IOP Conference Series: Materials Science and Engineering

PAPER • OPEN ACCESS

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To cite this article: L L Matté *et al* 2018 *IOP Conf. Ser.: Mater. Sci. Eng.* **459** 012095

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Exploring "Everyday Experience Methods" as a means to assess the (social-)psychological comfort of clothing

L L Matté[1,2], A C Broega[1] and M E B Pinto[3]

[1]Centre for Textile Science and Technology, Department of Textile Engineering, University of Minho, Guimarães, Portugal

[2]Department of Fashion Design, Federal University of Technology - Paraná, Apucarana - PR, Brazil

[3]Department of Psychology and Psychoanalysis, Londrina State University, Londrina - PR, Brazil

E-mail: livialauramatte@yahoo.com.br

Abstract

One of the main challenges for the Science of Clothing Comfort, is to uncover the intricacies and complexities of the psychological aspects of the clothing comfort perception. The concept and the parameters of this comfort dimension are still in the process of maturing, and the methods and tools to assess this component are still underdeveloped. One of the main drawbacks of the research on the psychological comfort of clothing resides in the dependency of the context and situational information, to elaborate a psychological comfort or discomfort perception. In the realm of the psychological or social-psychological comfort, it's primordial that the context variables are considered. This pilot study aims at examining the feasibility of assessing the perception of (social-)psychological comfort of clothing, using an everyday experience method. For this purpose, the PACO application (pacoapp.com) was the chosen platform.

1. (Social-)Psychological Comfort

At the interface between the human body and its surrounding environment, clothing plays a determinant role in the subjective perception of a user's comfort status. In the scope of clothing, comfort includes the physical, physiological and social-psychological balance between an individual, their clothing and their environment [1]. This balance is fundamental when it comes to the person-clothing relationship and the particularities that involve the use of a product that interacts continuously and dynamically with the body and is often compared to a second skin [2, 3]. Psychological comfort, or social-psychological comfort, is a process of hedonic judgment, whereby the brain forms a subjective perception of sensory stimuli, influenced by many factors. Due to its subjective nature, and diversity of influential parameters, psychological comfort is, according to Slater, the hardest comfort component to evaluate [4].

The choice of clothing, intentionally or unintentionally, communicates as an "open letter"[5], so that feeling of psychologically comfortable will largely depend on the reactions and public responses received by the user. This observation points out the importance of comfort assessments in real situations, as well as reveal the need for interdisciplinary studies to understand psychological comfort. The apparent diversity and complexity of the set of parameters to be considered in the process of evaluating the psychological comfort of garments, warns of the indispensability of seeking creative ways and combining methods and contributions from other fields to collaborate in this task.

To the best of our knowledge, there are, up to this date, no methodological proposals or instruments dedicated to assessing the psychological comfort of clothing. We believe, that the complexity of variables, and the problem with ecological validity in assessing such parameters in laboratory settings, are probably the reasons why this dimension is underdeveloped. A starting point for a more concrete assessment of socio-psychological comfort may be following the path of the Everyday Experience Methods.

2. Everyday Experience Methods

Everyday Experience Methods refer to a paradigm for studying social-psychological phenomena as they occur in the ebb and flow of everyday life. This heading proposed by Reis, Gable and Maniaci, contemplates a myriad of procedures and measures that aim 'to capture life as it is lived'. There are many different techniques, by which researchers can study daily experiences, and although the names of these methods vary (experience sampling, diary methods, ambulatory assessment, ecological momentary assessment, diary methods, intensive longitudinal designs) in sum, they allow researchers to study experience, behavior, environments, and even, physiology of individuals, self-reported or non-self-reported, in their natural settings, in (close to) real time, and on repeated occasions [6–9].

This range of methods started to flourish in the early 1970s, being the Experience Sampling Method (ESM), conceived by Mihaly Csikszentmihalyi and colleagues, the most prominent one. The ESM, "was developed as an attempt to adapt the scientific method to the understanding of human behavior and human experience instead of the reverse; that is, to understanding only those aspects of human experience that were amenable to experimental laboratory investigation." The ESM intends to study what people do, feel, and think during their daily lives [6,10–12]. In ESM protocols, when receiving a signal (usually via pagers or smartphones) the participant must respond as soon as possible. Typically, in ESM studies, participants receive eight daily notifications at random times. The questions can have both objective and subjective nature, but there are always the basic questions for characterization: where the person is, with who is he/she, and what is he/she doing at the moment of receiving the signal. The sampling of data can assume three forms: *time or interval-contingent*, when participants record their experiences at predetermined intervals (e.g. at the end of the day or every four hours); *signal-contingent,* where participants describe their activity at the moment a signal (with random or fixed schedules) is delivered; or *event-contingent,* which requires a report every time certain events occur, for example, the act of dressing, which was the selected event for the experiment to be described in the next topic [10].

A fundamental benefit of the Everyday Experience Methods is that, they permit the examination of reported experiences within its natural, spontaneous context. Kaiser, emphasizes the importance of context when studying clothing, asserting that "clothes do not exist in limbo; instead, they are embedded in context - the more complete framework or social circumstances of daily life." [13].

Also, by sampling experience the moment it occurs, it is possible to avoid the potential distortions associated with the use of retrospective diaries. The act of dressing and the decision-making process to decide which clothes to wear is an ordinary, mundane one, so, it is primal that the collection of data occurs at least, close to real time, avoiding the reliance on recollection since these events are not exactly memorable. It is clear that the method is not free of limitations, a considerable disadvantage, for example, is the demand it imposes on the interviewees because of the commitment to participate in an experiment for several consecutive days, besides, the experiences with random signal-contingent can also be inconvenient in certain situations. [8, 10, 11]

3. Method

This pilot study was developed as part of a Ph.D. research on the social-psychological comfort of clothing. At this phase, we aimed at examining the feasibility of assessing the perception of psychological comfort of clothing, using an everyday experience method [10, 12, 14]. For this purpose, the PACO application (pacoapp.com) was the chosen platform.
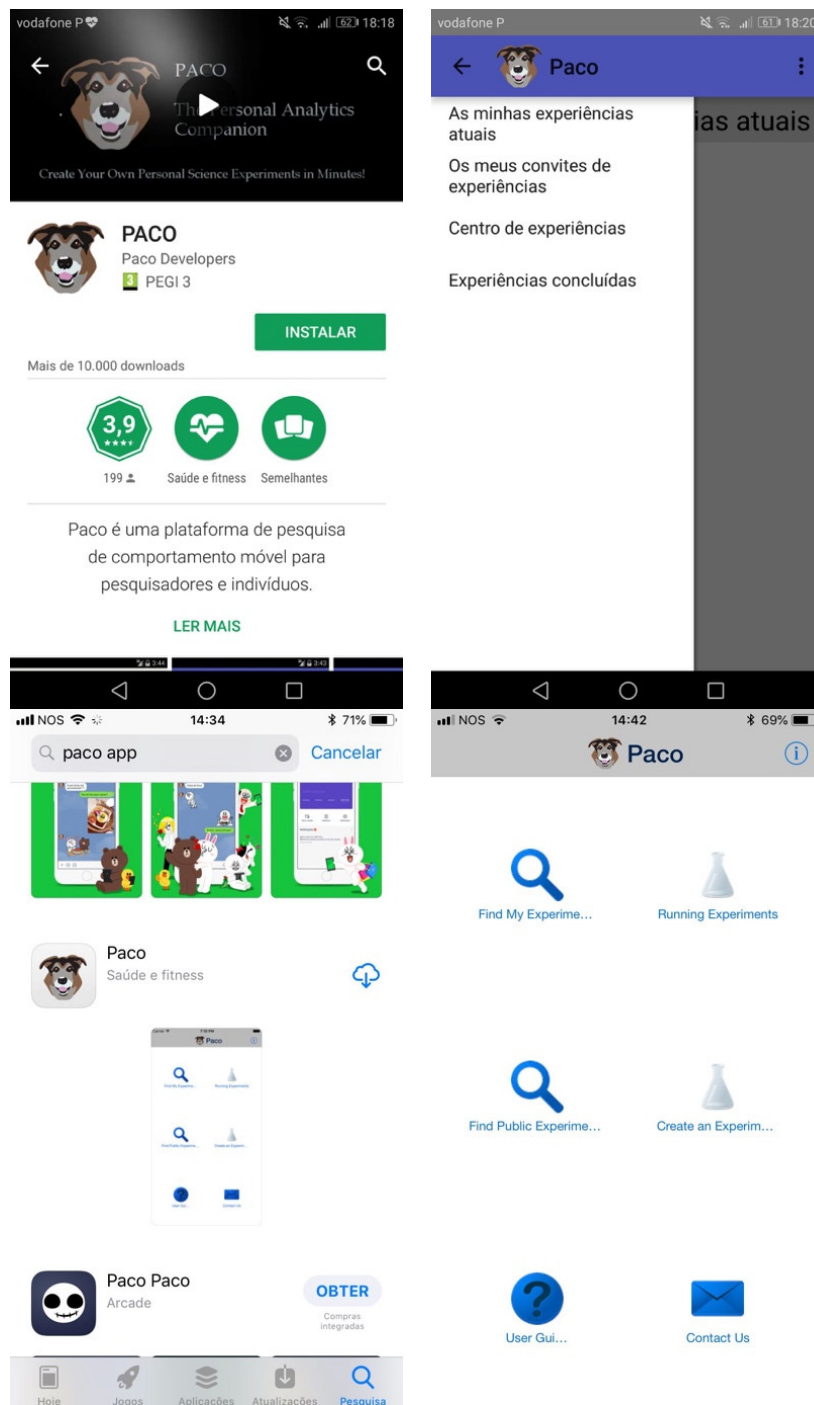
Figure 1. The interface of PacoApp for Android (top) and IOS (bottom).

PACO (Personal Analytics Companion) is an open source ESM (Experience Sampling Method) [12] that enables the scaling of qualitative research through quantitative, computational techniques [15]. The platform provides customizable software to design and deliver remote research instruments to mobile devices. The figure 1 shows two sample screenshots of the application interface for Android and IOS.

A group of clothing comfort and fashion design experts were invited to take part in the pilot study. They received guidelines for downloading and installing the Paco App and a protocol to participating

in the trial. For seven consecutive days, requests were sent to participants to fill out a small form (7 questions) immediately after the dressing time (in the morning) and at the end of the day (5 questions), which classifies the adopted model as "event sampling", since there are two specific "events" during the day that require responses.

Although the procedure was defined as event-contingent sampling, the researchers decided that it was important to send notifications, both visual and sonorous, as a reminder. After each notification (visual and sound), participants completed the open questions and the Likert scale ratings, directly in the application, concerning current context (location, weather, situation, and company) as well as satisfaction with clothing, self-esteem, social appropriateness and other components of user's momentary subjective experience with clothing. The design of the experience also included a request to take a picture (selfie) that showed the outfit choice for the day. Each report took approximately 1–2 min to complete. The answers were time-stamped, allowing for accurate recording of the time that the responses were received.

The purpose was to explore the potentialities and limitations regarding the use of this specific App as a viable tool to instrumentalize the assessment of the social and psychological aspects of clothing comfort. Some of the issues to be addressed from this phase of testing were:

-Test the App and evaluate whether the record of information fed in by the participants would be reliable.

-Explore the available possibilities to include the questions that were essential for the assessment of the psychological comfort of clothing

-Test whether participants would receive daily notifications as programmed by the researchers.

-Identify the difficulties faced by the volunteers, both, in the process of installing the App and at the moment of the answering, also evaluating the suitability of the scales that were chosen for the survey.

4.   Results

Despite the application had already been tested by the researchers (in android), the platform had some problems in processing the images and had also a delayed reception of the answers. So, in this phase, it was essential to ensure that the App worked properly. It was also important to look for alternatives to make Paco perform well for users of IOS and, because the App was not fully compatible with this operating system, the researchers had to find ways to adapt the questionnaires to circumvent the limitations of the platform.

Technically, the App performed very well, and the participants declared that taking part in this study was enjoyable. This experimentation phase also brought relevant outputs that helped us to improve the questionnaire for the next phase of the research, when applying the event-sampling method and inquiries using Paco to a larger audience. Some of the interesting findings during the testing of the App were that a) we noticed that the lack of specific instructions (in the protocol) to make the selfies photography would be a problem, as we observed that some of the images did not show the clothing as a whole, (most of them, just above the waist); b) it was possible to adjust the questionnaire, expanding the options of some questions (for example: For what occasion did you get dressed?) and modifying some of the scales (From a simple 5 point Likert scale to a smiley scale); c) the time interval within which it was possible to respond to the questions needed to be shortened as it was noted that in some occasions, the participants only responded much later than they were supposed, since the application allowed them not to respond immediately after the notifications; d) although some may have found it fun to answer the questions and take the pictures every day, we are aware that the commitment to respond twice a day and also the disposition to photograph its own outfits, even in the "not so good days" are significant obstacles.

The overall evaluation of the platform was positive, and the main advantages of the method, besides portability, were that it obtains reports about people's experience as it occurs, not relying on memory and reconstruction, and the most important, it enables the correlation between the perception of psychological comfort of clothing and social contexts/situations.

5. Final remarks

The need for a deeper understanding of psychological comfort presents itself as a still vast field of research, especially regarding new and creative methods for evaluating this comfort component. With this paper, we sought to explore and present the methodological richness and innovative to be found in social-psychological research and, hopefully, to present ideas for expanding the methodological diversity employed in the Comfort Science.

Everyday Experience Methods (diary-methods, experience sampling method, event sampling, ecological momentary assessment, and all those studies that use systematic measures of momentary experience and behavior), offer more than just another methodological alternative; the possibility to understand and assess the aspects of daily activity in real-time, including momentary physiological sampling, will allow researchers to evaluate comfort in a broader sense.

As pointed by Reis et. al, experience methods are meant to complement, not substitute for, experimentation [10], that way we believe that even the other dimensions of clothing comfort research such as ergonomic, sensorial and thermophysiological, can benefit from methods that include everyday experience protocols.

References

[1] Branson D H and Sweeney M 1991 Conceptualization and measurement of clothing comfort: Toward a metatheory *Critical linkages in textiles and clothing subject matter: Theory, method and practice* ed S B Kaiser and M L Damhorst (Monumet, CO) pp 94–105

[2] Hosseini Ravandi S A and Valizadeh M 2011 Properties of fibers and fabrics that contribute to human comfort *Improving Comfort in Clothing* pp 61–78

[3] Sanches M C de F, Ortuño B H and Martins S R M 2015 Fashion design : the project of the intangible *Procedia Manuf.* **3** 2311–7

[4] Slater K 1985 *Human Comfort* (Springfield: Charles C. Thomas)

[5] ECO U 1989 O hábito fala pelo monge. *Psicologia do vestir* pp 3–20

[6] Mehl M R and Conner T S 2012 *Handbook of research methods for studying daily life* (New York, NY.: Guilford Press)

[7] Bolger N and Laurenceau J-P 2013 *Intensive Longitudinal Methods: An Introduction to Diary and Experience Sampling Research* (New York: The Guilford Press)

[8] Hektner J M, Csikszentmihalyi M and Schmidt J a. 2007 *Experience sampling method: Measuring the quality of everyday life.*

[9] Schwartz J E, Neale J, Marco C, Shiffman S S and Stone A A 1999 Does trait coping exist? A momentary assessment approach to the evaluation of traits *J. Pers. Soc. Psychol.* **77** 360–9

[10] Reis H T, Gable S L and Maniaci M R 2014 Methods for Studying Everyday Experience in Its Natural Context *Handbook of Research Methods in Social and Personality Psychology* ed H T Reis and C M Judd (New York: Cambridge University Press) pp 373–403

[11] Bolger N, Davis A and Rafaeli E 2003 Diary Methods: Capturing Life as it is Lived *Annu. Rev. Psychol.* **54** 579–616

[12] Larson R and Csikszentmihalyi M 2014 Flow and the Foundations of Positive Psychology pp 21–35

[13] Kaiser S B 1993 Linking the social psychology of dress to culture: a contextual perspective *Social science aspects of dress: New directions* (International Textile and Apparel Association) pp 39–47

[14] Mehl M R, Conner T S and Csikszentmihalyi M 2012 *Handbook of Research Methods for Studying Daily Life* (New York, NY.: Guilford Press)

[15] Evans B 2016 Paco - Applying Computational Methods to Scale Qualitative Methods *EPIC2016 - Pathmaking* pp 348–368