

Health Prevention Programs in Social Marketing: Recent Trends and Future Prospects

Corina Serban, PhD in progress
Academy of Economic Studies, Bucharest, Romania
serban.corina@gmail.com

Abstract. Social marketing methods are nowadays frequently used in the development of health prevention programs. The main **Objectives** of this paper are: to identify the role of skin protection programs in society, to evaluate sun protection behavior among consumers and to propose future directions of research in skin cancer prevention. **Prior Work** in skin protection focused on the risks associated with long periods of sun exposure while offering advice regarding responsible behavior. In Europe, the main center of skin cancer research is European Cancer Observatory and, in Romania, Romanian Society of Dermatology (SRD). These institutions develop specialized programs annually. The **Approach** used in this article is the survey. The paper analysis consumers' perceptions regarding skin protection behavior in Romania by using a structured online questionnaire. A total number of 86 respondents participated in the study. **Results** show that 53% of respondents don't have a sun protection behavior. **Implications** of the study are: health practitioners can use these findings in further research and nonprofit organizations can increase their prevention programs in certain groups. The **Value** of this paper consists of direct analysis regarding skin cancer issue in Romania while emphasizing the importance of health prevention programs for social marketing domain.

Keywords: sun protection; skin cancer; social program; responsible behavior

JEL Classification: P20; L19

1. Introduction

Sun protection has become an important aspect of every day life. As more UV radiations pass every day through the ozone layer, people are being exposed to severe risks. Pigmentation, sun burns, early aging are some of the side-effects associated with sun exposure. However, skin cancer remains the most serious disease in this category and its incidence has increased drastically in the last decade. Prevention remains the best solution for skin cancer that is why companies, institutions and non-profit organizations have joined together and launched new and more attractive campaigns. This paper focuses on health promotion programs and studies the impact generated by skin cancer prevention campaigns on population in Romania. Therefore, the cross-sectional survey describes the influence of four factors: family, school, mass-media and government on people's behaviour. The first two factors are considered to be main sources of education, mass-media represents a source of information, while the government, is mainly

responsible with establishing laws which respond to people needs. Using the structural equation model, the article analyzes a multiple regression in SPSS software program. The generated model consists of one dependent variable and four independent variables. The article describes the relationships between sun protection behaviour and the four factors considered, as well as their impact on the consumer. Results show that correlations between variables are high and the level of significance is less than the theoretical value of 0.05. As a result, the model considered is valid. In real world conditions, the model shows the low incidence of sun protection behaviour, as well as the carelessness of people regarding skin cancer issue. People have little knowledge of how many risks are involved with sun exposure and continue to think that a healthy skin is a tanned skin. As the incidence of skin cancer continues to grow, the need for education becomes a priority. Social marketing programs represent an important connection between health practitioners and consumers. Their efforts should be encouraged and supported by local communities, public institutions and large companies. Only by informing people, the incidence of skin cancer will decrease and this can only be done through partnership and cooperation.

2. Skin Cancer Prevention Programs

Nowadays, over 132,000 skin cancer cases occur globally each year. According to the Skin Cancer Foundation Statistics, one in every three cancers diagnosed is a skin cancer and the number continues to grow.

In developing skin cancer, some of the predisposed factors are: long exposure to the sun, a history of sunburn and fair skin tone (Alberts and Hess, 2008). These factors lie within each person's own responsibility and awareness of the problem.

In fighting skin cancer, many specialized institutions and non-profit organizations has initiated prevention campaigns. Some important social programs are organized every year in Australia, the country with the highest incidence of skin cancer in the world (Templeton, 2011). This is due to Australians fair skin and the extreme levels of UV radiation registered in this country. Therefore, skin cancer accounts for over 80% of all cancer diagnosed in Australia, and more than 1600 Australians die every year from this disease.

One of the most recent campaigns in Australia is "Dark Side of Tanning" organized at the beginning of year 2010 by SunSmart and Cancer Institute NSW. The "Dark Side of Tanning" campaign aimed to inform young people about the deadly nature of melanoma, which is one most common cancers developed by adolescents. The campaign emphasizes that tanning is a sign of skin cells trauma by challenging the misconception that a tan does no damage (Snow, 2010).

In Europe, skin cancer prevention programs run annually. Their main purpose is to inform and provide evidence-based information about skin cancer and sun protection in general. During 2010, in United Kingdom ran a sun protection campaign initiated by SunSmart and Cancer Research UK.

The campaign delivered accurate information across the country through a specialized team. Among the activities initiated during the campaign we can mention: a social networking program, a road show and a school competition.

The organizers established relationships with local Cancer Networks and Local Authorities to promote a unified approach to skin cancer awareness through print advertisement and websites.

Moreover, through the development of the Advisory Board, people were provided statistics and information about skin cancer prevention while effective messages and strategies were created in order to better address the problem (SunSmart, 2010).

Another example of European campaign was “Care in the Sun”, organized during August-October 2010, in Northern Ireland. Initiated by the Public Health Agency, the campaign raised awareness of the health risks associated with sunbeds (Ulster Cancer Foundation, 2010).

In Northern Ireland skin cancer has become the most common form of cancer (UTV News, 2010). Therefore, the campaign communicated the long term health effects of sunbeds – skin cancer and pre-mature ageing, to sunbed users and the wider public. The main target of the campaign was young people, under the age of 35, who were more likely to use sunbeds.

In the United States, a recent campaign was “Choose your cover”, which mainly focused on offering free skin cancer screenings to population. The annual campaign was carried during the summer of 2010, though the initial program started in 2003 (Levinson, 2010). The campaign was sponsored by the United States Department of Health and Human Services (DHHS) and the Centres for Disease Control and Prevention (CDC).

“Choose your cover” provided information regarding skin cancer detection, prevention and sun smart precautions measures.

The campaign involved all kinds of groups, from physicians, to nurses, hospitals and health departments. Volunteers, municipalities and large corporations joined together and performed informing activities regarding skin cancer by using different channels of communication: brochures, posters, print ads, online articles and websites.

In Romania, the Romanian Society of Dermatology (SRD) organizes annually skin cancer prevention campaigns. The events usually take place in May on the occasion of Euro Melanoma Day (Romanian Society of Dermatology, 2010).

These campaigns come as a response to the increasing number of skin cancer cases traced among Romanians during the last years. Statistics show that, since 2006, the incidence of skin cancer increased six times, making the problem more difficult to handle by doctors alone. Thus, if in 2006, of the 784 persons auscultated, 68 persons were diagnosed with skin cancer, in 2009, of the 3124 persons auscultated more than 407 cases of skin cancer were confirmed.

More than 300 dermatologists from all over country, members of the Romanian Society of Dermatology (SRD) celebrated Euro Melanoma Day on May 25th, 2010. During that day they offered free auscultations to people interested in skin cancer. Patients also received advice regarding the risks associated with skin cancer and learned ways to prevent it.

Though Romania is not yet exposed to high risks of developing skin cancer, people are rarely informed about it. Therefore, few people avoid tanning and long exposure sessions and even fewer wear protective clothing, hats or sunglasses during summer.

Dermatologists don't deny the benefits of the sun: assimilation of vitamin D, melatonin synthesis or reduced risk of seasonal affective disorder (Realitatea.net, 2010). However, they don't recommend long sun exposure as it determines skin aging, immune suppression eye diseases and, of course, skin cancer.

Romanian doctors warn people with fair skin to avoid the sun, as they are more likely to develop skin cancer later in their life (MacFarlane, 2009). Children are also a vulnerable category as regards skin cancer (Stockfleth, Rosen and Schumack, 2009). That is why they should be kept away from the beach and they should be properly dressed while going outside during midday.

The need for involvement in this problem becomes higher every day. Non-profit organizations frequently now pair up with specialized institutions and large corporations in order to solve social problems (Adkins, 1999). Skin cancer needs to be given as much credit as other health related issues, as its incidence has significantly increased in the last four years.

By involving more organizations in this issue, informing will be done easier and messages will become more credible for the public. Skin cancer education means that people understand the risks associated with having too much or too little sunlight. At the same time, there must be a consensus regarding sunburn, which people should always avoid, no matter the context.

3. Study regarding Skin Cancer Prevention Programs in Romania

3.1. Purpose

The purpose of this study is to determine consumers' perceptions regarding sun protection behaviour in Romania.

3.2. Objectives

The objectives of this research are:

- a. Determine the number of consumers who use sun protection methods.
- b. Determine the percentage of consumers who consider family education as an important factor in developing responsible sun protection behaviours.
- c. Identify the attitude of consumers regarding school practices and its influence in developing responsible sun protection behaviours.
- d. Determine consumers' perceptions regarding the influence of mass-media on developing responsible sun protection behaviours.
- e. Identify the percentage of consumers who consider government influence as an important factor in developing responsible sun protection behaviours.

3.3. Assumptions

There were defined the following assumptions:

H1 – The development of responsible sun protection behaviour directly depends on the family education.

H2 – The development of responsible sun protection behaviour directly depends on school practices.

H3 – The development of responsible sun protection behaviour directly depends on media promotion.

H4 – The development of responsible sun protection behaviour directly depends on government policies.

3.4. Methods

The research method used was an online survey, which was conducted during November-December 2010. The questionnaire addressed issues regarding skin cancer behaviour and consisted of 9 items: 5 items expressed the relationship between sun protection behaviour and the 4 factors considered: family education, school practices, media promotion and government policies and 4 items addressed socio-demographics aspects.

A total number of 92 persons completed the online questionnaire, but 6 participants were eliminated on basis of missing responses. A final sample of 86 participants was therefore considered in the research. In choosing the participants for the research it was considered relevant the random sampling method.

The answers to the questions were measured using a proportional type scale which consisted of 3 levels: high, medium and low. This scale reflected the influence of the four factors considered on sun protection behaviour.

3.5. Data Interpretation and Results

In analyzing the results of the survey, it was used SPSS software program, version 13.0. The first step in data interpretation was defining a multiple regression model, with one dependent variable: sun protection behaviour and four independent variables: family education, school practices, media promotion and government policies.

First table presents the number of persons who behave responsible when it comes to sun protection. Their percentage – 47%, is surprisingly lower than the percentage of people who don't take sun protection measures – 54%. Table also shows that there are no missing values, as 100% of respondents answered this question.

Table 1. Sun protection behavior by number of consumers

		Sun protection behavior		Percentage (%)
		No	Yes	
Sun protection behavior	No	46	0	100.0
	Yes	40	0	

Table 2 presents some basic statistics regarding each variable considered. Thus, the table describes the values for mean, standard deviation and total sample. Considering a 3 level scale, 1 – high, 2 – medium and 3 – low, the mean shows that people generally agree with the influence of the independent variables on the dependent variable.

Standard deviation measures the spread of the observations. Since, in our case, values are small we can say the variables are not very spread out. This also means that the correlation between variables is considerably high.

Table 2. Descriptive statistics

	Mean	Std. Deviation	N
Sun protection behavior	0.47	0.502	86
Family education	1.87	0.764	86
School practices	1.94	0.620	86
Media promotion	1.64	0.701	86
Government policies	1.92	0.723	86

In table 3, the column labeled R presents the values of the multiple correlation coefficients between the predictors and the dependent variable. Next column gives us the value of $R^2 = 0.599$. This means that the independent variables account for 59.9% of the variation in sun protection behavior.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.774	0.599	0.580	0.325	1.622

The column labeled adjusted R square gives an idea regarding how well the proposed model describes the problem. Since its value is close to the R square value we can say the model is relevant. The final column, Durbin-Watson statistic shows whether the errors are correlated or not. The value 1.622 is close to the reference value of 2, meaning that the errors are more likely to be independent.

The ANOVA method tests whether the model can be used to predict the outcome better than by just analyzing the means.

The model is expressed by Regression and Residual. Regression reflects the fitting of the model, while Residual expresses the inaccuracy that exists in the model. Since the F-ratio is very high, we can say the model fits very well in the equation.

The significance value is less than 0.05 which means that the F-ratio presented in the table is unlikely to have happened by chance.

In conclusion, the ANOVA test proves that the model is significant enough to predict the outcome variable.

Table 4. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.825	4	3.206	30.304	0.000
Residual	8.570	81	0.106		
Total	21.395	85			

Table 5 presents two categories of coefficients: unstandardized coefficients and standardized coefficients. The B coefficients reflect the relationship between sun protection behavior and each independent variable.

In our case, coefficients are negative which means the relationship between the dependent and the independent variables is indirect. For example, if people don't behave responsibly regarding sun protection, family education should increase.

The values for standard error are small, meaning that errors have little impact on the variables considered.

Standardized beta coefficients are measured in standard deviation units and reflect the number of standard deviations that the outcome will change as a result of one standard deviation change in the predictor.

The standardized beta values are -0.045 for family education, -0.399 for school practices, -0.244 for media promotion and -0.339 for government policies. This means that school practices has the highest impact on the model.

Table 5. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Constant	1.884	0.136		13.803	0.000	1.612	2.156
Family education	-0.030	0.053	-0.045	-0.559	0.578	-0.135	0.076
School practices	-0.322	0.067	-0.399	-4.809	0.000	-0.456	-0.189
Media promotion	-0.175	0.059	-0.244	-2.964	0.004	-0.292	-0.057
Government policies	-0.235	0.054	-0.339	-4.347	0.000	-0.343	-0.128

The last table, coefficient correlations, expresses the relationships between the independent variables considered. From the table we can conclude that the relationships are negative, meaning that the variables are indirect correlated. Moreover, correlations are not very strong as most of the values are around -0.2.

Table 6 Coefficient Correlations

Correlations	Government policies	Family education	Media promotion	School practices
Family education	1.000	-0.072	-0.264	-0.173
School practices	-0.072	1.000	-0.211	-0.310
Media promotion	-0.264	-0.211	1.000	-0.238
Government policies	-0.173	-0.310	-0.238	1.000

As a result the model considered reflects the relationship between variables and is relevant for further analysis and research.

4. Conclusions

To conclude, the paper analyzes the extent to which sun protection behaviour depends on variables like family education, school practices, media promotion and government policies. Future directions of research could focus on analyzing other factors that determine sun protection behaviour or could discuss the impact of skin cancer communications on consumers.

As skin cancer incidence increases every year, society's involvement in solving this issue becomes a priority. People need to be informed of the risks regarding skin cancer and need to understand the future consequences of their actions.

Therefore, social marketing campaigns need to address more specifically this problem. Practice is sometimes a good measure to make people understand the dimensions of skin cancer that is why clinical demonstrations of UV effects on skin can sometimes be more effective than simple communication messages.

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