Journal of Cranio-Maxillo-Facial Surgery 45 (2017) 1133–1137

Contents lists available at ScienceDirect

Journal of Cranio-Maxillo-Facial Surgery

journal homepage: www.jcmfs.com

Screening for psychological distress: A new approach to identify the patient's psychological needs in a pilot study on oral cancer patients

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ARTICLE INFO

Article history:
Paper received 1 March 2017
Accepted 11 May 2017
Available online 17 May 2017

Keywords:
Cancer
Oncology
Screening
Psychological needs

ABSTRACT

Objective: A new screening tool has been developed to predict the psychological needs of patients with oral cancer.
Method: The new screening method was developed inductively. Screening was pretested using interviews and implemented with 71 patients with oral cancer. Factor analysis was carried out to shorten the questionnaire.
Results: Negative and positive aspects explain forty per cent of the variance in distress, which should be adequate for a first screening. Seventy-nine per cent of the items deal with stable traits such as personality. The patients' objective need for support has to be another important part of this new screening.
Conclusions: Personality and other traits are good predictors for psychological distress. Longitudinal studies need to assess these new aspects of screening cancer patients to find out if they need psycho-oncological support.

1. Introduction

The number of cancer patients is expected to almost double within the next 15 years in developed countries. Furthermore, it is one of the most common life-threatening diseases in Germany. A diagnosis like this changes life forever (Canadian Strategy for Cancer Control, 2001; Haberland et al., 2006). However, due to better surgery techniques, mortality rates are falling, which means more patients having to deal with the consequences of cancer. These patients have to deal with both physical and psychological burdens. Therefore, oncological and psycho-oncological guidelines require that psychological support is offered to the patients in order to provide holistic recovery and improve the patients' quality of life. They recommend screening every cancer patient to make sure that all psychological needs are met and to screen for indications anxiety disorders or depression (Deutsche Krebsgesellschaft, Deutsche Krebshilfe, 2014). Studies show a need for psycho-oncological treatment in about forty per cent of cancer patients (Mitchell, 2007; Mehnert et al., 2006; Zabora et al., 2001; Pascoe et al., 2000).

Over the last decade many screening techniques have focused on the patients' current situation and their physical sensations. Mehnert et al. give an overview of more than 30 psycho-oncological questionnaires and screenings currently in use worldwide (Mehnert et al., 2006). These questionnaires are used to identify patient's quality of life, psychosocial distress, anxiety, and other aspects. Most of these focus on a fixed period of time, for example the last 7 days. They include items like 'How have you felt over the last 7 days?' or 'How much pain have you suffered from?' Therefore, these screening methods are based on urgent problems, feelings, and needs. They do not consider the patients' general situation. However, the results are significantly influenced by time (Baker et al., 2013). Directly after diagnosis patients tend to score higher on general distress and low in aspects like quality of life (Cooley et al., 2003; Mantegna et al., 2013). The results of these

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http://dx.doi.org/10.1016/j.jcms.2017.05.008
1010-5182/

screenings would differ if you asked these patients directly after their surgery or later in their healing process. Specificity of most screening techniques is very low, while sensitivity is high, which leads to more psycho-oncological treatment than is actually necessary (Baker et al., 2013; Cooley et al., 2003).

Some recent studies have shown the relevance of personality traits and other aspects that do not change over time (Rana et al., 2014; Aarstad et al., 2011; Hassanein et al., 2005). For instance, Rana et al. showed a correlation between personality, style of coping and quality of life, and psychological aspects of cancer (Meggiolaro et al., 2015; Hassanein et al., 2005; Barg et al., 2007). According to them personality is one of the most important predictors of depressive coping, which automatically leads to a higher level of distress. They could also demonstrate significant correlations between active coping and extraversion. Aarstad et al. could even verify that about one third of the variance in distress can be predicted through personality (Aarstad et al., 2011). In general, a high level of distress is positively related to low quality of life, high level of neuroticism and pessimism, and an external locus of control (Hassanein et al., 2005; Warbah et al., 2007). Such a focus on personality traits explaining distress is not as new as these studies suggest. Distress has been associated with personality traits since the 1990s (Becker et al., 2004; Bolger and Schilling, 1991). However, the important findings in this area were taken into account while regarding psycho-oncological distress. Social background has also been shown to have an influence on how people cope with their disease (Alferi et al., 2001).

The above studies all point to the huge influence personality has on distress. However, the questionnaires in use miss out these aspects. For this reason, screening methods are not able to differentiate clearly between short-term stress and real burdening. Moreover, they do not consider the patients' need for treatment (Schaeffeler et al., 2015). The low specificity of current questionnaires needs to be addressed through new approaches that also take psychological traits into account. Gessler et al. suggest screening for distress in general, but also combining this with indication of other treatable problems, such as anxiety and depression (Gessler et al., 2008). Improving screening in this way requires finding new points of reference. The aim should be to identify stable negative predictors that do not change over time. Only these aspects are able to offer long-term information about patients' level of distress and thus the opportunity to improve their quality of life.

The aim of this pilot study was to develop a new screening method that combines questions about the patients' subjective need for psychological treatment, predictive factors, and symptoms. It was applied specifically to the field of oral cancer. On this basis, a comprehensive statement on the patients' situation, and predictions for future psycho-oncological support, should be possible.

2. Methods

In anticipation of this study, qualitative research was conducted to establish what patients and doctors think are the most important predictors for patients' level of distress (Rana et al., 2016). However, bearing in mind what patients feel is most important for them, our research began with questionnaires and current literature. Based on established questionnaires and research, a first design including 46 items was developed. In this way, various questionnaires and research articles were screened to find out which aspects seemed to be the most important when screening cancer patients. During this process the main focus was on trait-based questions covering, for example, personality, coping, social background, and distress. Aspects such as depression and anxiety were also considered. Based on the results of Cooley et al. and Mantegna et al., a few questions focusing on actual behavior were included (Cooley et al., 2003; Mantegna et al., 2013), so the results should be more reliable. All questions were generalized to avoid specific answers relating to the form of cancer. For example, phrases like 'Do you have problems while breathing' were avoided.

The first version was presented to patients with oral cancer using a 'thinking aloud' method. As a result of the patients' comments, the screening was shortened and a Likert scale was applied to four questions. Some questions needed to be reworded and some aspects mentioned by the patients were added. The new version was then given to 71 patients with oral cancer. This pretest was carried out to evaluate the new screening and to calculate corrected item–total correlations. Furthermore, factor analysis was conducted to reduce the number of items and to describe the relationships between observed variables.

2.1. Patients

From October 2015 to January 2016 eligible patients were asked to complete the newly developed screening while waiting for their routine control. A briefing on the aim of the study, risks, and exclusion criteria and eligibility criteria was given to every patient before starting the questionnaire. The whole study was approved according to the Hannover Medical School Ethics Committee (No. 2683-2015).

The eligibility criteria were as follows: diagnosis of oral cancer, majority, and written consent. Exclusion criteria were pregnancy, drug addiction, mental disability, and the need for a caregiver. 71 patients completed the screening and each of them was asked about their personal opinion on psycho-oncological support. 44 male and 27 female patients participated. Patients were 65.01 years on average (SD = 12.09); men (M = 62.64, SD 11.49) were younger then women (M = 69.00, SD = 12.51).

3. Results

The suitability of data for factor analysis was reviewed by the Kaiser-Meyer-Olkin criterion. The MSA (measure of sampling adequacy) was 0.63. After this, principal factor extraction with varimax rotation was performed on 38 items of the new screening for the sample. Four items asked about the subjective need for support and were excluded from the analysis because they were mandatory.

Principal components extraction was used to reduce the number of items. However, due to theoretical research, the principal component factor analysis with discontinuation below eigenvalue criterion (eigenvalue $\geq$1) and varimax rotation was performed, defining two factors. The two factors explain thirty-four percent of the total variance. The determination supports the idea of one negative factor, regarding dysfunctional coping style, and one positive factor, regarding functional coping.

On the first factor, 20 items loaded highly positively. On the second factor, 11 items loaded. Seven items have been removed from the screening because of the results of factor analysis. (Table 1) Items number 7, 20, 21, 26 and 27 did not load one any of the two factors. Items number 13 and 25 had very small loads below .35. Therefore there were also removed from the questionnaire.

The first factor includes the items about depressive coping, pessimism, neuroticism, low social support, and anxiety and depression. This factor can be summarized as negative processing, since the variables, which load highly on this factor, imply dysfunctional illness processing and high distress levels in general.

For the second factor, the variables life satisfaction, optimism, active coping, performance orientation, and internal beliefs of