



Real Life Scenes to Study Emotions in Women

Escenas de la Vida Real para Estudiar Emociones en Mujeres

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Abstract

This study aimed to develop and test common scenes of real life to study emotions in women. The methodology adopted herein combined qualitative and quantitative methods and involved three distinct study stages: (i) use of a descriptive question to identify daily situations that evoked negative emotions among women; (ii) construction of everyday life scenes; (iii) assessment of how effectively the constructed videos manipulated emotions. The visual analog scale (VAS), a descriptive question, and a focus group were used to discuss the negative emotion and neutral emotional condition evoked during the experiment. The videos developed, *Routine Life Scenes* and *Dramas of Life Scenes* fulfilled the objective of the study. The qualitative approach helped to understand how the videos mobilized the emotions. The participants recognized themselves in similar experiences, in contexts of life, and by the worry and fearfulness of the possibility of living the same experiences.

Keywords: **Negative Emotion; Mixed Methodology; Tool to study emotion, Videos to evoke emotion**

Abstract

El objetivo de este estudio fue desarrollar y evaluar videos con escenas de la vida real para utilizarlos como herramienta de provocación de emociones en mujeres. Fue adoptada la metodología mixta, con metodología cualitativa y cuantitativa combinadas, desarrolladas en tres etapas: (i) Uso de una pregunta descriptiva para identificar situaciones cotidianas que provocan emociones negativas en mujeres; (ii) construcción de escenas de la vida cotidiana; y (iii) evaluación de la eficacia de los videos para provocar emociones. Para discutir las emociones negativas y neutras provocadas durante el experimento se utilizó la escala visual analógica (EVA), una pregunta descriptiva y grupos focales. Los videos desarrollados, Escenas de la vida rutinaria y Escenas con dramas de la vida cumplieron los objetivos del estudio. Los participantes se reconocieron en situaciones similares: contextos, experiencias y en los temores de vivir las mismas experiencias.

Palabras clave: Emoción Negativa; Metodología mixta; Herramientas para estudiar emociones; Videos para provocar emociones

Introduction

Personal characteristics, the environment, and social and psychological factors, including emotions, influence the human behavior and impact various practices (Congard, Dauvier, Antoine, & Gilles, 2011). Methods available to assess the relationship between emotions and different types of behavior are complex: they involve many variables that can affect the emotional response and consequently the behavior under study (Adriaanse, de Ridder, & Evers, 2011; Domoff, Meers, Koball, & Musher-Eizenman, 2014). Videos are one of the most frequently used techniques to evoke emotions in experimental studies, because they combine visual and auditory stimuli and can elicit a plethora of emotions at different intensities. In addition, methods based on videos are easy to replicate (Ellard, Farchione, & Barlow, 2012; Schaefer, Nils, Sanchez, & Philippot, 2010; Westermann, Spies, Stahl, & Hesse, 1996).

The movies validated to manipulate emotions are videos that stimulate fear, incite anger, and foster happiness (Bongers, Jansen, Havermans, Roefs, & Nederkoorn, 2013; Gross & Levenson, 1995; Macht & Mueller, 2007; Philippot, 1993; van Strien et al., 2013; Yeomans & Coughlan, 2009). These movies have effectively aided investigation of specific emotions.

However, ambiguous feelings are frequently evoked in the case of emotions generated by life events, including discussions between couples, problems experienced at work, concern about sick family members, among other types of situations. Identification with the situations presented in the videos is important for individuals to pinpoint the feelings that emerge after the video presentation (Hatch & Dohrenwend, 2007; Turner & Turner, 2005).

Identification with the movie context can also influence emotion intensity or realism. As well described Ed Tan (1994), in reference to the book by Nico Frijda (1886), the emotion is related with the relevance of experience to the subject and the reality and its meaning is part of perspective of the subject. Videos can evoke emotions because the individuals establish a connection between the event presented in the video and their own concern. Therefore, videos portraying distinct realities,

customs, and unfamiliar cultures or even well-known and discussed parts of popular movies may attenuate the intensity and quality of emotion. Quantitative methods, such as the visual analogue scale (VAS) that is widely used to analyze emotions, can be employed to measure particular emotions. Nevertheless, information obtained by this instrument may displace individual circumstances, culminating in a superficial analysis (Castro, Kellison, Boyd, & Kopak, 2010; Tonkin-Crine et al., 2016; van Griensven, Moore, & Hall, 2014). From this perspective, a qualitative methodology would be appropriate to contextualize and analyze the information extracted from the evoked emotions in detail.

The present study aimed to develop and test two videos containing scenes of real life to study emotions generated by daily reality a group of women. One video showed life problems experienced by women, which should evoke a set of negative emotions. The other showed routine activities, which should maintain a neutral emotional condition.

The combination of quantitative and qualitative methods enabled a more in-depth analysis of the approaches investigated herein (i.e., the visual analog scale). Moreover, this approach increased the ability of the researcher to understand the feelings, representations, and perceptions of the studied subject.

Material and methods

This study comprised three stages: (i) use of a questionnaire to identify the daily situations that caused suffering among women, (ii) construction of everyday life (iii) emotional changes evaluation: application of a visual analog scale (VAS), descriptive question and a focus group This study was approved by the local Research Ethics Committee.

(i) Identification of daily situations that caused negative emotions in women

Participants were invited and recruited via e-mails sent to all works from the University of São Paulo (total of 6 thousand of workers) and the workers could indicate other people. The inclusion criteria were healthy women adult (in reproductive age:18-45 years old), with regular menstrual cycle over the previous six months, without chronic, endocrine, or psychological pathologies; were not using psy-

choactive drugs or drugs that affected the appetite; and women were in the follicular phase on the both days of the experiment.

The following descriptive question was used to identify the causes of negative emotions experienced by women: "*What makes you feel stressed, tense, anxious, worried, and anguished in your daily routine?*" The participants were allowed all the time they thought was necessary to answer this question in a room with only the researcher. A total of 42 adult women participated in this stage, but they did not take part in the subsequent phases of the study.

(ii) Construction of everyday life scenes

We watched 47 Brazilian movies to select scenes that depicted situations the participants had described as eliciting negative emotions because they portrayed problems of everyday life (i.e., situations identified in the preceding stage). All the scenes were discussed by the authors, and the twelve scenes that best portrayed the problems reported by the women were selected for editing. The use of the scenes in the referenced movies was permitted Law n° 9610, regarding copyright.

To maintain the neutral emotional state in participants, we considered scenes of routine activities when editing the video that mimicked the neutral condition.

The videos were edited by using the programs Windows Movie Maker 2012 and Sony Vegas® Pro 11.0. Both videos lasted approximately 45 minutes.

(iii) Evaluation of the instrument used to evoke emotions

The objective of the qualitative approach was to certify if the VAS was efficient to catch emotions from the videos and to understand if the problems showed in the videos really touch them and why it occurred.

A mixed methods study was carried out to evaluate the emotions provoked by real life. The quantitative data were obtained by employing a VAS (individually) depicting seven emotions (tranquility, happiness, anger, worry, anxiety, sadness, and indignation).

The first part of qualitative data was obtained by using descriptive questions ("*How are you feeling right now?*") applied before and after

presentation of each video. This part was answered individually.

The mainly part of qualitative data was based on focus group which occurred after applied the VAS and deceptive question. In this group, the interactions among the participants allow observers to explore the topics by starting from individual reflections and counting on personal peculiarities (the vocabulary the participants use and the way participants express themselves). This approach allowed investigation of pertinent questions without limiting the discourse, which motivated the participants to express their opinions through each other's reports. In the present study, the focus group helped to evaluate the emotions involved in the videos and determine the similarities between these emotions and the emotions experienced by the volunteers in their lives. The senior investigator conducted this activity in a private room, and it lasted an average of 20 minutes. The list of questions used to guide the focus group had been developed and previously tested in a pilot study. The guided questions were: "*What did you feel while watching the videos?*" "*Which scene moved you the most? Why?*" "*How moved were you by these stories?*" "*Which of the problems presented in this video do you believe is the most common in our population?*" "*Is this feeling aroused by the video common in your daily life?*"

This stage involved 44 adult healthy women without psychological pathologies, who were not using any psychoactive drugs, and who were in the follicular phase of the menstrual cycle. All the participants watched the two videos, on different days (the interval between the video presentations was between two and seven days). One video evoked negative emotions; the other video corresponded to the neutral condition. The groups consisted of three to five women. The participants were not closely related.

Except for the presented video, all the procedures followed during the experimental tests were identical for the two presentation days. The videos were presented with the aid of the program data show in a large room with comfortable chairs and ambient light. The experimental tests took place between 8.00 a.m. and 11.30 a.m.

Before the start of the intervention, the participants answered a questionnaire for socio-economic characterization. The questionnaire aimed to collect information about age, per capita income, marital status, educational status, type of residence, and number of children.

To assess video effectiveness, the VAS and the descriptive questions were applied before and after the video presentation, and a focus group was held at the end of each intervention.

Data analysis

All the analyses were carried out with the program PASW Statistic 17.0 (2009). Data are presented as the mean \pm standard error. A general repeat-measurement analysis of variance (ANOVA) was employed to assess the effect of the videos on the VAS scale for negative and positive emotions in both experiments (Neutral and Negative emotions). Paired Student t-test was performed to compare each emotion (tranquility, happiness, anger, worry, anxiety, sadness, and indignation) in the VAS before and after the video presentations.

To analyze the qualitative results obtained with the descriptive question and with the focus group, the data were coded by content analysis refined by two investigators according to the thematic framework (Braun, & Clarke, 2006).

The methods were synchronized by crossing the categories extracted from the qualitative data with the results of the subjective analog question.

Results

(i) Identification of daily situations that evoked negative emotions in women

The replies regarding situations that elicited negative emotions were as follows, in decreasing order of frequency: financial hardship, lack of recognition and safety at work, discussions between spouses, betrayal, precarious health assistance, traffic problems, domestic violence, exhausting work routine, sexual harassment, concern about the children, drugs and alcohol abuse, and death in the family.

(ii) Selection of movie scenes related to the identification of the preceding phase and video editing

To prepare the video that evoked negative emotions, six movies portraying common problems reported by the volunteers were selected: *Mulheres do Brasil* (Martino & Mello, 2006) (betrayal and domestic violence); *Linha de Passe* (Salles & Thomas, 2008) (exhausting work routine and lack of safety and recognition in the workplace); *Aparecida - O Milagre* (Victoria & Yamasaki, 2011) (concern about the children, discussion among family members, and traffic problems); *3 Efes* (Gerbase, 2007) (discussion between spouses); *5 x Favela* (Magalhães et al., 2010) (financial hardship, concern about the children, and exhausting work routine); and *Lula o Filho do Brasil* (Barreto & Santiago, 2012) (alcohol addiction, death in the family, and precarious health assistance). This video was named *Dramas of Life Scenes (DLS)*.

For the neutral condition, scenes were edited from the documentary *"Life in a day"* (Clisby & Macdonald, 2011), produced by Ridley Scott, Scott Free Productions, and YouTube and distributed by National Geographic Films. This is a documentary constructed from 80,000 clips sent by YouTube users. Scenes regarding waking up, brushing the teeth, walking, cooking, eating, driving, and sleeping were edited. We selected scenes in which the environment and the practices are very common in everyday life. The collection of the edited scenes was named *Routine Life Scenes (RLS)*. Both edits generated 40-minute videos.

(iii) Assessment of the instrument used to evoke emotions

Sample characterization

The sample consisted of 43 women aged 31.5 years on average (range: 24-42 years). The mean per capita income was 1,888 Reais (median: 3000 Reais, min: 1200 Reais max: 8000 Reais). The marital status was balanced: 54.5% and 45.4% of the women were single and married, respectively. Most volunteers had finished their studies (68.9%), with time of schooling of (Mean/SD) 14.1 \pm 1.6 years, most of them reported to be catholic or practicing of another religion (81,1%), and lived in their home (68.1%), and had no children (61.3%).

Emotions	VAS score before the video Mean ± SD	VAS score after the video Mean ± SD	F(1,86)	T(43)	95% CI of the difference Lower/Upper	p-value
Drama Life Scenes (DLS)						
Tranquility	5.50 ± 2.18	3.65 ± 1.92	17.65	5.23	1.13/2.55	<.001
Happiness	5.57 ± 2.09	3.30 ± 1.55	32.94	7.43	1.64/2.86	<.001
Anger	2.62 ± 2.13	5.87 ± 2.11	51.42	-7.55	-4.12/-2.38	<.001
Worry	5.24 ± 2.31	6.21 ± 1.36	5.78	-2.44	1.77/-1.17	.018
Anxiety	5.48 ± 2.48	6.24 ± 1.25	4.84	-2.54	.17/1.50	.015
Sadness	3.26 ± 2.15	6.57 ± 1.79	61.01	-2.47	-4.13/-7.47	<.001
Indignation	2.80 ± 2.23	7.13 ± 1.67	105.09	-10.40	-5.16/-3.48	<.001
Routine Life Scenes (RLS)						
Tranquility	5.67 ± 2.21	6.16 ± 2.35	1.04	-1.79	-1.05/.06	.310
Happiness	5.32 ± 2.14	5.63 ± 2.35	.41	-1.09	-.87/.25	.521
Anger	2.03 ± 2.23	1.88 ± 2.07	.10	.73	-.25/.55	.749
Worry	6.04 ± 2.23	5.33 ± 1.98	2.51	2.27	-1.34/2.27	.117
Anxiety	5.67 ± 2.88	4.71 ± 2.60	2.60	-1.98	-1.52/0.13	.054
Sadness	4.10 ± 2.70	3.88 ± 2.54	.16	.75	-.37/.82	.688
Indignation	3.10 ± 2.71	3.10 ± 2.52	.00	-.00	-.67/.66	.997

Table 1. Comparison of the Emotion Score Obtained by the Subjective VAS Before and After Presentation of the Videos

Subjective analog scale for emotions

Mean values for all investigated emotions changed significantly after presentation of the DLS video. Positive emotions declined, whereas negative emotions became more intense from a statistical viewpoint. As expected, the RLS video did not elicit any significantly different emotion, that is, the emotion scores obtained for the VAS applied before and after presentation of this video were similar. Table 1 displays the results of these analyses (See Table 1).

Categories resulting from the analysis of qualitative data: descriptive question and focus group

The descriptive question and the focus group were designed to explore the emotions evoked by the videos in each participant and to determine whether such emotions were familiar and plausible in their lives. Table 2 lists the categories extracted by analysis of the reports for both methods. To keep the anonymity of participants, the names of them were replaced by numbers (See Table 2).

The descriptive question asked before the video presentation and as soon as the participants arrived at the site of the experiment revealed that all the participants reported feelings of anxiety and worry. While some of the participants related these feelings to a personal problem they were experiencing at the time of the experiment, such as profes-

sional or family problems, others associated these feelings with the expectation of participating in the current study. In other words, participants manifesting worry and anxiety because they identify their own problems or with the context presented in the video *Dramas of Life*.

After the video presentations, the focus group reported experiences and made comments that were organized into the following categories: "*Emotions manifested after the video*," "*Physiological manifestations reported after the videos*," and "*Situations regarding recognition and identification with the problems or context approached in the video and reported after the video presentation*".

In the category "*Emotions manifested after the video*", watching the *RLS* video allowed us to divide the participants into two groups: women who reported to have more positive emotions before the intervention and who maintained their emotions after the intervention ($n = 28$), and women who reported to have more negative emotions before the intervention and who showed an increase in positive emotions in parallel to a reduction in negative emotions after the intervention ($n = 15$). Analysis of the qualitative data revealed that the *RLS* video seemed to transmit a sense of tranquility to the spectators.

After watching the *DLS* video, all the participants reported at least two of the negative emotions present in the VAS. Many partici-

Topic	Drama Life Scenes (DLS)	Routine Life Scenes (RLS)
Emotions manifested after the videos	<p>The story makes us identify with it. It affects my emotions. Some scenes of anger, others of sadness, all show something bad that really happens in our life...a fact that makes us worry. (Participant 23, focal group, 23 March 2013)</p> <p>I was furious watching some scenes, especially the last one because you know that it is something that happens because you feel impotent, you think that you would like this to change, to be different, but we have no power to do this, right? (Participant 18, focal group, 20 April 2013.)</p>	<p>In general, I think it did not change my emotional status (Participant 46, focal group, 05 March 2013)</p> <p>After watching the video, the sensation of tranquility was even more intense. During the video, my feelings of concern and anxiety gave way to feelings of tranquility and happiness. I am feeling relaxed, ready to face my day with calm, patience, and good expectations. (Participant 39, focal group, 03 May 2013)</p> <p>I am calm and sleepy. The video did not change my emotional status. (Participant 37, focal group, 28 May 2013)</p>
Physiological manifestations reported after the videos	<p>I feel emotional, a little upset, a little sad, I don't know how to explain it, but it is a different thing. Now I have started to feel sick; I think the film moved me a lot and affected my feelings. I am anguished because it was about family and this is very important to me, I feel worried and quite moved. (Participant 16, focal group, 20 April 2013)</p> <p>In this film I felt that wish, that force that makes you feel that you cannot breathe, you know? I had trouble breathing; I felt an anguish that really oppressed me, you know? That tightens! (Participant 3, focal group, 12 April 2013)</p> <p>In addition to worrying about bills to pay. So, I feel this tension, anguish, indignation, and anxiety in my daily life. (Participant 9, focal group, 14 February 2013)</p>	<p>I liked the video, but some parts of the movie made me sleepy; however, I think it was because of the music, that background music made me a little sleepy. (Participant 42, focal group, 25 April 2013)</p> <p>I confess that I dozed off during the video presentation, actually I slept. (Participant 34, focal group, 03 May 2013)</p>
Situations regarding recognition and identification with the problems approached in the video and reported after the video presentation.	<p>I'm feeling a lot of sadness because of the stories of loss that appeared in the film, a lot of anguish and anger because of the violence. The story of the girl's abuse made me feel very anguished because it has to do with my personal history, too, and I feel even worse, because the scene that happened to me came to my mind all the time. I even feel discomfort and nausea. (Participant 17, focal group, 16 March 2013)</p> <p>That video of the little boy greatly moved me... because my father also worked with construction and fell (crying)..., and he died. So, when I watched the story, my story came to my mind. (Participant 10, focal group, 18 March 2013)</p>	<p>I don't know if it is because I am... in a slightly stressful phase regarding my things. So I am a little more sensitive, and I think that I calmed down yes a little, I did like the film. (Participant 29, focal group, 03 April 2013)</p> <p>I can say that my emotional status is calmer than before and that I am more reflexive regarding my daily activities. (Participant 35, focal group, 22 April 2013)</p>

Table 2. Topics identified in the analysis of the focus group after presentation of the videos Routine Life Scenes and Drama Life Scenes

pants mentioned physiological manifestations such as nausea, palpitation, disquiet, and crying after the *DLS* video. In contrast, after the *RLS* video, the participants mentioned relaxation, sleepiness, and well-being. Some of the participants identified with situations due to their own experience and felt great suffering during the scenes of the *DLS* video.

Synchronization of the quantitative and qualitative methods

Anxiety and worry scored high in the VAS applied before the video presentations. These findings were consistent with the anxiety and worry manifested by the women due to participation in the investigation and to problems that were not related to the study. The dif-

ference in anxiety and worry between the scales applied before and after the *DLS* video presentation was significant, but small ($F_{(1,86)} = 4.845$; $p = .015$; $T(43) = -2.548$ and $F_{(1,86)} = 5.784$ $p = .018$; $T(43) = -2.448$, respectively), which may raise doubts about the effect of the video on these emotions. However, analysis of the category "*Emotions manifested after the videos*" revealed that the *DLS* video also evoked these emotions, which did not appear in a more preponderant manner in the quantitative methodology because the volunteers had already scored high in the initial VAS.

The descriptive question applied before the video made it possible to perceive the presence of anxiety and worry of the participants for other reasons also what caused in the little difference in the emotions anxiety and worry. Excerpts from the reports listing the responses to the descriptive question illustrate this analysis "I have many things I must remember to do today and cannot forget about doing them because I will be leaving on a trip tomorrow. For this reason, I feel a little anxious and concerned" and "Right now I am quite concerned about my home problems, I feel distressed by having to wait for some phone calls about work I have to do and also quite anxious when I see that my bills are almost due, and so far I have no work" (Participant n29, focal group, 03 April 2013).

Another result that showed agreement between the methods was increased negative emotions and decreased positive emotions after presentation of the *DLS* video, as corroborated by the descriptions recorded in the qualitative method for the categories "*Physiological manifestations reported after the videos*" and "*Emotions manifested after the videos*". After presentation of the *RLS* video, the scales pointed a trend toward increased positive emotions and reduced negative emotions, albeit without statistical significance. The qualitative results showed that the *RLS* video might lead to a feeling of relaxation and even sleepiness in some individuals.

The interconnection of the results generated by the two methods supported and clarified questions pertinent to the evoked emotions, as could be observed in the Table 2.

Discussion

The results have shown that scenes of real life effectively evoked emotions in women. Scenes of common problems in women's lives (*DLS* video) provoked negative emotions, whereas scenes of routine activities (*RLS* video) maintained neutral emotional status. Therefore, the instrument developed herein could help to access emotions based on common situations of women's lives. Furthermore, the benefits of mixed methods were noteworthy and clarified the results obtained with the VAS.

Scenes based on frequent routine activities (*RLS* video) proved to be an excellent instrument to maintain the neutral emotion condition, and their characteristics resembled the characteristics of videos validated in other studies. Indeed, the emotions described by the participants before and after the video presentation did not differ significantly, as reported by Michael Macht & Jochen Mueller (2007). In fact, positive emotions (joy and tranquility) increased slightly, whilst negative emotions decreased very little, as reported in other studies (Sheppard-Sawyer, McNally, & Fischer, 2000; Yeomans & Coughlan, 2009). In the present study, participants also reported increased sleepiness after presentation of the *RLS* video, a fact that Christine L. Sheppard-Sawyer et al. (2000) also described in their work.

Regarding comparison of the *DLS* video with previously validated videos, other studies have also mentioned an increase in negative emotions and a reduction in positive emotions after presentation of this type of video (Macht & Mueller, 2007; Sheppard-Sawyer et al., 2000; van Strien et al., 2013; Yeomans & Coughlan, 2009).

Although quantitative and qualitative methodologies have distinct philosophical foundations, the literature contains studies that have integrated these two methods successfully, when pertinent. As a result, more data have been covered, problems have been identified more easily, and the intrinsic qualities of each method have been maintained. In addition, there have been fewer methodological limitations as compared to studies using only one of the methods (Domoff, Meers, Koball, & Musher-Eizenman, 2014; Dressler & Smith, 2013; Tonkin-Crine et al., 2016; Zhang &

Creswell, 2013; Zhang & Watanabe-Galloway, 2014).

In 2013, Rossano Dal-Farra & Paulo C. Lopes emphasized the benefits of combining qualitative and quantitative methods in research based on the advantages and limitations of each method (Dal-Farra & Lopes, 2013). In the present study, the use of measurement scales (quantitative method) facilitated data generalization and enabled replication of the investigation. The reports (qualitative method) helped to confirm which situations provoked suffering and allowed us to observe that the quality of the selected scenes was essential for the participants to identify with the presented situations. The cultural pertinence of the selected movies seemed to have been important to evoke emotions in the participants. The combination of the results of the different methods enabled us to equalize the emotional peculiarities and values of the participants.

Conclusions

This research has some limitations. It is important to enlarge the sample with other group and it is necessary to analyze the influence of social characteristics in the emotions.

The *DLS* video proved to be a useful instrument to evoke negative emotions such as anger, anxiety, worry, indignation, and sadness as well as to reduce positive emotions like happiness, tranquility, and calm. The *RLS* video was an efficient instrument to maintain neutral status related with routine life. Both videos effectively elicited negative and neutral status in women and were therefore appropriate to assess common emotions.

In addition, the present study described that the mixed model of investigations contributed to covering complex questions such as the experience of emotions. The interweaving of quantitative and qualitative approaches facilitated our understanding of features related to the emotions that the participants did not report in VAS and improved our understanding of the changes in emotions, especially worry and anxiety.

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