

The Season to Help: The Effect of Seasonal Mood and Gain Versus Loss Advertising Message Framing on Intention to Help Charity

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Abstract

There are various researchers who studied the relationship between seasons and feelings. However, only a few did shed light on how these two variables affect decision-making and physical behaviors especially prosocial behavior which emphasize on the benefits of other people and/or society as a whole. Due to a lack of studies on the topic, we investigated whether the combination of seasons and message framing could be useful in eliciting intention to help on an environmental issue. A 3x2 experiment examined the interactions between seasonal mood (summer, winter, controlled) and types of message framing (gain, loss) on future helping intention (volunteer, donation, petition signing). The findings suggest that in normal circumstances where seasonal mood were not applied, gain message framing was more effective in promoting higher intention to sign a petition than loss message framing. However, when thinking of winter, loss message framing has greater ability to do so than gain message framing. Moreover, seasons and mood are found to be associated with a higher positive mood in summer and a negative mood in winter. Lastly, limitations and implications are discussed.

Keywords: *seasons, message framing, intention to help, charity advertisement, nonprofit organization*

1. INTRODUCTION

Today, people are said to manifest greater eagerness in giving donation towards nonprofit organizations [1]. Academic studies have focused excessively on the topic of help and charity, as well as the antecedents that influence and promote prosocial behaviors. However, only a few scholars did investigate whether the external factor of meteorology (i.e., weather or seasons) can cognitively and affectively influence people to donate or help.

Therefore, we analyzed whether different seasonal feelings can sensitize the soft side of people, and

motivate them to offer help.

Seasons and weather conditions have significant effects on how people perform daily tasks and activities; however, geographic locations and regional variations can affect the weather variables differently [2]. For instance, different individuals might have different temperature preferences (e.g. A might feel hot at 25 degrees Celsius, but B might feel hot at 35 degrees Celsius). To avoid possible confusion of perceived feelings in each season, the duration of seasons mentioned in this study will be defined as follows: summer season (June to August), and winter season (December to February) since they are observable to be entirely different. To elaborate on helping behaviors, the three primary behavioral commitments are considered to be donation (giving money), physical volunteer work (giving time), and petition signing [3].

2. LITERATURE REVIEW

2.1 Seasonal Mood and Helping Behaviors

Only a few studies investigated the relationship between seasons and intention to help, and the effects of daily weather and temperature on an individual's helping behavior. For instance, in summer, sunshine and high temperatures make people more relaxed which trigger a positive mood and positive responses to requests than in cold temperature [4, 5]. The sun is proved consistently in studies as the factor capable of prompting a good mood [6-8]. Therefore, when referring to sunny and bright days, many think of summer rather than winter and this association is considered as common sense [9].

For winter, scholarship has [10] found that emotional states during winter and summer months can differently impact a person's health, such as the level of blood pressure. People can feel more depressed when they acknowledge that winter is approaching and are likely to go through a change of mood in cooler weather during fall and winter, but will alleviate in the warmer weather of early spring and summer [11-13].

2.2 Grounded Cognition

An individual's perception of seasons is influenced by one's memory of it. An explanation is offered through the grounded cognition theory and sensory experience. A study found that the human body and physical states can turn into a source of information. This is because the brain captures and stores the sensory experience as memory, known as *grounded cognition* [14]. After experiencing an event for the first time, the perceptual, physical, as well as introspective states are stored in the brain system [15, 16]. When encountering similar physical or sensory cues in the future, the brain activates these sensory experiences, and deploys them as inferences. For instance, it was found that participants were more likely to portray interpersonal warmth and choose a present for a friend rather than themselves when holding a hot therapeutic pad versus a cold one [17]. This could reflect physical warmth and positive emotions, such as sharing and love. Other than physical cues, mood can also be induced by applying visual stimulus (e.g., warm or cold background color) [18]. Building on these findings, the present study aims to define the *seasonal mood* as the perceived seasonal atmosphere which manipulates mood through cognitive memory.

2.3 Mood, Message Framing and Intention to Help

The framing of messages refers to the extent to which two logically indistinguishable situations are exhibited within the opposite content. The aim is to form a perception of the differences between the outcomes

of gains if the desired behavior is adopted, and losses if not adopted [19]. For instance, gain framing was confirmed to influence the intention to donate of an individual [20]. On the other hand, loss framing usually presents the unfavorable consequences of either oneself, others, or both if helping behaviors are not performed, and is likely to increase the feeling of guilt which occurs when people are aware that they failed to do something they should do, or acknowledged that they are in a better well-being state than others [21, 22].

Other than gain versus loss message framing, we also focused on the framing of seasonal mood. Following existing scholarship on grounded cognition, the framing strategy applied through cues such as a temperature of visual objects (e.g., snow for a cold object, and a cup of hot coffee for a warm object), or color background (e.g., warm and cold colors) can also impact on charity appeal. Studies found that loss charity appeal makes people feel negative. Likewise, viewing a picture of cold objects before exposure to negative framing, further prompts physical coldness and mental loneliness, which in the end reduce the number of donations when compared with the neutral appeal, when feelings of sympathy were diminished. However, loss framing can enhance the intention to donate by being exposed to a warm color background, which is proved to be more efficient when compared with reading the same framing message on a cool color background. On the other hand, it was found that gain-framed message against cold background can elicit better intention to donate than on warm background [23, 25].

To summarize, both gain and loss message framing are proved to be capable in eliciting help or pro-social behavior. However, if each message framing is applied in a specific and suitable context, it can portray a more effective result. The literature review articulates the research questions of this study, as follow:

RQ1: Do people possess a different mood in different seasons?

RQ2: How do different seasons elicit the same level of intention to help when paired with different message framing?

3. METHODOLOGY

3.1 Pre-test

A content analysis was first conducted to examine existing charity advertisements. Through Google's image searching website (<https://images.google.com>), the aim was to find the relationship between seasons and the message framing in real advertisements in the context of environmental charity. These advertisements were searched through related keywords: (i) *environmental fundraising ad* (ii) *environmental charity ad*, and (iii) *environmental donating ad*. Afterwards, each advertisement was coded by using a coding scheme (see Table 1). In addition, the variables of *published seasons*, *country of advertisements origin*, and the *type of nonprofit organization* are identified through a separate search for each advertisement, on web-based advertising and commercial archives (www.coloribus.com and www.adsoftheworld.com).

Table 1. Content Analysis Coding Scheme

Season the Advertisement was Published
Summer: June to August
Winter: December to January
Message Framing

Gain framing: makes the audience realize that their active involvement can make a change or have beneficial consequences for others.

Loss framing: makes the audience realize that their passive involvement is causing damage, or is not driving change or any beneficial consequences for others.

Advertisement Country of Origin

The country where the advertising agency who produced the ad is located. The countries are grouped according to the located continent.

North America (e.g., United States, Canada)

South America (e.g., Brazil, Mexico)

Europe (e.g., Belgium, Germany, Spain)

Asia (e.g., Malaysia, Singapore, South Korea)

Africa (e.g., South Africa)

Australia/New Zealand

Eurasia countries located in both Europe and Asia (e.g., Russia, Turkey)

3.2 Main Study

Experimental Design

After a content analysis, a 3 (seasonal mood, with two variables summer, winter, controlled) x 2 (message framing: gain, loss) study between-subjects design was conducted with the intention to help charity as the dependent variable. Data analysis was conducted using the IBM SPSS Statistics v. 23. Reliability tests were performed for all the items and measures, chi-square tests, independent sample t-tests, Pearson's correlation, and a series of two-way analyses of variance (ANOVAs).

Procedures and Stimuli Development

To develop an advertisement stimulus, it is necessary to identify the focus of existing nonprofit organizations. The data was taken from a website (<https://topnonprofits.com>), which published a list of top nonprofits on the web made by conducting a preliminary screening through thousands of nonprofit organizations to conclude whether their statistics are enough to be ranked. We then examined the website and the social media platform of each organization to determine their charity focus. Ten organizations were eliminated since they are either museum, broadcasting channel or publication. 30% of the nonprofit organizations focused on environment-related issues. Before completing the experimental survey, subjects were randomly assigned to a different experimental condition (summer-gain, winter-gain, controlled-gain, summer-loss, winter-loss, controlled-loss) and a 50-second seasonal video stimulus (See Fig. 1), which asked them to imagine a specific season (summer or winter; controlled condition does not make the subject think of seasonal pictures). Accordingly, two videos were created, one for each season (summer and winter).



Figure 1. Screenshots of the Seasonal Video Stimulus

Afterwards, subjects were exposed to a mood scale survey, to identify the mood during the assigned season. This scale was developed from the positive and negative affect schedule (PANAS) mood scale, which is considered as a reliable and definite measurement when identifying people's mood [9, 24]. In this scale, “mood” is divided into two dimensions: *positive affection* and *negative affection*. The positive ones consist of the following keywords: *active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, and strong*. The words that fall into the negative affect dimension are: *afraid, scared, nervous, jittery, irritable, hostile, guilty, ashamed, upset, and distressed*. (Cronbach's $\alpha = .72$). In addition, three 5-point questions were given to assess the respondents’ belief about different seasonality (Cronbach's $\alpha = .70$).

Table 2. Methodology Process Model

Pre-test	Main Study	
Content Analysis on Environmental-related Charity Advertisements	Experiment (Random Assignment)	Questionnaire
	Independent Variables <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 10px 0;"> 1) Seasonal Mood 2) Message Framing </div>	→

Next, subjects were asked to read an advertisement from an imaginary nonprofit organization about the environment (the choice was based on the result of the discussed content analysis), called "Dream Tree." The advertising message was written with either gain or loss framing (see Figure. 2). Right after reading the

advertisement, subjects completed a questionnaire with 5 points multi-item Likert scale (1=Strongly disagree to 5=Strongly agree) to measure the intention to help, the perceived message framing, and attitudes towards the advertisement and the organization. The items in the survey were further analyzed after the manipulation, as follows:

Intention to help: Three items (with a total score of 15) measured the willingness to help 1) doing volunteer work 2) making a monetary donation, and 3) signing petition for the organization (Cronbach's $\alpha = .73$).

Message framing: Two items assessed how the participants perceived the framed message (gain or loss) shown in the advertisement (Cronbach's $\alpha = .70$).

Previous helping behaviors: Three items assessed the frequency of the subjects' helping behavior prior to completing the survey. These items were measured on a 5-point Likert scale (1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Always) (Cronbach's $\alpha = .77$).



Figure 2. Advertisements with gain and loss message framing

4. RESULTS

4.1 Pre-test

Two coders independently coded a total of 985 photos, but only 113 corresponded to the criteria of an environmental fundraising advertisement. The rest were either duplicates, did not possess enough information, or were not environmental-related. An inter-rater reliability analysis using the Kappa statistics was performed to determine consistency among raters' coding of the message framing used in each advertisement. There was a moderate agreement between the two coders, $\kappa = .866$, $p < .001$.

Among the 113 advertisements, 55 of them (48.7%) were released during summer and winter months. More than half (56.4%) of the fundraising advertisements on environmental issues were released during summer from June to August. Moreover, these advertisements usually indicated loss framing at 65.5% over neutral and gain framing at 18.2% and 16.4%, respectively. Remarkably, 54.5% of the environmental charity advertisements were found to be released and/or produced by the advertising agency in countries located in Europe during summer and winter months (See Table 3).

Table 3. Distribution and Frequency of Coding Variables

	Total (N=55)	
Seasons the Advertisement was Published		
Summer Season	31	56.4%
Winter Season	24	43.6%
Message Framing		
Gain	9	16.4%
Loss	36	65.5%
Neutral	10	18.2%
Country of Advertisement Origin		
North America	5	9.1%
South America	8	14.5%
Europe	30	54.5%
Asia	5	9.1%
Africa	5	9.1%
Australia/New Zealand	2	3.6%
Types of Nonprofit Organization		
Global	28	50.9%
Local	27	49.1%

To test the relationship between published season and message framing used in the environmental charity advertisements, a chi-square test of independence was performed. Loss framing is found to be used the most in both summer (74.2%) and winter (54.2%). Unfortunately, the relationship between these variables was non-significant, $X^2(2, N = 62) = 1.64$, $p = .44$. The seasons in which environmental fundraising advertisements are released or published do not show any positive relationship with message framing used in the advertisements.

To summarize, the primary variables which are the focus of the study (seasons and message framing) were found unrelated to each other; therefore, an experiment was conducted with manipulation of the variables for further investigation in the main study, and the results are discussed in the next section.

4.2 Main Study

The Relationship Between Seasons and Mood

To answer the first research question about relationship of seasons and mood, a chi-square test for independence was performed, in which the results indicated a significant association between the two categorical variables: $X^2(6, N = 158) = 12.92, p < .05$. Overall, a positive mood was found to occur the most across all three conditions (73.4%). However, it was highest in the summer condition (82.7%) when compared with the controlled (77.4%) and the winter condition (60.4%) respectively. The negative mood, it was identified to be highest in the winter condition (28.3%) when compared with the controlled (20.8%) and the summer condition (12.5%). These results were found to support the findings of previous studies about the influence of weather on mood and behavior.

Table 4. Relationship Between Seasons and Moods

		Mood				Total
		Positive	Negative	Neither	Both	
Season Condition	Summer	43 82.7%	7 12.5%	1 1.9%	1 1.9%	52 100%
	Winter	32 60.4%	15 28.3%	0 0.0%	6 11.3%	53 100%
	Controlled	41 77.4%	11 20.8%	0 0.0%	1 1.9%	53 100%
Total		116 73.4%	33 20.9%	1 0.6%	8 5.1%	158 100%

Participants

Samples in this study were limited to subjects who live in North America (the U.S. and Canada). 13 samples out of 171 were eliminated because they didn't conform to the required criteria, leaving the total sample at 158 (N=158). The participants volunteered to participate in an experiment through the Google online survey platform. Among the total sample, 52 (32.9%) reported their gender as male, and 106 (67.1%) as female. Moreover, 115 (72.8%) out of 158 participants were found to be between the age of 20 to 29 years old. An initial analysis was conducted to figure whether there were any statistically significant differences in demographic variables used across the total sample showing intention to help (volunteer work, monetary donation, and petition signing). The results showed non-significant mean differences in terms of gender, $t(156) = -.42, p = .68$, two-tailed; age, $t(156) = -1.39, p = .17$, two-tailed; and country of residency $t(156) = -.03, p = .98$, two-tailed. There was also no correlation between previous helping behavior and future intention to donate. Therefore, these variables were not controlled in the following analyses.

Interaction Effect of Seasons and Message Framing on Intention to Help

A series of two-way between-groups analyses of variance (ANOVAs) were conducted to investigate the impact of seasons, as well as message framing on the intention to help (See Table 4). Firstly, seasons were found to affect intention to do volunteer work $F(2,152) = 3.28, p < .05$. And post-hoc comparisons using the

Tukey HSD test indicated the mean score for the summer condition ($M = 3.40$, $SD = .87$) was significantly different from the winter condition ($M = 2.92$, $SD = 1.12$). Subjects were more willing to do volunteer work after thinking of summer than winter.

Table 5. Results of ANOVA on Study Variables

Independent Variables	Dependent Variables	df	F	p value	Partial eta squared
Seasons (A)	Volunteer	(2, 152)	3.28	< .05*	.041
	Donation	(2, 152)	2.34	> .05	.030
	Sign Petition	(2, 152)	.304	> .05	.004
Message Framing (B)	Volunteer	(1, 152)	3.17	> .05	.020
	Donation	(1, 152)	.256	> .05	.002
	Sign Petition	(1, 152)	.311	> .05	.002
A x B	Volunteer	(2, 152)	.892	> .05	.012
	Donation	(2, 152)	1.13	> .05	.015
	Sign Petition	(2, 152)	5.09	< .05*	.063

* $p < .05$

Secondly, the interaction effect between seasons and message framing was not statistically significant for the intention to volunteer, $F(2, 152) = .89$, $p = .41$; and intention to donate money, $F(2, 152) = 1.13$, $p = .33$. However, intention to sign a petition was found to be statistically significant, $F(2, 152) = 5.09$, $p < .05$. The simple main effects analysis indicated that in the winter condition, loss message framing, ($M = 3.70$, $SE = .823$) was more effective than gain-framed message, ($M = 3.23$, $SE = .863$). On the contrary, in the controlled condition, gain message framing ($M = 3.81$, $SE = .801$); was more effective than loss message framing, ($M = 3.22$, $SE = 1.09$). In the summer condition, both gain, ($M = 3.65$, $SE = .846$); and loss message framing, ($M = 3.54$, $SE = .647$) yielded similar results on intention to sign a petition. However, through post hoc analysis using Tukey's procedure, no significant differences were found on the mean comparison between each season.

Table 6. Descriptive Statistics of Intention to Help

			Mean	Std. Deviation	N
Volunteer	Summer	Gain	3.65	.846	26
		Loss	3.15	.834	26
		Total	3.40*	.869	52
	Winter	Gain	2.92	.935	26
		Loss	2.93	1.30	27
		Total	2.93*	1.12	53
	Controlled	Gain	3.23	.976	26
		Loss	2.89	1.03	27
		Total	3.06	1.01	53
	Total	Gain	3.27	.976	78

		Loss	2.99	1.03	80
		Total	3.13	1.01	158
Donate	Summer	Gain	3.27	.827	26
		Loss	3.54	.761	26
		Total	3.40	.799	52
	Winter	Gain	3.23	1.14	26
		Loss	3.41	.971	27
		Total	3.32	1.05	53
	Controlled	Gain	3.15	.834	26
		Loss	2.93	.829	27
		Total	3.04	.831	53
	Total	Gain	3.22	.935	78
		Loss	3.29	.889	80
		Total	3.25	.910	158
Petition Signing	Summer	Gain	3.65	.846	26
		Loss	3.54	.647	26
		Total	3.60	.748	52
	Winter	Gain	3.23	.863	26
		Loss	3.70	.823	27
		Total	3.47	.868	53
	Controlled	Gain	3.81	.801	26
		Loss	3.22	1.09	27
		Total	3.51	.993	53
	Total	Gain	3.56	.862	78
		Loss	3.49	.886	80
		Total	3.53	.872	158

*p < 0.5

5. DISCUSSION

The aim of this study is to introduce a new stream of research where content related to seasons and message framing are combined to promote charitable behaviors. First, the findings suggest that seasons and mood are associated. When results were examined through each season separately, a positive mood was reported mostly in summer, or when thinking about it. Contrastingly, an increase in the negative mood was observed when thinking of winter. The pre-test result also showed that most fundraising advertisements on environment are released during summer. Accordingly, advertisers can for instance, launch an engagement or persuasive campaign in the summer since people possess more positivity and willingness towards new things and requests.

Second, the effect of seasons on the intention to do volunteer work was found. Summer was more effective than winter in eliciting higher intention to volunteer in planting trees with the organization. An explanation for this result can be referred to previous studies which stated that people showed higher helping behaviors in hot weather than comfortable or cold weather. However, since seasons were interpreted in this study as feelings rather than a physical variable, future study can apply both tangible and intangible objects to emphasize the actual perception of seasons.

Third, an interaction effect between seasons and message framing on intention to help sign a petition was found. When seasons were not manipulated, the gain message framing worked better than the loss-framed message in eliciting help for petition signing. Conversely, in the winter condition, the advertisement with loss message framing was more effective in eliciting intention to sign a petition than the gain message framing. For summer, gain framing elicited a slightly higher level of intention than loss framing. In addition, the reason that petition signing elicited higher help might be because it is a form of charitable act that does not require the participants to spend money and an enormous amount of time. Theory of planned behavior states that people act according to an existing sequence of designed routine. Consideration of factors such as the level of effort needed to complete a task occurs before producing an intention to try. Consequently, practitioners might design easy and quick charity campaigns that require minimum effort for people to participate. Likewise, since there is still a lack of academic scholarship on the topic, researchers can expand the variables of seasons and message framing to various fields of study. For instance, in advertising and consumer research, the effect of seasons and message framing can be explored on purchase intention. Similarly, in the political research field seasons and message framing can be used to study about shift in political preferences, voting decision, as well as behaviors.

6. CONCLUSION

It is crucial to note that despite being statistically significant, the relationship between seasons and mood in this study was limited to only subjects in a particular region. Future research can be conducted with a wider sample population, while also investigating further possible antecedents, such as culture and beliefs. Another two more interesting factors could be individual preferences and media channels. This is because different individuals might personally prefer one season over another or prefer to receive information via different media platforms which can affect how the messages should be displayed to gain fullest attention and outcomes.

In conclusion, the results of this study offered insight into the topic of social behavior while also providing an explanation of how different perceived seasonal mood and message framing can lead to charitable behavior. Researchers from various fields can apply the topic of seasonal mood on future studies to further understand how external factors such as seasons affect people in different societies and cultures. Likewise, the study also informs fundraisers as well as nonprofit marketers on how to plan effective charitable campaigns with suitable timing and appropriate message appeals.

ACKNOWLEDGEMENT

This study was supported by the Korea Creative Content Agency's 2017 Culture Technology RD program.

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