Mammography-related pain and anxiety

Whe have read with interest the recent article on mammography-related pain and anxiety by Alimoğlu et al. (1). We would like to point out the fact that this popular subject originating from Turkey is considered to be an important resource for Turkish research, which has fallen behind in medicosocial matters. However, we believe that some details must be reviewed again.

1. In the study, the Spielberger State-Trait Anxiety Inventory (STAI, Turkish version), which is considered to be a valid and reliable instrument, was used in order to determine the level of situational anxiety. However, no measurements were taken in order to determine the level of anxiety within recent days. Determining the recent anxiety level by asking only one question ("Do you recently feel more strained and more nervous than before?") without any validity or reliability study is not a suitable method. There are scales that are structured for measuring the level of recent anxiety. One of them is the continuous anxiety subscale of STAI (2). However, a more suitable scale is the Hospital Anxiety and Depression Scale (HAD), which was developed by Zigmond and Snaith (2). The validity and reliability studies for the Turkish version of this scale (Hospital Anxiety and Depression Scale; HAD) was carried out by Aydemir et al. (3). Due to the unsuitable method used in their study, the authors should review their result indicating that the recent anxiety level and pain perception were related.

2. Considering the literature and the results of this study, it is inevitable to agree that cancer anxiety increases the level of anxiety. However, it is known that the level of anxiety may influence the participation in cancer screening programs. In other words, only high levels of anxiety produce a negative influence on cancer screening programs, whereas medium and low levels of anxiety are known to improve the participation in screening programs (4, 5). Although the influence of high levels of anxiety on the participation in mammography screening was mentioned in the introduction of the article, the content of the article does not reveal the number of patients who have developed levels of anxiety that were high enough to prevent them from participating in mammography. Since the average anxiety score in the study group had indicated midlevel anxiety, the probability that this level of anxiety discouraged the participation in mammography is questionable.

3. On the other hand, in a study involving many variables (such as menopause, sociodemographic variables, mammography experience, cancer anxiety, levels of anxiety, etc.) as in this case, using a multiple regression analysis in order to determine which of these variables has a more significant influence would be more appropriate.

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Author's reply

First, we would like to thank Drs. Göktan and Taşkın for their interest in our recent article on mammography-related pain and anxiety and their constructive feedback (1). The summary of their three comments and our response to these comments are given below.

Comment 1: Determination of the recent situational anxiety level by asking only one question ("Do you recently feel more strained and more nervous than before?") without any validity or reliability study rather than using continuous anxiety subscale of Spielbeger State-Trait Anxiety Inventory (STAI) or Hospital Anxiety and Depression Scale (HAD) is not a reliable method. Accordingly, the relationship between the recent anxiety level and pain perception should be reviewed.

Response 1: STAI is composed of two parts. The first part measures continuous anxiety and the second part measures spontaneous situational anxiety (2). Although we were aware of the subscale concerning the continuous anxiety, we used only the part of the scale that measures situational anxiety since our purpose was to measure the spontaneous anxiety level of the patients as did Sakan et al. in their study, which was published in 2003 (3). The question "Do you recently feel more strained and more nervous than before?" is not any different from the question "Are you afraid of being diagnosed with cancer as a result of examination?" in terms of reliability. Both questions are survey type questions and naturally it is not possible to expect the replies to give the validity and reliability that would be provided by a scale. Therefore, we have only mentioned the data that we obtained concerning recently experienced anxiety in our results and had de-

liberately avoided quoting these results in the Discussion section, wherein we mentioned only the results that could be derived from our study. We agree that the HAD scale could be an alternative for studies similar to ours, especially with patients experiencing physical impairment (4). However, we could not find any scientific proof introducing HAD as a better alternative for STAI.

Comment 2: Although it is known that high levels of anxiety discourages the participation in mammography, while low levels encourage it, the content of the article did not reveal the number of patients who developed levels of anxiety that were high enough to discourage participation in mammography. The probability that midlevel anxiety in this patient group was sufficient to discourage participation in the screening programs is questionable.

Response 2: Our article does not include any comments on the influence of anxiety levels on the participation in screening programs, as the purpose of our study was not to determine the number of patients who developed levels of anxiety high enough to discourage their participation in mammography, but to understand the influence of informing the patients on the pain levels related to anxiety and the mammography process. We totally agree that the probability of midlevel anxiety preventing this patient group from participation in a mammography screening program is questionable. For that reason, we have elaborated on this matter in the Discussion section and we have suggested that fear, as a cause of anxiety, should definitely be taken into consideration. However, we did not mention the number of patients who were discouraged to participate in cancer screening. Therefore, we believe it is possible to reach a more reliable conclusion by means of monitoring the participation of our patients in the screening programs over a longer period of time.

Comment 3: In a study involving many variables, using a multiple regression analysis in order to determine which of these variables has a more significant influence would be more appropriate.

Response 3: We totally agree that using a multiple regression analysis when examining the influence of many variables on the dependent variables would have been an appropriate approach (5). Evaluating our data by using both Student t test and multiple regression analysis have not changed the result, i. e., informing the patients about the process does not effect the level of anxiety but effects the level of pain perception. The reason why we have preferred the Student t test was that the aim of our study was not to determine all of the factors that have an influence on the levels of pain and anxiety and the casual relationship between these factors, but to determine the influence of informing the patients on the pain scores and anxiety levels. If our purpose was to determine the cause of pain and anxiety related to mammography, we would have preferred multiple regression analysis in order to obtain the net influence of each factor.

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