



The relation between disgust-sensitivity, blood-injection-injury fears and vasovagal symptoms in blood donors: Disgust sensitivity cannot explain fainting or blood donation-related symptoms

Anna N. Vossbeck-Elsebusch^{a,*}, Alexander L. Gerlach^{a,b}

^a Westfälische Wilhelms-Universität Münster, Institut für Klinische Psychologie und Psychotherapie, Fliednerstraße 21, 48149 Münster, Germany

^b Institute for Clinical Psychology and Psychotherapy, University of Cologne, Hoeningergweg 115, 50969 Cologne, Germany

ARTICLE INFO

Article history:

Received 20 April 2011
Received in revised form
22 July 2011
Accepted 15 August 2011

Keywords:

Disgust
Vasovagal symptoms
Syncope
Blood-injection-injury phobia

ABSTRACT

Background and objectives: Page's (1994) prominent theory for the explanation of fainting in blood-injection-injury situations holds that disgust sensitivity contributes to syncopal reactions. We investigated if blood donation-related vasovagal symptoms (1) or fainting related to blood donations (2) are associated with disgust sensitivity.

Methods: In an online sample of 361 blood donors, we assessed blood-injection-injury fears, disgust sensitivity, history of blood donation related fainting and retrospective self-ratings of vasovagal symptoms. For the assessment of blood-injection-injury fears we used the BII-Q which has excellent psychometric properties and does not confound disgust and anxiety sensitivity. Vasovagal symptoms were measured by the Blood Donation Reactions Inventory (BDRI) which captures mild and strong vasovagal symptoms and has been used in previous studies with blood donors.

Results: Disgust sensitivity did not significantly contribute to the explanation of self-reported vasovagal symptoms in a regression model with gender, blood-injection-injury fear and disgust sensitivity as predictors. We did not find any significant group differences in disgust sensitivity for blood donors with or without a fainting history (statistical power = 0.95) and a Bayesian model selection procedure showed that it is more likely that both groups are equally disgust sensitive than it is that the fainters are more disgust sensitive.

Limitations: Further research is required to confirm the findings in prospective studies.

Conclusion: Our results indicate that disgust sensitivity is not relevant for the development of vasovagal syncope.

© 2011 Elsevier Ltd. All rights reserved.

1. Introduction

When blood is being taken or people are confronted with blood-injection or injury related stimuli, fainting and vasovagal symptoms are not a rare phenomenon. For example, in a study by Graham (1961), 15.2% blood donors fainted and Newman (2004) found vasovagal symptoms in 7% of whole-blood donors. These experiences of vasovagal syncope and symptoms have a negative effect on the donors' inclination to make another blood donation (Cable, Farmington, Trouern-Trend, & Badon, 1999; Gorlin & Petersen, 2004; Newman, Ahmad, & Newman, 2004) and are involved in the development of blood-injection-injury fears, which can have dramatic consequences like the avoidance of essential medical treatment (Kleinknecht & Lenz, 1989).

Up to approximately 80% of blood-injection-injury phobics have a blood-injection-injury evoked positive fainting history (Öst, Sterner, & Lindahl, 1984; Thyer, Himle, & Curtis, 1985). Since fainting has rarely been reported in other anxiety disorders (Connolly, Hallam, & Marks, 1976; for descriptive studies see Freeston, 2000; Green, Antony, McCabe, & Watling, 2007), fear alone cannot explain vasovagal syncope.

It is still controversial which mechanisms are involved in the development of syncope and vasovagal symptoms during, before or after the confrontation with blood-injection-injury stimuli. Page (1994) proposed that disgust sensitivity predispositions blood-injection-injury phobics to vasovagal syncope. He argued that people find blood and injuries disgusting (Rozin & Fallon, 1987) and that disgust and vasovagal syncope are both mediated by parasympathetic processes involving the vagus nerve (Page, 1994). Page (1994) assumed that fainting in blood-injection injury phobia is a result of a rapid sympathetic response and a slow disgust related

* Corresponding author. Tel.: +49 251 83 34118; fax: +49 251 83 34115.
E-mail address: annavoss@uni-muenster.de (A.N. Vossbeck-Elsebusch).

parasympathetic response that then sums with an antagonistic increase in parasympathetic activity, which follows the initial sympathetic response. Page (2003) holds that blood-injection-injury stimuli are the only stimuli that evoke fainting, because all other phobic stimuli like animals elicit either disgust or fear, but are not on the intersection of disgust and fear like blood-injection-injury stimuli.

Page's theory is supported by studies which found a positive association between disgust-sensitivity and blood-injection-injury related fears (e. g. de Jong & Merckelbach, 1998; Muris, Merckelbach, Schmidt, & Tierney, 1999; Olatunji, Williams, Sawchuk, & Lohr, 2006; Sawchuk, Lohr, Tolin, Lee, & Kleinknecht, 2000; Schienle, Walter, Stark, & Vaitl, 2002; Schienle, Schäfer, Walter, Stark, & Vaitl, 2005; Tolin, Lohr, Sawchuk, & Lee, 1997). In some of these studies blood-injection-injury fear was only associated with certain domains of disgust (e.g. animal-reminder disgust, body-envelope violation) but not with others (e.g. de Jong & Merckelbach, 1998; Olatunji et al., 2006). Similarly, Schienle et al. (2003) only found increased disgust sensitivity in reaction to disorder-relevant cues when they confronted blood-injection-injury phobics with disgusting pictures. Other studies failed to find increased disgust sensitivity in blood-injection-injury phobics (Gerlach et al., 2006) or found the association in only a part of the analyzed samples or measures (Koch, O'Neill, Sawchuk, & Connolly, 2002; Merckelbach, Muris, de Jong, & de Jongh, 1999).

Other studies analyzed the association between disgust and faintness. For example, Hepburn and Page (1999) found that disgusting images increased self-reported faintness but not fear when subjects were confronted with blood-injury stimuli. In a study by Valentiner, Hood, and Hawkins (2005), disgust sensitivity ("anatomy disgust sensitivity") predicted self-reported faintness when watching film segments of anatomy and medical procedures, but, surprisingly was not associated with blood-injury related fainting history. Exeter-Kent and Page (2006) found that trait anxiety and disgust sensitivity interact to generate self-reported symptoms of faintness and thereby underlined the role of disgust sensitivity in predicting symptoms of faintness. These results are contrary to those of Kleinknecht, Kleinknecht, and Thorndike (1997) who used a structural equation model to analyze the role of disgust and fear in blood and injection related fainting symptoms. They found that a latent variable related to disgust experiences was inversely related to fainting when blood-injection-injury fears were included in the model. They concluded that the relation between disgust and faintness might be illusory and mediated by disgust's shared covariance with fear.

The present study serves to further investigate the relationship between disgust sensitivity, blood-injection-injury fear, self-reported vasovagal symptoms and fainting history. For several reasons, these associations were investigated in a sample of blood donors. Firstly, blood donations provide a heavy confrontation with blood and injection stimuli, which offers the chance to find subjects who have already fainted in the relevant situation and who are likely to show vasovagal symptoms as vasovagal symptoms are common among blood donors. For example, Meade, France, and Peterson (1996) found at least mild vasovagal symptoms in 44% of a sample of blood donors. Secondly, blood donors are usually not blood-injection-injury phobic as they volunteer for blood donation, but blood donors nevertheless do often experience pre-donation anxiety (Ditto & France, 2006b; Piliavin, 1990). For these reasons it can be expected to obtain a sample with a sufficient variance in the variables of interest. Another advantage of choosing blood donors for a retrospective survey is that the amount of confrontation is similar between individuals, as the procedure of a blood donation is relatively consistent in different institutions. In contrast, everyday blood-injection-injury situations that lead to fainting are quite heterogeneous (for example fainting in a severe

accident vs. fainting while looking at pictures of minor bruises). In addition, when the interest is focused on the association between disgust sensitivity and vasovagal symptoms rather than on the association between blood-injection-injury phobia and vasovagal symptoms, blood donors are an especially suitable sample since the majority of these subjects is unlikely to suffer from severe blood-injections-injury phobia mostly including avoidance behavior. Thus, the effects of disgust on vasovagal symptoms should be especially easy to dismantle.

When investigating the relation between blood-injection-injury fears, disgust, and faintness, it is important to use a self-report instrument for blood-injection-injury fears that avoids confounding anxiety with faintness, disgust or avoidance. Many questionnaires that have been used in past studies fail to fulfill this criterion. For example, Schienle et al. (2002) have used the Mutilation Questionnaire (Kleinknecht & Thorndike, 1990), which contains apparently disgust-related items like "I could not remove a fish hook." Olatunji et al. (2006) have used the Medical Fear Survey (Kleinknecht, Kleinknecht, Sawchuk, Lee, & Lohr, 1999) that contains the items "feeling dizzy" and "feeling faint." De Jong and Merckelbach (1998) have used items from the Fear Questionnaire (Marks & Mathews, 1979) which only assess phobic avoidance of situations, which can either be triggered by anxiety or by disgust. Therefore, we have developed and validated a new questionnaire (Vossbeck Elsebusch, & Gerlach, submitted for publication) that avoids item formulations that ask for reactions other than anxiety (e.g. disgust or faintness).

In the present study, we will test the two hypotheses that are derived from Page's explanation of vasovagal symptoms and fainting during the confrontation with blood (1994, 2003). Firstly, we will test if subjective ratings of blood donation related vasovagal symptoms are associated with disgust sensitivity. We want to find out if disgust sensitivity explains any variance in vasovagal symptoms over and above the variance that is explained by blood-injection-injury fears. Secondly, we will test if individuals with a fainting history are more disgust sensitive than individuals without a fainting history.

2. Material and methods

2.1. Participants

Participants were invited to the survey that was created by the "EFS Survey" software (Globalpark AG) in online social networks and on bulletin boards (e. g. <http://www.facebook.com> and <http://www.studivz.de>). We included all groups whose description contained the German words for donating blood, blood donor or blood donation and that were serious and not likely intended to be humorous. The groups had between one and 2141 members, some individuals were members of more than one group of blood donors. 361 participants followed the invitation and finished the survey, 58 of them reported that they had experienced a complete syncope during blood donation, 289 stated not to have experienced a complete syncope and 14 did not answer the question if they had already fainted during blood donation. Based on age, height, weight, occupation and browser type we checked if it was likely that a person had filled in the questionnaire twice. Two subjects had the same occupation, nearly the same height and weight as well as the same browser type. When we excluded these subjects from the analysis, none of our significance tests came to a different result. The two subjects were relatively little disgust-sensitive and little blood-injection-injury-anxious non-fainters. We therefore decided not to exclude them. Ethical clearance has been obtained from the local ethic committee for psychology and sport sciences of the University of Münster.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات