect children. Nevertheless, there cannot be a standard solution for every ethical dilemma, as they occur exactly in moments when two valid concerns like privacy and justice or truth and confidentiality contradict. However, recognizing and analyzing the ethical issues, raise awareness about the possibility that they can happen is already the most important step to protect against unethical behavior.

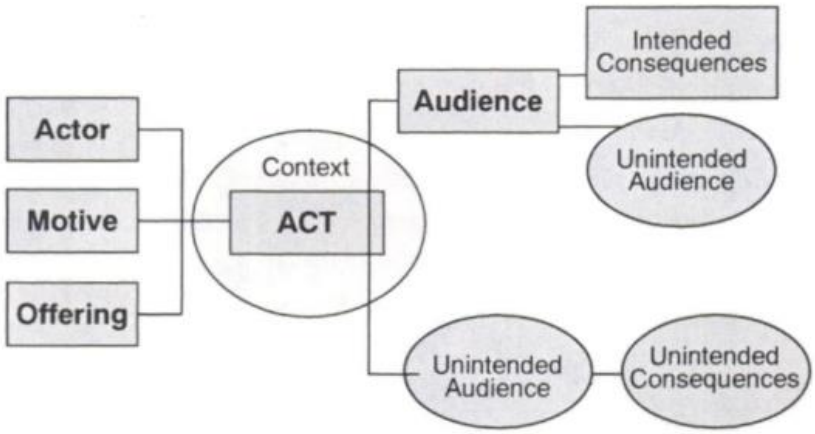

Figure 4. An ethical framework for SM (Andreasen 2011 p.4)

Figure 4 displays a scheme where and when these issues are most likely to appear. The process is initiated by an actor who is offering or sponsoring a product which could be an object, a service or a behavior. The actor is guided by a motive to provide a certain offer. The act and the context in which it occurs influences an intended and an unintended audience. Also, the consequences arising from the act affects both intended and unintended audiences. Each element consists of determinants helping to understand ethical parameters from a social marketing perspective. The actors, for instance, could have wrong motives. To judge the ethicality of these motives it is a possibility to assess the similarities to the target audience. The greater the similarity is, the greater is the more ethical is the motivation to offer a specific product. The product represents the nature of the ethical dilemma depending on the origin of the offer. Is the offer a service like childhood vaccinations the determinant issue may be

equal access. The problem with the motive is that there are many different determinants that could be relevant. For instance, the motive could be entirely out of self-interest or out of altruism or it could be a mixture like increasing sales by being or pretending to be socially conscious. Nevertheless, it is nearly impossible to be certain what the actual motive of an actor is. Therefore, it is essential that the motive is in consistency with the program or service. Taking money from the tobacco industry to fund a program against smoking, for instance, would be considered unethical. The act, on the other hand, discusses if the content is truthful and accurate. It also considers that if the act is offensive to e.g. minorities or supports stereotypes. The context refers to the issues arising with the time, the place and the cultural context of the implementation. Most important questions about the audience are if the intended audience has the ability and opportunity to understand and accept the product and how it could potentially influence the unintended audience. Whereby, the unintended audience is much more complex as the social marketer does not have as much information about their values, beliefs and behavioral determinants. A program to reduce adolescence pregnancy e.g. could negatively influence the problem of child abuse or change the perception of teenage mothers that their child is ruining their lives. This leads to the final consequences which include benefits, relative beliefs and possible harm resulting from the act (Andreasen 2011).

The TMA and other approaches force social marketers to pay more attention to the market within they operate rather than on individuals, urges to analyze and understand its difficulties and propose effective solutions. All the challenges noted here generate opportunities to collaborate and advocate the importance of SM activities to the population.

2.2 Cardiopulmonary resuscitation (CPR)

This chapter stresses the influence and importance of bystander CPR, the main determinants why there is a resistance and gives indications how SM could improve the situation. CPR is a potentially lifesaving treatment that can easily be implemented by society without the need for expensive investments. It is the initial step to significantly improve chances of survival in case of a cardiac arrest (CA). It is defined as *"… the cessation of cardiac mechanical activity, as confirmed by the absence of signs of circulation" (Benjamin et al. 2017 p. e468)* and a result of several reasons like rhythm disturbances, pulseless ventricular tachycardia or ventricular

fibrillation (VF). Often a CA is used interchangeably with a heart attack (myocardial infarction). Although, the two terms are used conversely in casual conversation or by the media a CA is different and must be distinguished from a myocardial infarction. When a SCA occurs the victim collapses, is unresponsive to soft shaking, stops coughing or moving and stops normal breathing after a deep rescue breath what leads to a prompt death if not reversed. A heart attack, on the other hand, is a condition in which the blood cannot be pumped to the heart as it is blocked by a narrowed or obstructed coronary artery. This causes insufficient oxygenation and damage to the heart. However, it does not necessarily lead to unconsciousness. A heart attack hence can lead to a CA as it may affect the electrical signaling. Nevertheless, a CA does not cause a heart attack (Griebler et al. 2015; Graham et al. 2015). It is necessary to realize the distinction between the two terms because the goal, treatment, and individuals qualified to perform it are very different. The main goal if someone suffers a SCA is to guarantee the return of spontaneous circulation to avoid death. This treatment can be unlike with a heart attack, be performed by bystanders by performing effective CPR (Graham et al. 2015).

If suffering from a SCA the survival relies on prompt recognition, early access to help, early high-quality CPR and early defibrillation (Griebler et al. 2015). During a SCA the heart stops pumping blood. Using effective CPR helps that the vital blood flow stays maintained, and oxygenated blood circulates through the body and brain. Already this minimal chest compression during CPR generates a critical amount of the blood flow to the heart until the circulation is supported by another therapy. Each minute that a patient goes without CPR or defibrillation the likelihood of survival decreases seven to ten percent (Carlbom et al. 2014). Effective bystander CPR on

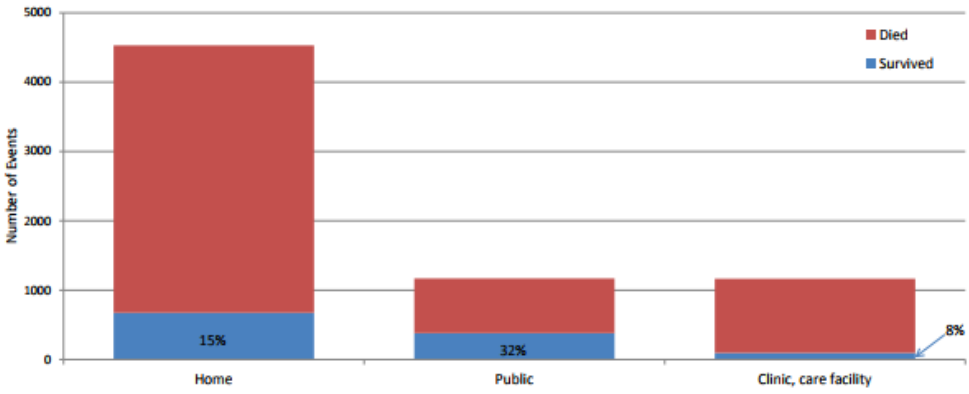

Figure 5. Percentage of patients having a cardiac arrest who survived hospital discharge (Carlbom et al. 2014, p.7)

the other hand that is provided immediately after a CA can double the patients chance of survival (McRae; Abella et al. 2008; Markenson et al. 2016). Additional, favorable circumstances to maximize the likelihood of survival of a SCA are if patients are younger, it is witnessed and occurs in a public location (Nürnberger et al. 2013). However, as illustrated in figure 5 most of the deadly incidents happen at home. Hence, most of the bystanders are family members (Swor et al. 2006). The chance of surviving an IHCA is generally lower, as the patients are already sicker, and the arrest takes place due to the hearts response to a systemic illness. Moreover, the interaction between the emergency medical dispatcher, the bystander and the deployment of an AED is crucial for the patients' survival (Markenson et al. 2016).

The American Heart Association introduced the "cardiac arrest chain of survival" model (compare figure 6) to increase the number of survivors. It identifies five key

Figure 6. The cardiac arrest chain of survival (Resuscitation Academy, 2014)

elements, early access, early CPR, early defibrillation, early advanced cardiac life support (ACLS) and early post-resuscitative care. Every step in this process must be done rapidly and efficiently to maximize the chance of survival. The possibility of success decreases if any link is delayed or incorrectly performed. However, the survival chain is limited as it does not explicitly elaborate on how the links should be connected and do not emphasize the importance of other factors as proactive leadership, transparency or quality. Nevertheless, it illustrates the necessity of early access and early CPR as the most critical link in the survival chain for those who experience an OHCA. (Graham et al. 2015).

2.2.1 Bystander CPR

A bystander is defined as an individual who is witnessing an incident and is not part of the emergency response system. It commonly is someone who does not have a

professional education in healthcare. Low rates of bystander CPR are sometimes explained due to the bystander effect. It stresses that the more people are around the higher is the possibility to refuse to help.

> *"Studies also show the bystander effect as a major barrier to helping, where the reasons for doing so can be broadly categorized as either diffusion of responsibility (there are so many people around, someone else is bound to help) or the need to behave in a socially acceptable way (i.e. if others are not helping, it must be inappropriate to do so)." (Markenson et al. 2016, p. 29)*

Those aware of the existence of the bystander effect are more likely to help. Research also, suggests that individuals more easily help patients who they can empathize with. If rates and quality of bystander CPR can be improved long-term it has the potential to save the lives of many victims experiencing a SCA each year. (Graham et al. 2015; Markenson et al. 2016). Already a small number of straightforward methods can reduce barriers. Therefore, it is important to understand how society may be motivated to engage in the performance of CPR.

The centerpiece of an engaged community is a proactive and coordinated system across all actors able to deliver care. These actors may be the general public, EMS, local health, education, schools, employers or non-profit organizations. A high-quality performance and treatment must be guaranteed throughout the system to enable change (Graham et al. 2015). A key element for creating a proactive society is surveillance and reporting. As cardiac arrests represent a large health burden it is subject to the national responsibility to facilitate the dialogue and request comprehensive data collection. Timely reporting an dissemination of information that is reliable and accurate is essential to empower the states, the health departments, healthcare systems, researchers as well as to define benchmarks and renew education and training materials to implement best practice procedures (Graham et al. 2015). Additionally, a broader CPR Training is necessary that addresses the series of complex transitions between different caregivers including bystanders, trained first responders EMS personnel and involved healthcare providers. New technologies allow to accelerate CPR education and reach a larger audience. The AHA, for instance, developed a 22-minute self-instructional CPR course that enables training outside of the classroom. Further, the law can help facilitate education by e.g. establishment of lay rescuer AED (automatic external defibrillator) programs in federal buildings, schools, shopping malls or gymnasiums. Also training of dispatcher-assisted "telephone CPR" allows instructions

in real-time and ensure help even if the rescuer has not received training. This is especially important for incidents happening at home where no AED is available (Abella et al. 2008). To support community engagement first, the public awareness about disparities in care and opportunities that lead to greater involvement in education and training need to be communicated. Society needs to know the risks of mortality and disability without an immediate response. A culture of pro-active behavior can only be fostered by promoting easy access, public advocacy, local awareness events and leadership opportunities. By creating a platform of dialogue potential bystanders can be prepared to willingly deliver basic life support. The discussion should also address topics that cause reluctance like the risk of disease transmission through performing CPR. This exchange of knowledge needs to be included in training as the public must understand the relevance of prompt bystander CPR (Graham et al. 2015; Abella et al. 2008). Moreover, the inclusion of continuous improvement of EMS and CPR quality is essential. Only through reviews of resuscitation efforts the quality of CPR and instructions provided to bystanders by dispatchers can increase. To manage this enhanced accountability and transparency is inevitable. The more detailed and larger data sets are available the more opportunities to increase public awareness, improve training and modify local treatment protocols related to CA emerge.

The more the knowledge and the more trust the community gains and the more transparent the system gets the more likely it is that individuals participate in CPR training and the higher is the chance that death due to a CA can be prevented.

2.2.2 Behavior determinants of bystander CPR

Even though society is aware that performing CPR is crucial for the survival of the victim the willingness of bystanders to perform CPR remains low. The literature discusses different aspects which influence the decision to help or not help as a bystander of a sudden cardiac arrest. Generally, lack of time, lack of interest, too high costs, inability to find a course or missing recommendation of healthcare professionals are factors explaining why CPR performance remains low.

Additionally, individual behavior is determined by the task itself, the personal feelings toward the task and the relationship towards the victim. Regarding, the task itself bystanders mainly claim that they did not perform CPR because they did not

know what to do due to lack of training, that the task is too complex or that resuscitation was not done because of bad health or physical limitation. Personal feelings influencing the decisions are mostly expressed by fear. This includes fear of causing harm, fear of contracting infectious diseases (reluctance to make mouth-to-mouth contact), fear of legal consequences or being too emotionally upset. Further, the personality itself can determine specific behavior. The literature e.g. evaluated that individuals who easier embarrassed themselves are slower in helping. Although, most individuals are unable to make the decisions rather than not wanting to help. The relationship towards the patient is essential as individuals are more likely to help if the victim is known. This is important because the most frequent bystanders are family members. Moreover, the specific circumstances in the situation influence the behavior of an individual. Bystander CPR for instance, decreases the more potential bystanders are around. Besides, research indicates that the likelihood of receiving resuscitation is higher in public areas. (Bobrow et al. 2010; Swor et al. 2006; Coons and Guy 2009; Platz et al. 2000; Vaillancourt et al. 2008; Zoccola et al. 2011)

Summarizing, many different aspects influence the decision to act pro-active behavior and the performance of CPR. Reluctance to engage in the process range from problems with the task itself, the beliefs towards the tasks, personal feelings or the settings in which the incident occurs. To be able to make a clear statement about the predominant reasons further information about why and how individuals take decisions is needed.

2.3 The decision-making process

To understand the motivation of a certain behavior it is necessary to understand the basis of the decision-making process. Behavior is influenced by a range of different aspects. Some of those aspects are clear and obvious others are happening automatically without even being aware of them. People often do not know in which way information guides their judgments and impressions of the things happening around them. Behavior is formed as a function of the accessibility of knowledge and attitude from memory that became available by incidental means like recent experiences. Thus, not only attitudes are often automatically influenced by aspects outside of the awareness but also behavior. It is e.g. effected by incidentally activated behavior, activated behavioral information, trait knowledge, behavioral information, goal-

relevant information (motives), context information knowledge (J. Ferguson and Bargh. A. John 2004). Information processing is determined by the extent that the attitude is accessible from memory and therefore, capable of automatically activate the attitude towards the object (Petty and Krosnick 2004).

This chapter provides an overview of the different behavior theories to be able to understand the essential factors of the decision-making process related to the performance of bystander CPR.

2.3.1 Theories of planned behavior

The theory of reasoned action (TRA) and the theory of planned behavior (TPB) are explaining individual motivational factors that determine how likely it is to perform a specific behavior. It is mainly used to understand the relationship between attitudes, intentions, and behaviors. These concepts indicate that intention is the best predictor of behavior. TPB additionally includes if individuals have control over the performance of their actions. It explains the variance between intention and actual behavior. Furthermore, these theories have been used to develop effective changes in health care behavior like smoking, alcohol consumption, breastfeeding or cancer screening. The intention to perform the behavior consists of external variables, attitude, subjective norm and perceived control (compare figure 7). External variables

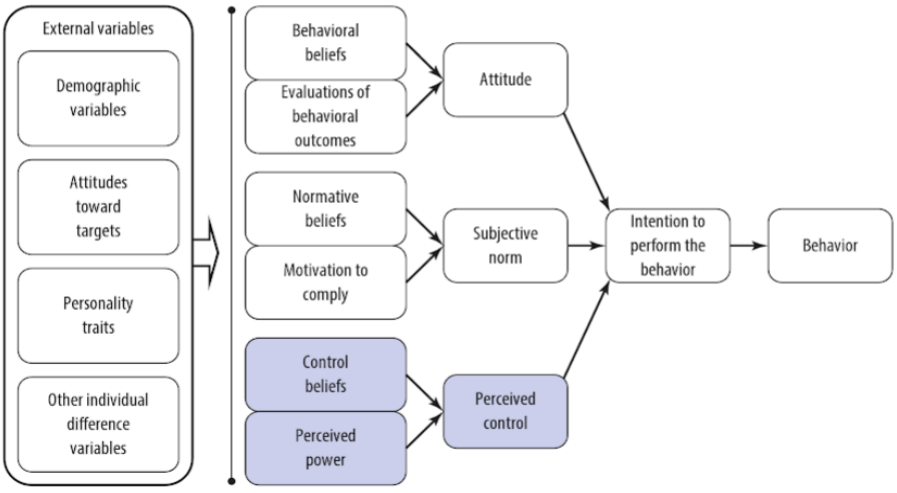

Figure 7. Theory of Reasoned Action and Theory of Planned Behavior (Glanz et al. 2015 p.98)

are demographic, attitudes towards the targets, personality traits, and other individual difference variables. Attitude includes behavioral beliefs and external beliefs.

The subjective norm consists of normative beliefs and motivation to comply. Perceived control is determined by control beliefs. By promoting these factors society can be motivated to not only intend to change but actually carry out the new behavior.

Another theory is the Integrated Behavior Model. It uses the constructs from the TRA/TBP and considers that the most important determinant is the intention to perform the behavior. The model assumes that even if an individual has a strong intention to act in a certain manner the person needs the knowledge and skills to carry it out (without proper motivation it is unlikely to change behavior). Further, it needs to be ensured that there are not circumstantial constraints that make the act difficult or

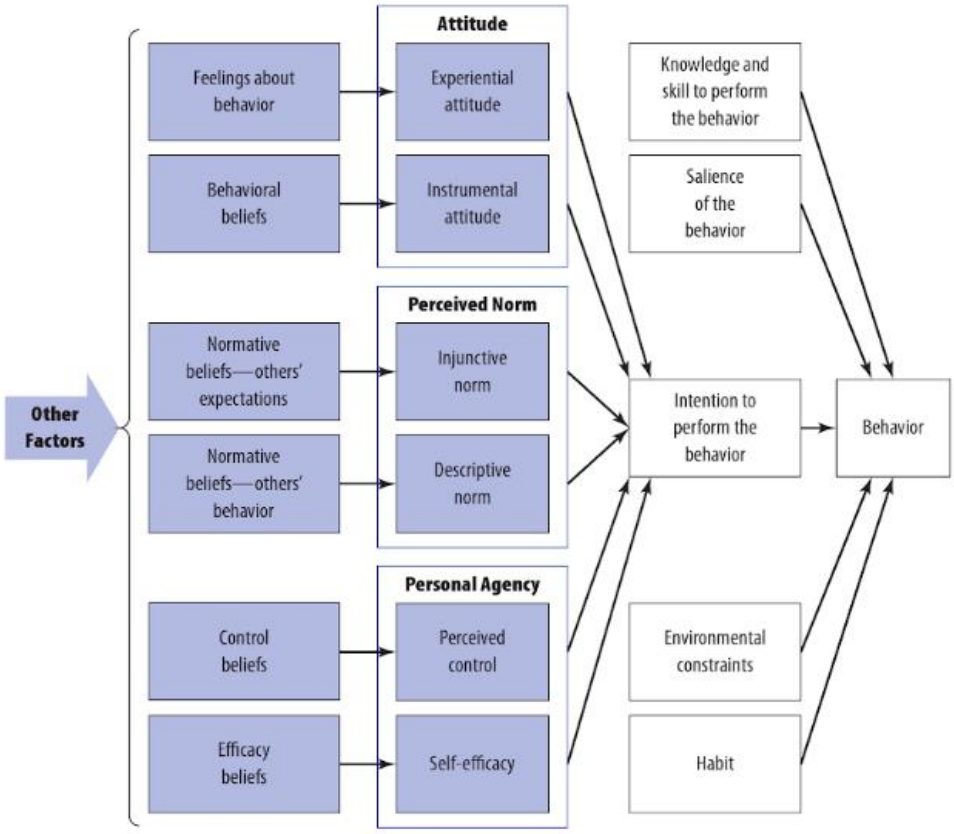

Figure 8. Integrated Behavior Model (Glanz et al. 2015 p.104).

impossible. It should be essential to the individual and the experience to behave in a certain way should become habitual. As once the behavior becomes a habit the intention becomes less important. Figure 8 illustrates all components which need to be integrated when designing healthcare interventions.

2.3.2 Theories of spontaneous behavior

Spontaneous behavior happens as soon as someone lacks either the motivation or the opportunity to decide about what action to take. In this scenario, individuals are strongly influenced by pre-existing information available from memory. In comparison to the previously explained theories of planned behavior the spontaneous attitude-behavior process assumes that the accessibility of attitude is substantial. Attitudes are personal and mental constructs which enable individuals to judge decisions. They allow to structure and evaluate certain objects, issues, and people. Therefore, to affect spontaneous decisions making it is important to know the attitudes that might guide the behavior (Petty and Krosnick 2004; Mayerl 2009; Chaiken and Trope 1999). Attitude accessibility can be defined as an

„... associations in memory between an attitude object and one's evaluation of these object and that the strength of this association determines the accessibility of the attitude from memory." (Petty and Krosnick 2004, p. 247)

An object as referred to in the definition has a very broad meaning. It can be a social issue, a category of a situation, a category of people, specific individuals and physical objects. The evaluation can range from very intuitive to very analytical judgment towards the object. The relationship between the object and the evaluation is then viewed as attitude. The strength of this association is determined by emotional reactions and behavioral information. The concept of attitude strength, therefore, is influenced by the accessibility of the attitude (the likelihood that you associate positive or negative feelings towards the object), the attitude ambivalence and the affective-cognitive discrepancy (consistency between the attitude object and the activated response). Emotional reactions are considered a trustworthy basis for evaluation. Individuals trust their emotional reactions to decide about an object. Behavioral information focusses on freely chosen behavior as a basic concept of the self-perception theory. It explains that individuals develop attitudes, if there is no previous attitude or lack of emotional response, by observing the own behavior. People believe that their own behavior is a solid and important indicator of their attitudes (Petty and Krosnick 2004).

"Attitude relates to the informational basis for the attitude, to the emotionality of the attitude, frequency of attitudinal expression and relates to the stability of the attitude over time and to its extremity." (Petty and Krosnick 2004, p. 267)

According to the theory, the spontaneous behavior is driven by responses to behavioral opportunities. The greater the possibility of automatic activation from memory the greater is the direct influence of the attitude and therefore, on the decision-making process. Well-learned associations need less cognitive work to respond as it is possible to automatically activate the attitude towards the object from memory. At the other end of this attitude-nonattitude continuum, it is the case that there is no prior evaluation of the object stored in memory. The individual is forced to construct an evaluation immediately based on any relevant attribute related to the situation that might be available. The most common model used to explain why and when attitude influences behavior is the MODE model (motivation and opportunity as determinants) (Fazio 1990; Petty and Krosnick 2004).

The spontaneous behavior process starts with the presence of an environmental trigger, an opportunity that presents itself and requires an immediate response either because you are interacting with someone or a request for action is made. The perception that individuals have towards the object in such an immediate situation is the basis of the MODE model. According to the model, the two moderating factors (motivation and opportunity) express to what extent the behavior process is spontaneous or deliberative in its nature. When deciding about two alternatives and the individual lacks either the motivation or the opportunity, for instance under time pressure the decision is rather based on global attitudes than specific knowledge. Moreover, if the attitude is not activated automatically, perceptions are likely to be based upon features of an object that are not necessarily congruent with the actual attitude of the individual. The model predicts that attitudinal bias should be minimized by promoting these two determinants and that changing the perceptions about an attitude object can have an impact on eventual behavior. It is also possible that the decision-making process consists of automatic and controlled elements. They can assume any number of forms, for instance, as soon as a situation requires to control and monitor impulsive behavior. Nevertheless, to engage in the cognitive effort both motivation and opportunity are essential (Chaiken and Trope 1999).

“Active control over ones responses is particularly likely when normative constraints intervene and prevent from behaving in accordance with perceptions of the attitude object in the immediate situation.” (Chaiken and Trope 1999, p. 103)

The MODE-model provides a framework for considering multiple possible processes by which attitudes may guide behavior. Automatically activated perceptions from memory influence the attitude object in immediate situations. However, by providing motivation for accuracy and opportunity individuals can be supported to decide upon specific knowledge than trusting on previously stored information towards the attitude object (Chaiken and Trope 1999).

2.3.3 Pro-social behavior

In contrary to the previously explained models, this approach tries to explain the determinants of the decision-making process in situations where others are in need. Elliot et.al highlight that motivation for pro-social behavior is based on three factors which are within our genes. Individuals decide to offer help due to kin selection, reciprocity and the ability to learn and observe social norms. To explain behavior in this specific situation two different theories were established.

First, is the concept of “social exchange”. It assumes that reward and costs in social interactions are monitored. Helping in this scenario could bring several advantages.

1. Helping is an investment in the future.
2. Helping contributes to reducing personal strains.
3. Through helping arises social reward.

Assisting others, therefore, decreases as soon as the costs like pain, threat, embarrassment or lack of time are too high. If the advantages overrule the costs individuals are more likely to help. However, the second theory explaining pro-social behavior assumes that sometimes empathy is more essential than advantages or disadvantages. It discusses the “pure motive to help”. Empathy is explained as the ability to share and understand the emotions of someone else. Therefore, a person with high empathy will assist another without considering gaining a personal benefit, even if the costs are higher than the benefits.

These theories support that assistance is mainly based on different characteristics. If these personal attitudes will be supported the likelihood of individuals helping

other individuals will be increased. Especially the concept of accessibility is considered to be the most important factor influencing this decision-making process (Aronson et al. 2004).

2.3.4 Traits and Motives

However, decisions are not only based on knowledge, beliefs or the accessibility of it but as mentioned previously based on who we are (traits) and our intrinsic motivations (motives). At the beginning of personality research traits and motives were treated separately. Just in the 1990s McCrae, a well-known trait researcher, concluded that there must be a relation of these components. Nevertheless, they refer to two fundamentally different aspects of personality and therefore, express different kinds of behavior. Whereby, motives refer to the needs and desires and explain "why" certain behavior was carried out, traits are seen as "basic tendencies" or words to describe others. (Winter et al. 1998). The following part examines the concept of motives and traits and their influence on behavior more closely.

As already mentioned, decisions are not only influenced by the accessibility of knowledge and attitude from memory or trait knowledge but are also driven by goal-relevant information, the motives and motivations individuals have. Motivation is defined as the *„process whereby goal-directed activities are energized, directed, and sustained" (Ryan 2012, p. 13).* Hence, thoughts, beliefs, and emotions underlie a specific motivation which is based on incentives. Most important goals are self-evaluation progress, outcome expectations, values, social comparison and self-efficacy (Ryan 2012). Motives can be implicit and explicit. Explicit motives or "self-attributed-motives" are motives that are consciously accessible as individuals describe themselves as having a specific need that motivates them. On the contrary, implicit motives are not immediately accessible to the conscious mind but still have a great influence on one's feelings and behavior. They orient, select and energize the decision-making process (Schultheiss and Brunstein 2010; Schad 2006). An individual with a strong motive is someone with a strong response to an incentive. The person aims to promote the possibility of reaching his/her goal. Further, the motives interact with situational incentives to shape behavior. In the field of achievement motivation e.g. one and the same incentive can cause contrasting responses depending on the strength of an individual's implicit motive to achieve. For instance,

passing by a bar might be associated with the possibility to have a good time with others and might arouse a motivation to visit the bar. The motivation will then be attained if the person has a strong affiliation motive and enjoys spending time with others. If the individual does not have a strong affiliation motive the sign might not have any impact or he/she might have another incentive like alcohol to decide to visit the bar (Schultheiss and Brunstein 2010).

Historically five different indicators guiding motives were established. The intention, the instincts, the traits of the individuals and the association towards the object which is divided into learning psychology and activation psychology. Whereby the intention can be split into cognition (feel, think, perceive) and motivation (perception, association, ideas) (Heckhausen and Heckhausen 2010). Motive researchers as McClelland and Atkinson then focused on three of these classes of human motivation. The affiliation motivation as the motivation to have close relationships, the power motivation as the need to have an impact on others and the achievement motivation, which refers to the motivation to do something according to a standard of excellence. The implicit achievement motivation describes the nonconscious desire for improving one's per-

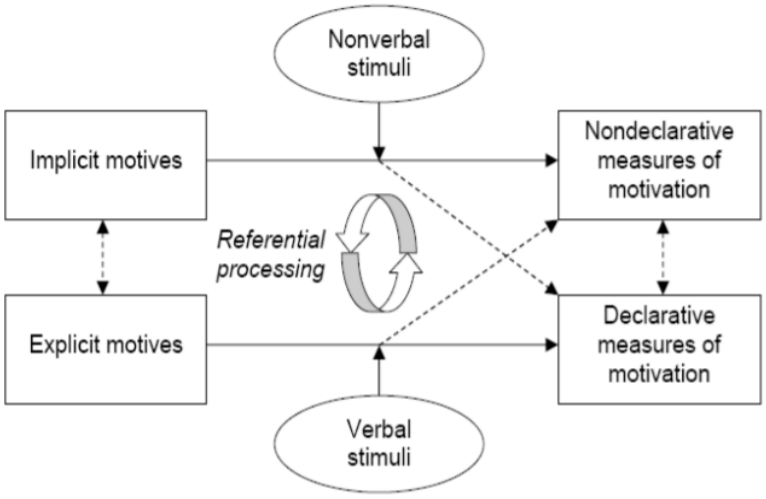

Figure 9. Information-processing model of implicit and explicit motivation (Schultheiss and Brunstein 2010).

formance. Every achievement task has two possible outcomes – success or failure. Individuals are therefore either driven by maximizing the chance to succeed (an oriented aspect of achievement) or by minimizing the chance to fail (anxiety based). According to Atkinsons' expectancy-value theory of achievement, there are four possible modes of goal-directed behavior: active approach, active avoidance, passive

approach and passive avoidance. The active approach describes goal-directed behavior. An individual wants to reach his/her goal and is rewarded for doing so. The active avoidance displays a person who avoids punishment by inhibiting goal-related behavior. To execute goal-directed behavior in order to avoid punishment describes the passive approach and passive avoidance explains the behavior when someone rewards himself/herself for not displaying goal-directed behavior, as being afraid of success. The theory assumes that the tendency to engage in achievement behavior ($T_{succeed}$) is a multiple function of motive (M), subject probability (P) of succeeding and the incentive value (I) of succeeding – $\boxed{M * P * I = T_{succeed}}$ (Schultheiss and Brunstein 2010). The concept of implicit and explicit models was further developed with the information processing model by Schultheiss. He describes implicit and explicit motives as two independent systems that refer to information and process it in two distinctive ways. As visible in figure 9 implicit motives respond according to this theory to non-verbal stimuli to influence non-declarative measures (something you do/know automatically if you learned it once – like riding a bike) as part of the experiential system. Explicit motives, on the contrary, respond to the verbal stimuli in order to influence declarative measures (things you learn and train) (Schad 2006; Schultheiss and Brunstein 2010).

Generally, there are two ways of measuring motives. The so-called Picture Story Exercise (PSE) and questionnaire with self-descriptive items. The PSE is supposed to capture motives using imagery fantasy stories. The participants must describe pictures of people in social situations that might signal the potential availability of an incentive. The stories are then scored using an empirically derived coding system. McClelland et al. argue that the PSE measures implicit motives or needs and the questionnaires assess explicit motives (Schad 2006).

The implicit and explicit motives explained what thrives individuals to take action. These motives are not entirely due to what we know, feel, desire but also based on our personality. Personality is a neuropsychological structure, which makes many different appeals functional equivalent and deduces consistent equivalent forms of actions and impressions to direct its course. (Heckhausen and Heckhausen 2010). The concept of traits has been used in personality psychology to express consistent patterns of behavior. Especially in situations where the decision-making process

cannot be planned traits trigger motivations. Important is that traits are fundamentally different from motives. They rather channel or direct the way in which motives are expressed in particular situations which are consistent. In the beginning, traits were thought to be basic trends or simply words people use to describe others. Personality characteristics were assumed to be consistent inter-correlated groups of behavior. However, perfect consistency cannot be expected as traits are contradicting and modifying each other. Often, they arouse in one situation but not in another due to the fact that not all stimuli are equally effective (Winter et al. 1998).

Trait theories are mainly concerning the number, nature, and organization of basic traits. Psychologists developed three strategies on how to identify them: factor analysis, rational or prior theorizing and the ideographic approach. The factor analysis and other mathematical techniques are used to identify trait dimensions which are applicable to the general society. Rational theories also involve the construction of typologies that are also applicable to subgroups of people. The ideographic approach focuses on individual and unique traits or patterns of traits instead of identifying basic characteristics (John et al. 2008). After decades of research, the field has achieved an overall taxonomy of personality traits. It describes the domain of traits at the most abstract level of five clusters: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. This consensus is nowadays known as the “Five Factor Model” or “Big Five” (Winter et al. 1998). It does not represent only a theoretical perspective but also includes the natural language terms people used to describe themselves or others. The model allows integrating all previous systems into one framework as it illustrates different systems of personality (John et al. 2008). It represents traits as broad and relative nonconditional constructs.

> *“[They] provide an excellent "first read" on a person... [along] general and linear dimensions of proven social significance... It is the kind of information that strangers quickly glean from one another as they size one another up and anticipate future interactions.” (Winter et al. 1998, p.234)*

Extraversion describes someone who is active towards society. It represents traits like sociability, activity, assertiveness and positive emotionality. Extravert personalities e.g. approach strangers at a party or take leads in organizing a project. Agree-

ableness, altruism or affection characterizes a prosocial and strong orientation towards others. A person with high agreeableness focuses on the good qualities of others and for instance lends notes to classmates or consolidates a friend who is upset. Conscientiousness describes someone with a task- and goal-directed behavior, for example, it is important to follow rules and organize and prioritize activities. A person who is driven by conscientiousness e.g. arrives early to appointments and works hard to achieve the best grades in class. Neuroticism is also related to negative emotionality or nervousness. It contrasts emotional stability with negative emotionalities, like feeling anxious, nervous and sad. Neurotic persons accept their positive or negative faith without complaining. Openness, on the other hand, describes the spread originality and open-mindedness of an individual. A very open person takes the time to learn something because he/she enjoys learning and watches e.g. documentaries or educational TV (John et al. 2008; GESIS - Institut für Sozialwissenschaften).

The Big Five are represented by all languages of the western world and is the most accepted model between personality researchers as it offers reasonable predictors for different aspects of the daily life. Low neuroticism and high conscientiousness, for instance, are associated with a high life expectancy. Nowadays it is used as the reference model for the description of traits (GESIS - Institut für Sozialwissenschaften).

2.4 Summary – SM, bystander CPR and the decision-making process

As the findings of the literature research suggest that missing bystander CPR results in a major burden to the public health systems and further, represents a critical link in the survival chain. Many deaths could be prevented by educating and training society about how to react when witnessing an OHCAs. To improve the situation and facilitate CPR performance it is essential to get to know the decision-making process of the individuals.

To understand why individuals, take certain actions it is necessary to know what motivates them. In this regard, the literature research shows that the way people make decisions depends on the decision-making process – is it a planned decision with time to reflect upon the object or is it a spontaneous decision. As witnessing a sudden out

of hospital cardiac arrest cannot be planned it requires spontaneous behavior. The essential factor determining this decision-making process is, as explained through the MODE model, attitude accessibility. It assumes that if there is either a lack of motivation or opportunity the focus of attention is how accessible the information is to the conscious mind. Due to this, it is necessary to explore existing knowledge (informational basis, previous behavior) and possible emotional reactions towards performing bystander CPR. For instance, lack of interest results in lack of motivation and missing offers for training results in a lack of opportunity. Also, the fear of doing something wrong is an emotional reaction that automatically keeps individuals from acting. Another influential factor is the personality of the individual, like kinship or empathy. To describe one's personality traits and motives are needed. Even though the boundaries between them remain unclear generally it can be said that motives explain behavior by the ends or goals towards which it tends, and traits are directing the way in which motives are expressed. For example, three individuals are considered to be equally helpful. In the situation of witnessing a SCA one might help to seek justice another might always try to help others, while the third maybe acts to maintain his/her self-esteem or reputation. Individuals can have the same traits, but their motives influence their decision making differently (Winter et al. 1998). All these mentioned determinants from attitude accessibility, motivation, opportunity till personality need to be analyzed to understand why and how decisions are made and how the decision-making process can be sustainably influenced.

The discussion of the literature raises the following research question:

> *"How can social marketing facilitate the performance of CPR and decrease death due to out-of-hospital cardiac arrests in Austria?"*

3 Methods

As a data collection tool for the primary research, a public survey of the Austrian population using a self-administrated online questionnaire was chosen. This approach was used to reach as many participants as possible with the available resources. The goal of the questionnaire was to investigate the wants and needs to feel more confident to perform CPR in case of witnessing an OHCA. The results should provide more detailed information about what the Austrians know, what they believe, what their predominating traits and motives are and what interventions they would appreciate to

actively engage in CPR training. The structure of the questionnaire will be explained more detailed in chapter 3.1.1 Design.

The methodology part concludes with an interpretation of the collected data and suggestions about how future projects to educate and motivate society about performing CPR could be successfully realized by using a social marketing approach.

3.1 Questionnaire

3.1.1 Design

The survey was structured according to the results of the literature research. It comprises eight parts related to (1) the knowledge base, (2) the traits and (3) motives influencing the decision-making process, (4) emotions and beliefs towards CPR, (5) the external factors influencing behavior, (6) potential motivational factors, (7) Austrian initiatives promoting CPR and (8) demographic data. The questionnaire is presented in Annex-A.

The first part includes an introductory question and asks about the knowledge base to examine if the information about how to perform CPR is accessible to the Austrian society. The second part discusses the traits that are influencing our actions, represented by the BFI-10 model (GESIS - Institut für Sozialwissenschaften). It consists of 10 statements, two for every dimension (one positive and one negative item). The model allows an overall measurement of the individual structure of traits. The participants should decide if and how strong each item agrees with them on a scale from one to four. Additionally, the option “I don’t know” is given. The third part comprises the motives that are possibly influencing the decision to perform CPR. These items are based on the PVQ (personal value questionnaire) and AMS (achievement motivation scale) (Schönbrodt 2012). Questions one and two in this section represents the motive “esteem”, three to seven “power”, eight to 12 “hope of success”, 13 to 15 “fear of failure”, 16 to 17 “fear of losing control” and 18 to 19 measures the “fear of losing prestige”. The traits and motives should identify the best possible context that the marketing campaign should include. The next part deals with perceptions and feelings associated with witnessing a SCA. As for traits and motives the participants have the possibility to express how strong each item agrees with them using the same scale. In the end, possible favorable conditions to participate in a first aid course are

queried to explore what actions would increase participation in CPR training. Also important to the research is the last question, asking about the knowledge regarding Austrian initiatives to raise awareness and improve bystander CPR. The goal of this question is to get to know if previous campaigns/projects were successful. The demographic data includes gender, age as well as education and were chosen according to possible influence factors on pro-social behavior explained in the literature. They are especially important to identify differences among the Austrian society and identify the target population.

The questionnaire was established using the service “SoSciSurvey” and distributed vía social media. The main channels were Facebook, What’s App, Survey Circle, and E-Mail. The next part displays the results of the survey.

3.1.2 Analysis

The data analysis was carried out using the statistic tool SPSS, the visualization of the results was done by applying MS Excel. The questions concerning the knowledge base consist of polar questions and a multiple response question. These were analyzed by counting the frequencies of the variables. Further, cross tabulations with chi-square test were used to identify if there is a correlation between knowledge and age group as well as knowledge and education. The part about the traits was analyzed as suggested by the Institute for Social Science Leipzig (GESIS - Institut für Sozialwissenschaften). To examine the expression of the participants on the dimensions of the “Big Five” (extraversion, agreeableness, conscientiousness, neuroticism) pro dimensions every answer was calculated as average. Therefore, the negative items (Items 1, 3, 4, 5 and 7) were recoded into (1=4) (2=3) (3=2) (4=1). The SPSS Syntax command is displayed in Annex-B. Afterward, the mean of every positive and recoded negative item of every dimension was computed. The results were summarized by generating frequencies. The same method was applied for evaluating the motives (esteem, power, hope of success, fear of failure, fear of losing control and fear of losing prestige). First, the items that belong to every dimension were summarized and then the mean was generated. The recoding of the traits and motives was done and visualized by defining a multiple response dataset and generating frequencies (compare Annex-B). To analyze the answers for the emotions, beliefs and external factors

influencing the decision-making process also multiple response datasets were created and displayed by applying the frequencies. The free-input fields were written down, counted and simply described in the results.

4 RESULTS

Completed and usable questionnaires were received from 212 Austrians. Table 1 provides an overview of the characteristics of the sample. The majority of the respondents is female, between 20-39 years old and graduated from university. Other forms of education include vocational school types, commercial colleges or specialized training. Positive to note is that 206 received CPR training at least once in their lives. However, just 31 ever witnessed a SCA.

Characteristics		N=212
Gender		
	m	65
	f	147
Age		
	< 20	4
	20-39	165
	40-59	37
	60+	2
Education	Apprenticeship	36
	A-levels	58
	Graduate	85
	Healthcare profession	27
	Others	6
Received CPR Training	Yes	206
Witnessed SCA	Yes	31

Table 1. Overview sample population

Knowledgebase

The question “Do you know how to perform CPR?” was answered by 75% with yes. As can be observed in table 2 and table 3, mostly graduates who belong to the 20 to 29-year-old population have a lack of knowledge regarding the performance of CPR.

			Education					
			Apprentice-ship	A-levels	Gradu-ate	healthcare profes-sion	Others	Total
Know-ledge	Yes	Count	24	40	56	26	12	158
		% within Know-ledge	15,2%	25,3%	35,4%	16,5%	7,6%	100,0%
	No	Count	12	18	24	0	0	54
		% within Know-ledge	22,2%	33,3%	44,4%	0,0%	0,0%	100,0%

*Table 2. Crosstabulation Knowledge*Education*

Whereby it needs to be considered that these represent the highest number of the participants. However, no correlation between the variables could be found (chi-square education = 15,969[a], p = 0,003; chi-square age = 3,257[a], p = 0,354). Even

though no significant relationship between these variables could be evaluated, it shows that interventions already need to be implemented for the young Austrian population.

			Age				
			younger than 20	20 to 39	40 to 59	60 or older	**Total**
Knowledge	Yes	Count	2	121	31	4	158
		% within Knowledge	1,3%	76,6%	19,6%	2,5%	100,0%
	No	Count	2	44	6	2	54
		% within Knowledge	3,7%	81,5%	11,1%	3,7%	100,0%

*Table 3. Crosstabulation Age*Knowledge*

The question “Do you have a family member with an increased risk of experiencing a SCA” could not be answered by 49% of the participants, 40% think there is a family member at risk and only 11% do not assume that an incident could happen within the

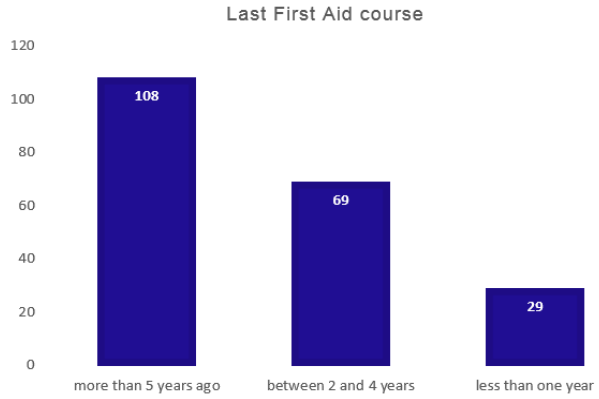

Figure 10. Question: If yes, when was your last first aid course?

family. However, it did not increase their motivation to participate in CPR training (compare figure 11). As already mentioned 206 of the respondents visited a first aid course, still 54 respondents declared not to know how CPR is carried out. Thus, for the majority, the last first aid course was more than five years ago. The highest count was again between those who are between the age of 20 and 39. Proportionally it could be detected that the older, the higher is the number of people receiving the last basic life support education more than five years ago (compare table 4). Nevertheless, there is no correlation between these two variables (chi-square = 3,257[a], p = 0,353).

		Last Course			
		more than 5 years ago	between 2 and 4 years	less than one year	Total
Age	younger than 20	1	2	0	3
	20 to 39	83	53	25	161
	40 to 59	20	13	4	37
	60 or older	4	1	0	5
Total		108	69	29	206

Table 4. Crosstabulation Age Last First Aid Course*

Figure 11 presents the reasons for attending basic life support training. The major reasons to participate was due to the obligation of the driving license. Not as important seem to be personal interest and requirement for the profession. Interesting to see is, that only a few received CPR training as part of their school education. Friends, who attended the same course was a less decisive reason. Nevertheless, it was mentioned as a top motivational factor (compare figure 16). The least encouraging factor is the recommendation of a doctor. Other reasons mentioned were: Requirement for volun-

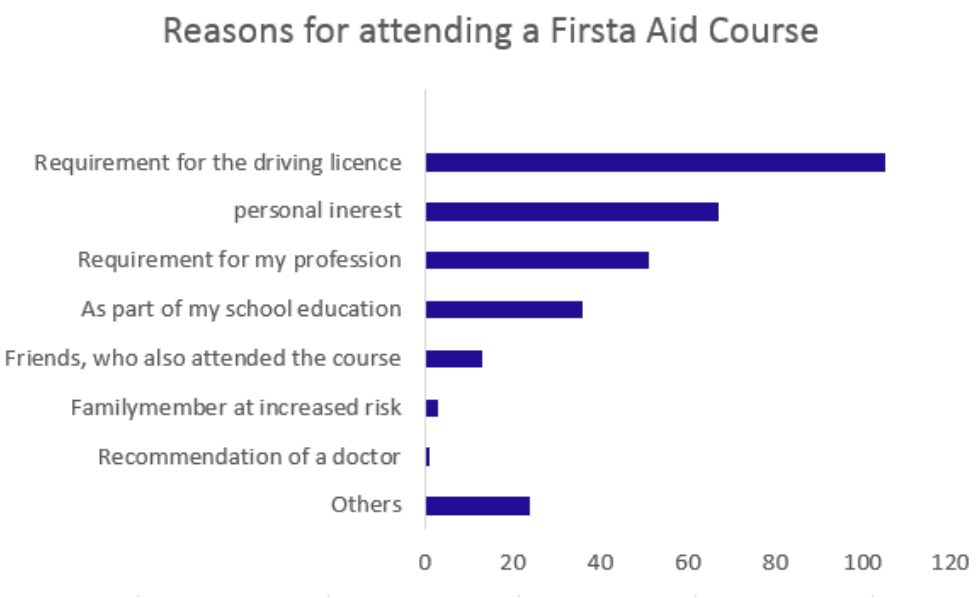

Figure 11. Reasons for attending a First Aid Course

tary aid organizations, member of the voluntary firefighters, education for paramedic, voluntary social year, and payment through the employer or military service. The six participants who did not take part in a first aid course argued that they had no time, never thought about it, that there was no offer in the area or that they were not interested.

Traits

Figure 12 presents an overview of the traits. The most decisive traits guiding the decision-making process of the participants are consciousness (item 3 and 8 of part of the “Big 5”) and openness (item 5 and 10 of part of the “Big 5”). It can be observed that the majority strongly agrees with doing a thorough job and are not considering themselves lazy. Only a small part tends to be lazy and inaccurate. In comparison to consciousness more than double of the participants strongly disagree with having ar-

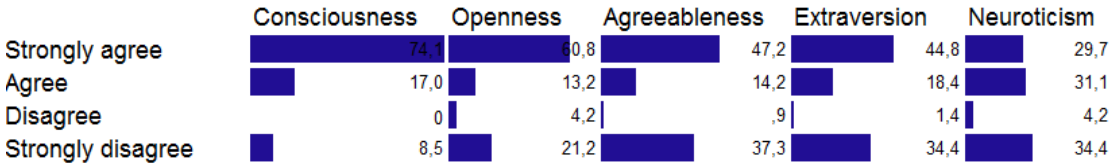

Figure 12. Overview Traits in %.

tistic interests and wanting to gain new insights just because of the joy of learning. However, approximately three-quarters of the participants strongly agree or agree with this description. A bigger difference can be observed to agreeableness, what is represented by the items 2 and 7 of the “Big 5”. In total, more than half have the perception to be generally trusting and are not likely to find faults in others. With the decreasing strong agreement with being tolerable the number of those who strongly disagree, and therefore, consider themselves very critical towards others and don’t easily develop trust, increases. Compared to agreeableness, nearly the same amount of the once who completed the questionnaire agrees with being outgoing and sociable (item 1 and 6 of the “Big 5”). Whereby, it needs to be noticed that the distribution between those who strongly agree and agree differs. The least decisive trait is neuroticism (item 4 and 9 of the “Big 5”). Even though still more than half of those who finished the questionnaire strongly agree or agree with being someone who gets nervous easily. Nonetheless, only a small amount totally compared to the other items totally complies with the description but, therefore, a higher number agrees. Nevertheless, nearly half state to be able to cope with stress very well. The overall response to this question was surprising as the participants either strongly agree or strongly disagree with the descriptions. This allows a clear interpretation of what characteristics the decision-making process is based.

Motives

The evaluation of the motives points out that the motivation for success is the most determining (compare figure 13). This is in agreement with the strong manifestation

of consciousness. The motives prestige, control, and appreciation are equally decisive. Unexpected is that the fear of failure is less determinant. A big difference can be observed when analysing the power motive. The hope to succeed comprises the items 8-12 in part (6) “potential motivational factors” of the questionnaire. It highlights

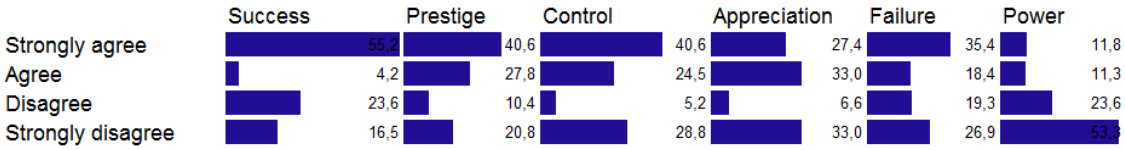

Figure 13: Overview Motives in %.

the importance of producing high qualitative work, maintaining high standards for the quality of their work, continuously improve oneself and take opportunities to work on difficult and challenging tasks. Those who strongly agree with this description account for as many as disagree and strongly disagree. Nearly similar results can be detected for the fear of losing prestige (item 18 and 19 of part (6)) and the fear to lose control (item 16 and 17 of part (6)). This shows that for Austrians it is important to keep their reputation undamaged and are worried in situations where their reputation is in danger. The fear of losing control only differs in the number of participants who strongly disagree. Over half strongly agree or agree that they get scared when they lose control over things and that they start worrying instantly when they notice that they do not have an impact. In comparison to prestige and control only approximately one-quarter strongly agree that appreciation (item 1 and 2 of part (6)) presents a motive for them. They are of the opinion that being fully recognized and appreciated is important to them as they feel like high-quality work is nothing if it is not appreciated and they need positive feedback from their environment. The fear of failure (item 13 to 14 of part (6)) represents being afraid to fail in difficult situations when a lot depends on it and the feeling of being uneasy doing something where success is not guaranteed. More of those who finished the survey strongly agree with this description than with appreciation. However, also, a few more disagree or totally disagree. This is why appreciation is considered more essential to the participants. The “power” motive (item 3 to 7 of part (6)) is the least decisive motive. Nearly as many as strongly agree with being motivated by success disagree strongly disagree with enjoying exercising control over others. Generally, the interpretation of the motives is not as precise as for the traits but still gives fundamental indications about what motivates the Austrians.

Emotions and Beliefs

A substantial result is that just 114 out of 206 who participated in a first aid course feel competent enough to perform CPR. Also, more than 100 of the interviewed would be afraid to harm the patient. A less decisive factor is the fear to contradict an infectious disease.

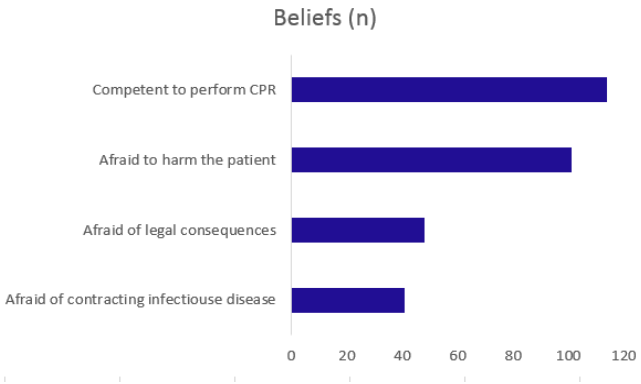

Figure 14. Question: Imagine you are witnessing a SCA.

External factors influencing behavior

Actual witnesses of a cardiac arrest were just 31 out of 212. Nonetheless, with a few exceptions, they all knew how to perform CPR at this time (compare figure 17). A critical point is that nearly no one received the help of a medical dispatcher. Roughly half of the sample stated that the incident happened in a public location. For less than five interviewed the patient was a family member. Also, only two were in the situation to be the only witness and only three were supported by a medical emergency dispatcher. Except one nobody felt the need to attend a First Aid Course after the incident. Whereby, it needs to be acknowledged that 16 of them have a healthcare profession.

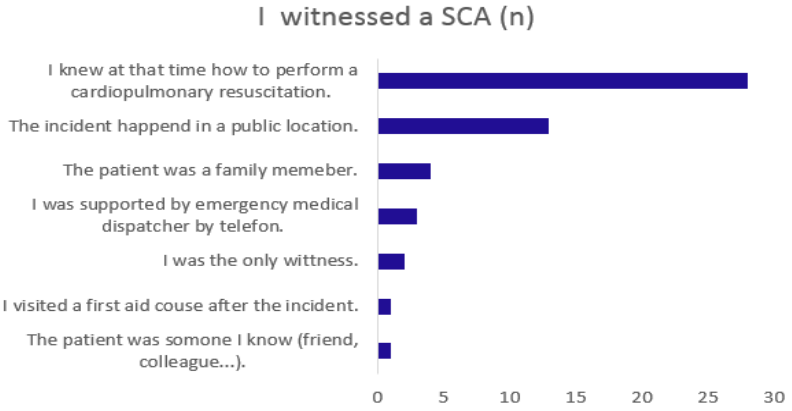

Figure 15. Question: If yes, please select all statements that agree with you.

Potential motivational factors

The most essential factors to participate in a CPR training in the future would be, as displayed in figure 16, if the course is free of charge, during working time, together with friends, strengthen self-confidence, organised by a club, appreciation for attendance, course lasts maximum one afternoon or if the course is at least after working time at work. Online courses, the opportunity of peer-to-peer learning, attendance together with children, recommendation through a healthcare professional, on the other hand, are less attractive to the sample population. However, with a few exceptions, all the participants are generally interested in the attendance of a first aid course. Other factors encouraging the participation mentioned were special offers on a refresher course, if it is a legal duty, if it is hands-on training (to be sure to know how to act correctly afterwards), if the course is suitable with working time and counted as working time, single courses, special offers for students during vacations, have enough available time for it and being in the situation where I could have saved a life with better knowledge.

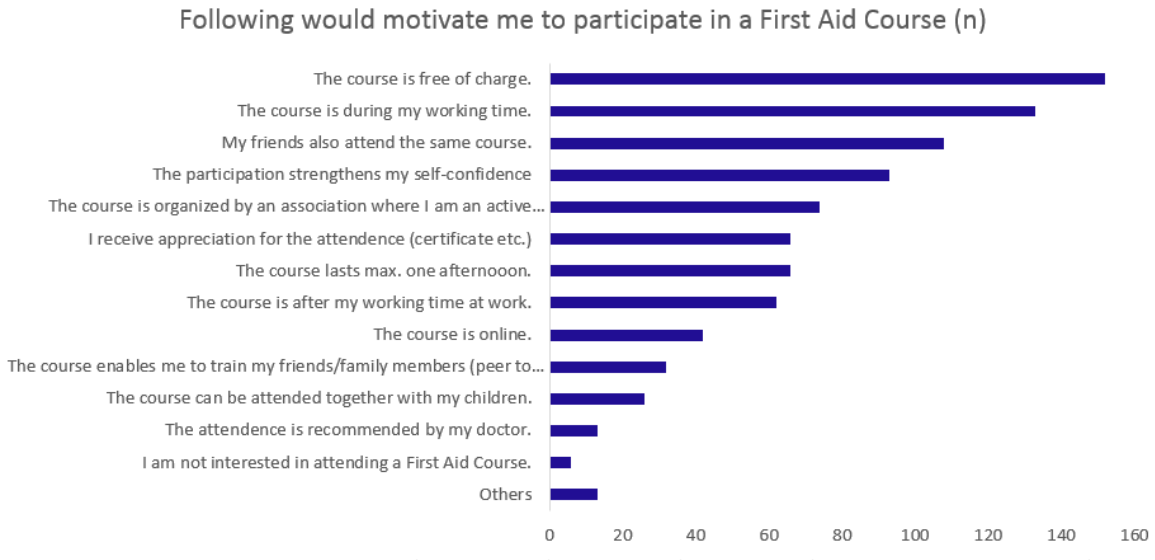

Figure 16. Question: What of the following statements would motivate you to participate in a First Aid course?

Austrian initiatives promoting CPR

Surprisingly only 26 out of 212 know Austrian initiatives promoting the performance of CPR. Mostly known are programs offered by different rescue services like the “Samariterbund”, Red Cross or the Green Cross (named 20 times). Organisations like the Austrian Resuscitation Council, “Verein Puls” or the Ministry of Health were men-

tioned once. An essential aspect is that only three participants could state actual initiatives not just offering organizations. These programs were the “Drück mich” initiative (2 respondents), the project “Herzkasperl” (1 respondent) and the installment of defibrillators in public buildings (1 respondent).

5 Discussion

In this paper, it was primarily invested how the Austrian society may be motivated to engage in CPR training in order to facilitate CPR performance and reduce unnecessary deaths. Based on the generated data the following interpretations and recommendations could be developed.

It could be argued that the majority of the sample belongs to the age group 20 to 39 due to the distribution through social media. As they are more frequently using Facebook and other social platforms. Further, it is especially attractive for students. A reason for the high percentage of female citizens taking part in the survey may be that they are generally more interested in the topic and more willing to help. Importantly the majority trained CPR at least once in their lives. Nevertheless, it needs to be noted that for more than 50% the last first aid course was more than five years ago. This indicates that it is less likely that the knowledge is accessible from memory in case of an emergency (Petty and Krosnick 2004). Further, the past time between the training in the actual performance could be an explanation for the beliefs towards CPR performance(Fazio 1990; Petty and Krosnick 2004). The fact that the last course was years ago could as well be explained because despite the obligatory course for the driving license there is no motivation to take part in CPR training. Additionally, no offers for a refresher training could be a reason for the low engagement in first aid courses. Besides, it could be claimed that the topic is not discussed in schools or universities what leads to low awareness among the population and therefore does not facilitate the willingness to participate in further training (Van Aken and Böttiger 2015). As referred to in the literature training is fundamental to increase the accessibility of the task in memory. Only well-learned associations allow being activated automatically as they require less cognitive work (Fazio 1990; Petty and Krosnick 2004). Another concern is that nearly half of the respondents do not have enough knowledge about CA to be able to understand its risks. This highlights that there is not enough data and information exchange about the topic. That a family member of risk does not lead to investing in CPR training may be due to lack of information about it. There

would be various possibilities to increase the literacy of CA and its consequences like e.g. including it in school education, offer courses at university and better involvement of healthcare professionals. Although a doctor's referral would not be a factor that influences the decision directly (compare figure 16) healthcare professionals could play a substantial role in the process of creating awareness and indirectly change people's perceptions. The reasons not to participate in first aid training, could not give a more detailed insight as only very few (3%) did not receive CPR training. A deeper understanding could have been created by asking this question to all participants to discover why no refresher course has been visited. Also, a comments section may have exposed different barriers. However, it may be assumed that no time, no offer in the area and no interest, as discovered in various other studies are the most pressing reasons. Regarding the traits and motives, it needs to be taken into account that these evaluations are subjective opinions and may differ from results when applying other methods like a PSE (Schad 2006). Nevertheless, an overview of what influences and motivates behavior and the decision-making process can be observed. The tendency of the interviewed to be conscious and thorough rather than inaccurate and lazy could, on the one hand, be explained by the high percentage of students/graduates who generally may be more stressed to work precisely or on the other hand be a result of a rather goal-directed society with high competition. This is also in compliance with the predominant motive "hope to succeed". Again, this implies that Austrians need more confidence to be able to succeed in performing CPR what could be achieved by raising awareness and offers that are complying with their wants and needs and considering their emotions and believes. Increased confidence would as well decrease the fear to lose reputation because of failure. By changing the individual's perspective regarding CA and CPR performance the predominant beliefs like fear to harm people, or fear of legal consequences may be significantly reduced. The low amount of the witnesses of an SCA may be a result of the high amount of young people who do not belong to the population at risk answering the questionnaire. Additionally, half of the participants who witnessed a SCA have a healthcare profession, and are, therefore, better trained and more likely confronted with emergencies where an individual's life is at stake. The mentioned reasons to participate in a first aid course are rather easy interventions that would make a difference. However, all of them require a high level of integration between various sectors and additionally forces the need for transparency. For instance, to convince employers that they should enable their employees to attend a first aid course during working hours the government

needs to offer some incentives. Without creating a benefit for all parties involved encouraging them to take the right choice will be difficult. A benefit for the government may be reduced healthcare costs and a benefit for the company may be more satisfied and motivated employees. Nonetheless, it may not be enough for an employer as there is no assurance that the employees would appreciate it. To solve the problem firstly, more detailed data needs to be obtained to learn about motivations of employees in different fields as well as to explore the wants and needs of the employers. Generally, a better cooperation and agreements between voluntary associations, firefighters, leisure clubs, schools, universities and healthcare professionals need to be developed to be able to improve the situation. Additionally, programs like special offers if you come together with a friend, inclusion of CPR in self-defense training or the possibility of receiving just CPR training to reduce the time of training and the costs could open new opportunities to increase the willingness to participate. In contrast to what the literature implies online training does not seem to be very attractive to the Austrian population (compare figure 16). The focus should be on hands-on training using manikins. Further, it needs to be thought of who will train the pupils, students or employees. Children may prefer that their teacher educates them about CPR as they feel more comfortable. In this case, for example, employees of the Red Cross would need to train the teachers in a way that they can professionally pass on their knowledge to their pupils. Students or employees may rather receive the training from a professional. The low awareness of Austrian initiatives may be because most of them focus on the city of Vienna. The campaign “Schock fürs Herzilein” by the non-profit organization “Verein Puls”, for instance, was established to raise awareness about the existence of public defibrillation stations in Vienna. The program “Drück mich” aims to provide as many people as possible with CPR training (Arbeitsgemeinschaft für Notfallmedizin). They e.g. invented the “Tag der Wiederbelebung” (resuscitation day) and are present at various events. However, it is very difficult to find information about their training. The barrier with courses offered by the Red Cross may be that the courses are quite expensive. Another initiative of the Red Cross is called “Drive +Help” established in 2011. It is a mobile application that should facilitate safety in road traffic. It ensures fast access to help and provides possibilities to improve knowledge about e.g. from first aid to traffic regulations. Further, they offer a WhatsApp subscription to receive news (Österreichisches Rotes Kreuz 2017). Also, the basic life support courses offered by the Austrian Resuscitation Council are quite difficult to find and detailed information about offers and prices are missing (Austrian

Resuscitation Council 2017). Generally, it may be assumed that the programs failed to be implemented on a broad scale because they did not consider the wants and needs of the Austrian population. Additionally, no evaluation of the effectiveness of these programs could be found.

To summarize the findings, immediate and effective bystander CPR is an essential aspect of the survival chain for patients suffering an OHCA. The reason why there is a need for a SM intervention is pointed out by the high rate of OHCA ending deadly throughout the European Union. The Austrian Association for emergency care argues that every tenth Austrian suffers from an OHCA in his/her life and only around 10% survive it (Arbeitsgemeinschaft für Notfallmedizin). Most of these deaths could be prevented if bystanders would be trained to deliver basic life support. Through chest comprehension and/or ventilation the blood flow to the heart and brain can be maintained until EMS arrives and can continue with additional treatment. Empowering Austrians to perform CPR may increase the chances of survival significantly and therefore reduce deaths (Graham et al. 2015; Markenson et al. 2016). By using social marketing tools to develop a campaign aiming to raise awareness and motivate individuals to participate in CPR training they still are given a choice but are guided to choose the promoted behavior. The main benefits are created because SM aims to exchange resources voluntarily and increases the advantages for all involved stakeholders (Grier and Byrant 2005; Lefebvre 2011). Overall benefits for the society could be increased self-confidence through increased knowledge and development of a safer environment by promotion of pro-active behavior as well as decreased costs of the consequences of a SCA. Nonetheless, it is just effective if all the sectors (government on a national, federal and local level), education, healthcare, employers…) are coordinated. It needs an approach that highlights the necessity of CPR, educates people and, offers different choices that fit the different needs. If a SM campaign is carried out considering all the previously mentioned aspects, it may lead to a rise in participation of CPR training, increases confidence and hence, results in pro-active behavior when witnessing a SCA. Further, it needs to be recognized that changing behavior is a long-term process and immediate results cannot be expected. It is essential that the initiative is evaluated frequently and adapted when necessary.

To improve the situation in Austria by using SM the information gained through the initial research suggests targeting the population between the age 20 and 39 who

receives or received an academic education with a family member at increased risk. The product/service that should be offered, should be free of charge, take place at a life path point (e.g. university or work) and include a special incentive e.g. if you come together with a friend, or being able to attend the course at work during working time. Explicitly, an initiative to increase participation among students could be a voluntary course at University, that is free of charge and for which they receive a certificate and ECTs points. Like this, the costs (time, money) are reduced and an immediate benefit that is valued by the target group (ECTs points) is generated. In addition, a certificate could be given to the participants to increase the feeling to be appreciated. As the research suggests another focus should be on providing different offers for refresher training that appeal to the different age groups. The most important stakeholders that need to be considered in Austria are the Austrian Red Cross, the Austrian Resuscitation Council, the government (national, regional and local), the ministry of education, the ministry of health, representatives for voluntary associations like the firefighters, the general public and representatives for employers and employees. The recognized strength is represented by the existing projects that can be used and modified to better fit the wants and needs of the Austrians. A barrier to successfully improve the situation in Austria is the lack of transparency. The absence of a nation-wide registry reporting OHCA is an indicator for the gap in actual knowledge of occurrence and treatment. Therefore, as an initial step to collect the necessary data, it is fundamental to improve the transparency throughout the system. This can be accomplished by developing e.g. a national cardiac arrest dataset. The gained information may open new possibilities to train bystanders and prevent death. Besides, the collection and analysis of this data enable different countries and systems to benchmark themselves and learn from each other to further improve treatment and the chance of survival (Gräsner et al. 2016). Moreover, it needs to be thought about how the different cultures may react to this topic or also, how refugees could be trained to make sure they know how to assist in case of witnessing an OHCA (Andreasen 2011). Pointing out the limitations of this work firstly, the findings might not be transferable to the whole population due to the rather small sample size. Also, the distribution via social media limited the reach as well as the diversity of the participants. By using Facebook as the main platform to share the questionnaire, also other German-speaking people despite the target population could have answered. Furthermore, the use of the “unified motivation scale” to gain knowledge about the motives represents solely the subjective opinion of the individual and may not be in compliance with the results as if using a PSE. In this

regard, the questions could have been answered to fulfill social norms and may not entirely represent the truth.

All in all, SM offers the right approach to increase CPR training and further, reduce death due to OHCAs. Nevertheless, to establish a successful SM strategy in Austria further development of the study would be necessary. A special focus should be on those who already witnessed a SCA. Besides, a differentiation between those who performed CPR and those who diffused their responsibility would clarify the different motives.

6 Conclusion

This paper discusses primarily the initial research necessary to develop a successful social marketing campaign that aims to facilitate CPR performance. It has given an account of the requirement to raise awareness of OHCA and its consequences and bring CPR training in the center of attention to increase attitude accessibility. Additionally, to reinforce bystander CPR performance in the future the education needs to be more consumer oriented as the training modalities may have a great impact on the effectiveness of the training. To facilitating participation in CPR training and long-term reducing death due to OHCAs in Austria SM can be successful. However, the research observes various limitations, like structural barriers or lack of transparency and cooperation. The use of internet-based approaches may expand the education outside of the classroom to the internet via television, mobile phones or other electronic devices. This brings new opportunities to train the society more efficiently and help to further increase the survival rate.

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ANNEX - A

Willkommen

Herzlichen Dank, dass Sie sich für diese Umfrage Zeit nehmen. Mein Name ist Bettina Leitner und ich bin Studentin am Management Center Innsbruck. Meine Masterarbeit beschäftigt sich mit der Durchführung der Herz-Lungen-Wiederbelebung im Falle eines plötzlichen Herzstillstandes außerhalb von Gesundheitseinrichtungen (bspw. in einem Restaurant, auf der Straße). Bitte, beantworten Sie den Fragebogen lediglich, wenn Sie aus Österreich kommen. Ihre Angaben werden selbstverständlich anonym erhoben und ausgewertet.

Bei Fragen und Anmerkungen können Sie mich gerne unter folgender E-Mail Adresse kontaktieren: b.leitner@mci4me.at

1. Wissen Sie, wie eine Herz-Lungen-Wiederbelebung durchgeführt wird?

- ○ Ja
- ○ Nein

2. Haben Sie Familienmitglieder mit erhöhtem Risiko für einen Herzstillstand?

- ○ Ja
- ○ Nein
- ○ Weiß ich nicht

3. Haben Sie bereits einen Erste-Hilfe-Kurs absolviert?

- ○ Ja
- ○ Nein

4. Wann haben Sie zuletzt an einem Erste-Hilfe-Kurs teilgenommen?

- ○ vor mehr als 5 Jahren
- ○ in den letzten 2-4 Jahren
- ○ vor weniger als einem Jahr

5. Was waren die Gründe für Ihre Teilnahme an einem Erste-Hilfe-Kurs?

Bitte kreuzen Sie alles Zutreffende an!

- ☐ Persönliches Interesse
- ☐ Familienmitglied mit erhöhtem Risiko
- ☐ Freunde, die ebenfalls einen Kurs besucht haben
- ☐ Empfehlung Ihres Arztes
- ☐ Voraussetzung für Ihren Beruf
- ☐ Im Rahmen des Schulunterrichts
- ☐ Voraussetzung für den Führerschein
- ☐ Sonstiges

6. Aus welchen Gründen haben Sie noch nicht an einem Erste-Hilfe-Kurs teilgenommen?

Bitte kreuzen Sie alles Zutreffende an!

- [ ] Kein Interesse
- [ ] Zu wenig Zeit
- [ ] Kein Angebot in der Umgebung
- [ ] Zu hohe Kosten
- [ ] Ich habe nie darüber nachgedacht
- [ ] Sonstiges

Eigenschaften, die unser Handeln beeinflussen.

Entscheidungen werden unter anderem auch aufgrund unserer Eigenschaften beeinflusst. Die folgenden Aussagen beschreiben Eigenschaften, die eine Person haben kann. Antworten Sie bitte anhand der Skala von trifft überhaupt nicht zu, bis trifft voll und ganz zu.

7. Beurteilen Sie bitte inwiefern folgende Aussagen auf Sie zutreffen.

	trifft überhaupt nicht zu	trifft eher nicht zu	trifft eher zu	trifft voll und ganz zu	kann ich nicht beurteilen
Ich bin eher zurückhaltend, reserviert.	○	○	○	○	○
Ich schenke anderen leicht Vertrauen, glaube an das Gute im Menschen.	○	○	○	○	○
Ich bin bequem, neige zur Faulheit.	○	○	○	○	○
Ich bin entspannt, lasse mich durch Stress nicht aus der Ruhe bringen.	○	○	○	○	○
Ich habe nur wenig künstlerisches Interesse.	○	○	○	○	○
Ich gehe aus mir heraus, bin gesellig.	○	○	○	○	○
Ich neige dazu, andere zu kritisieren.	○	○	○	○	○
Ich erledige Aufgaben gründlich.	○	○	○	○	○
Ich werde leicht nervös und unsicher.	○	○	○	○	○
Ich habe eine aktive Vorstellungskraft, bin fantasievoll.	○	○	○	○	○

Motive, die unsere Entscheidungen beeinflussen.

Ebenso beeinflusst die Motivation bestimmte Ziele zu erreichen unsere Entscheidungen. Die folgenden Aussagen beschreiben Motive, die eine Person haben kann. Antworten Sie bitte anhand der Skala von trifft überhaupt nicht zu, bis trifft voll und ganz zu.

8. Beurteilen Sie bitte, inwiefern folgende Aussagen auf Sie zutreffen.

	trifft überhaupt nicht zu	trifft eher nicht zu	trifft eher zu	trifft voll und ganz zu	kann ich nicht beurteilen
Eine gute Leistung ohne Lob ist für mich wenig wert.	○	○	○	○	○
Ich brauche sehr viele positive Rückmeldungen von meinem Umfeld.	○	○	○	○	○
Es ist mir wichtig, über eine Gruppe oder eine Organisation Kontrolle ausüben zu können.	○	○	○	○	○
Es ist mir wichtig, Einfluss ausüben können.	○	○	○	○	○
Es ist mir wichtig, in einer Führungsposition zu sein, wo andere für mich arbeiten und von mir Anweisungen erhalten.	○	○	○	○	○
Es ist mir wichtig, andere Menschen beeinflussen zu können.	○	○	○	○	○
Eine Stellung mit Prestige und Ansehen ist mir wichtig.	○	○	○	○	○
Meine Leistung stets auf einem hohen Niveau zu halten ist mir wichtig.	○	○	○	○	○
Ich bevorzuge Projekte, die mich bis an die Grenze meiner Leistungsfähigkeit bringen.	○	○	○	○	○
Es ist mir wichtig, mich ständig zu verbessern.	○	○	○	○	○
Ich übernehme gerne Verantwortung für schwierige und herausfordernde Aufgaben und Ziele.	○	○	○	○	○
Ich fühle mich zu Arbeiten hingezogen, in denen ich die Möglichkeit habe, meine Fähigkeiten zu prüfen.	○	○	○	○	○
In etwas schwierigen Situationen, in denen viel von mir selbst abhängt, habe ich Angst zu versagen.	○	○	○	○	○
Es beunruhigt mich, etwas zu tun, wenn ich nicht sicher bin, dass ich es kann.	○	○	○	○	○
Ich bekomme Angst, wenn sich Dinge meiner Kontrolle entziehen.	○	○	○	○	○
Wenn ich merke, dass ich auf manche Dinge keinen Einfluss habe, dann bin ich schnell beunruhigt.	○	○	○	○	○
Die Vorstellung in einer Situation machtlos zu sein macht mir Angst.	○	○	○	○	○
Ich achte sehr darauf, dass mein Ansehen nicht beschädigt wird.	○	○	○	○	○
Ich würde mir große Sorgen machen, wenn mein „guter Ruf " bedroht ist.	○	○	○	○	○

9. Stellen Sie sich vor, dass Sie Zeuge eines plötzlichen Herzstillstandes sind.

Beurteilen Sie bitte folgende Aussagen von trifft überhaupt nicht zu, bis trifft voll und ganz zu.

	trifft überhaupt nicht zu	trifft eher nicht zu	trifft eher zu	trifft voll und ganz zu	Kann ich nicht beurteilen
Ich habe Angst davor, dem Patienten Schaden zuzufügen.	○	○	○	○	○
Ich habe Angst davor, eine Infektionskrankheit zu bekommen.	○	○	○	○	○
Ich habe Angst vor rechtlichen Konsequenzen.	○	○	○	○	○
Ich fühle mich kompetent genug eine Herz-Lungen-Wiederbelebung durchzuführen.	○	○	○	○	○

10. Waren Sie bereits Zeuge eines Plötzlichen Herzstillstandes?

- ○ Ja
- ○ Nein

11. Kreuzen Sie bitte all jene Aussagen an, die für Sie zutreffen.

- [ ] Ich wusste zu dem Zeitpunkt wie eine Herz-Lungen-Wiederbelebung durchgeführt wird.
- [ ] Bei dem Patienten/der Patientin handelte es sich um ein Familienmitglied.
- [ ] Bei dem Patienten/der Patientin handelte es sich um eine Person die ich kenne (Freunde, Arbeitskollege...).
- [ ] Ich wurde von der Rettung telefonisch unterstützt.
- [ ] Ich war der einzige Zeuge/die einzige Zeugin.
- [ ] Der Vorfall ereignete sich an einem öffentlichen Ort.
- [ ] Ich habe nach dem Vorfall einen Erste-Hilfe-Kurs besucht.

12. Welche der folgenden Voraussetzungen würden Sie dazu motivieren an einem Erste-Hilfe-Kurs teilzunehmen?

Bitte kreuzen Sie alles Zutreffende an!

- [ ] Der Kurs findet während der Arbeitszeit statt.
- [ ] Der Kurs findet nach der Arbeitszeit in meiner Arbeit statt.
- [ ] Der Kurs findet online statt.
- [ ] Der Kurs dauert max. einen Nachmittag.
- [ ] Der Kurs kann gemeinsam mit meinen Kindern besucht werden.
- [ ] Die Teilnahme wird von meinem Arzt empfohlen.
- [ ] Meine Freunde nehmen ebenfalls am Kurs teil.
- [ ] Der Kurs ist kostenlos.
- [ ] Für die Teilnahme am Kurs erhalte ich Anerkennung (Zertifikat etc.).
- [ ] Die Teilnahme stärkt mein Selbstbewusstsein.
- [ ] Der Kurs wird von einem Verein organisiert, bei dem ich Mitglied bin (Sportverein, Landjugend etc.).
- [ ] Der Kurs ermöglicht mir meine Freunde/Familienmitglieder zu schulen (gegenseitiges unterrichten).
- [ ] Ich habe kein Interesse an einem Erste-Hilfe-Kurs teilzunehmen.
- [ ] Sonstiges

13. Kennen Sie Österreichische Initiativen zum Thema Herz-Lungen-Wiederbelebung?

- ○ Ja
- ○ Nein

14. Welche österreichische(n) Initiative(n) zum Thema Herz-Lungen-Wiederbelebung kennen Sie?

15. Geschlecht

- m
- w

16. Wie alt sind Sie?

- unter 20
- 20 bis 39
- 40 bis 59
- 60 oder älter

17. Welche Ausbildung haben Sie?

- Lehre
- Matura
- Akademiker
- Ich übe einen Gesundheitsberuf aus (Arzt, Krankenpflege, Sanitäter...)
- Sonstiges

ANNEX – B

```
*Part 4 - Personality traits.
*recode negative personality items and evaluate mean.
RECODE   PT02_01  PT02_03  PT02_04  PT02_05  PT02_07 (1=4) (2=3) (3=2) (4=1) into
 PT02_01r  PT02_03r  PT02_04r  PT02_05r  PT02_07r.

Compute BFI_E = MEAN    ( PT02_01r, PT02_06).
Compute BFI_N = MEAN    ( PT02_04r, PT02_09).
Compute BFI_O = MEAN    ( PT02_05r, PT02_10).
Compute BFI_C = MEAN    ( PT02_03r, PT02_08).
Compute BFI_A = MEAN    ( PT02_07r, PT02_02).

FREQUENCIES    BFI_E  .
FREQUENCIES    BFI_N  .
FREQUENCIES    BFI_O .
FREQUENCIES    BFI_C .
FREQUENCIES    BFI_A  .
```

Figure 17. SPSS Syntax Command Traits.

```
*Part 5 Motives.
*Compute Motives.
Compute Motive_E = MEAN    (M002_01, M002_02).
Compute Motive_P = MEAN    (M002_03, M002_04, M002_05, M002_06, M002_07).
Compute Motive_S = MEAN    (M002_08, M002_09, M002_10, M002_11, M002_12).
Compute Motive_F= MEAN    (M002_13, M002_14, M002_15).
Compute Motive_C = MEAN    (M002_16, M002_17).
Compute Motive_A = MEAN    (M002_18, M002_19).

FREQUENCIES    Motive_E .
FREQUENCIES    Motive_P    .
FREQUENCIES    Motive_S  .
FREQUENCIES    Motive_F    .
FREQUENCIES    Motive_C     .
FREQUENCIES    Motive_A .
```

Figure 18. SPSS Syntax Command Motives