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Communication Study

Nonverbal communication and conversational contribution in breast cancer genetic counseling

Are counselors' nonverbal communication and conversational contribution associated with counselees' satisfaction, needs fulfillment and state anxiety in breast cancer genetic counseling?

Henriëtta Dijkstra [a], Akke Albada [b,*], Christina Klöckner Cronauer [c], Margreet G.E.M. Ausems [b], Sandra van Dulmen [a,d,e]

[a] Netherlands Institute for Health Services Research (NIVEL), Utrecht, The Netherlands
[b] Department of Medical Genetics, University Medical Centre Utrecht, Utrecht, The Netherlands
[c] University of Neuchatel, Neuchatel, Switzerland
[d] Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands
[e] Department of Health Sciences, Buskerud University College, Drammen, Norway

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ABSTRACT

Objective: The current study aimed to examine how counselors' nonverbal communication (i.e. nonverbal encouragements and counselee-directed eye gaze) and conversational contribution (i.e. verbal dominance and interactivity) during the final visit within breast cancer genetic counseling relate to counselee satisfaction, needs fulfillment and anxiety.
Methods: Breast cancer counselees ($N = 85$) completed questionnaires measuring satisfaction, needs fulfillment and anxiety after the final consultation and anxiety before the initial visit. Consultations were videotaped. Counselor nonverbal encouragements and counselee-directed eye gaze were coded. Verbal dominance and interactivity were measured using the Roter Interaction Analysis System (RIAS).
Results: More counselor nonverbal encouragements and higher counselor verbal dominance were both significantly related to higher post-visit anxiety. Furthermore, counselor verbal dominance was associated with lower perceived needs fulfillment. No significant associations with eye gaze and interactivity were found.
Conclusion: More research is needed on the relationship between nonverbal encouragements and anxiety. Given the unfavorable association of counselor verbal dominance with anxiety and needs fulfillment, more effort could be devoted to involve counselees in the dialog and reduce the counselor's verbal contribution during the consultation.
Practice implications: Interventions focused on increasing counselees' contribution in the consultation may be beneficial to counselees.

1. Introduction

The medical consultation is a communicative event in which clinicians and patients exchange information, build a trusting relationship and make health-related decisions [1]. Apart from verbal communication, clinicians and patients use nonverbal behavior to communicate. Nonverbal behavior (e.g. head movements and eye gaze) is widely recognized as conveying affective and emotional information although it has other functions as well such as regulating turn-taking in conversation [2,3] and communicating dominance [4]. It is claimed that more than half of the meaning in human encounters is communicated nonverbally [5] which suggests that nonverbal behavior plays an important role in the medical encounter. Indeed, nonverbal behavior has been found to influence clinically relevant outcomes such as patient satisfaction and adherence [2] in either a facilitating or inhibiting way [6].

Most research on physician nonverbal communication during clinical interactions has focused on patient satisfaction. Although physicians' nonverbal communication is unlikely to immediately affect patient physical or mental health, it may lead to changes in health (e.g. adherence, self-management skills and social support) that are mediated through patient satisfaction [7–9]. More

* Corresponding author. Tel.: +31 088 7553097.
E-mail address: a.albada@umcutrecht.nl (A. Albada).

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nodding [2,10,11], smiling [11] and eye contact with the patient [2,10–13] were found to be related to higher patient satisfaction.

Another aspect of interaction that seems to influence patient satisfaction is the conversational contribution (i.e. verbal dominance and interactivity). The individual with the most utterances in the consultation is called verbally dominant and this is mostly the physician [14]. However, physician verbal dominance has clearly shown to influence patient satisfaction negatively [15–18]. Also, more interactivity, i.e. the number of turns during the consultation, was shown to be significantly related to receiving more tailored information from the physician and higher satisfaction, but evidence is limited to a study with simulated clients [14]. With higher interactivity there is ample opportunity for patients to express their views which enhances satisfaction [1,19].

Although there is a substantial body of evidence indicating that health care providers' nonverbal communication and conversational contribution influence satisfaction with the medical consultation, these aspects have received little attention so far in breast cancer genetic counseling. In genetic counseling the main goals are promoting counselees' health-enhancing behaviors, enhancing accurate risk perception, facilitating adaptation to genetic risk and preventing disease [20]. These goals can be reached only through communication of complex, probabilistic and uncertain genetic information [20–22]. In this subtle process nonverbal communication should not be overlooked and should be related to counselee satisfaction, but also to more relevant and sensitive, counselee reported outcomes such as the perceived fulfillment of needs and anxiety.

As opposed to satisfaction, needs fulfillment questionnaires are disease-specific and assess counselees' experiences with how needs were addressed [23]. Currently, needs fulfillment is an under-researched visit outcome in genetic counseling [24,25]. Needs fulfillment was shown to be associated with higher levels of perceived personal control and lower anxiety [26]. Many counselees report high anxiety [27] which may exert a profound influence on visit outcomes, such as recall and decision making [28]. Physicians' communication style can moderate patients' anxiety [29]. Especially, patient-centered and facilitative styles, including affective communication (e.g. empathy), were found to be effective in reducing a patient's anxiety. As nonverbal behavior is seen as essential in conveying affective information [2] and affective communication is an important counselee need [30], nonverbal behavior might also be associated with anxiety and needs fulfillment. Facilitative styles involve counselor's attempts to engage the counselee more fully in the dialog [29], thus higher interactivity and lower verbal dominance could be related to reduced counselee anxiety. However, the associations of nonverbal behaviors, dominance and interactivity with needs fulfillment and anxiety are unstudied yet.

To our knowledge, nonverbal communication is only studied in relation with counselee satisfaction, anxiety and needs fulfillment in the first visits for cancer genetic counseling [25]. Results suggest that there is no relationship with counselee satisfaction and needs fulfillment. However, longer counselor eye gaze did appear to be related to higher anxiety scores. Research on counselors' dominance and interactivity has furthermore shown that in genetic counseling counselors' speak more than clients [24,31,32]. The visits might have to become more interactive to facilitate discussion of counselees' views [33], to enhance their understanding [24,31] and to better fulfill needs. A recent review [34] suggests that lower levels of counselor verbal dominance are associated with more satisfaction. However, these results were based on simulated first consultations. Final visits are fundamentally different as these aim to increase accurate risk perception and adherence to preventive recommendations, whereas the goal of the first visit is to educate counselees about hereditary breast cancer for them to make an informed choice about DNA-testing [20,31,34]. How counselees think and feel after the final visit influences their subsequent cognitions and behavior, e.g. surveillance behavior [35]. To our knowledge, there are no studies on nonverbal behavior, verbal dominance and interactivity in final genetic consultations and its impact on the outcomes. Therefore, we will study nonverbal encouragement (i.e. smiling, nodding and shaking head), eye gaze, verbal dominance and interactivity in these visits and explore relations with visit outcomes (i.e. counselee satisfaction, anxiety and needs fulfillment).

2. Methods

2.1. Participants

Participating counselees were recruited from the department of Medical Genetics of the University Medical Center (UMC) Utrecht. This department offers breast cancer genetic counseling according to the Dutch guidelines [36]. Counselees enrolled from February 2008 to April 2010. Counselees who were aged 18 years or older, female and the first in their family to request breast cancer genetic counseling were sent study information and an opt-out form. Counselees were ineligible when they lacked Internet or e-mail access.

The study was approved by the medical ethical committee of UMC Utrecht and is registered in the Dutch Trial Register (ISRCTN82643064). Data were gathered as part of a randomized controlled trial (RCT) on the effects of a pre-visit tailored website on genetic counseling outcomes in which participants were randomized to receive usual care or usual care plus an educational website [37,38]. In the current study, this group allocation was controlled for.

2.2. Response

During 27 months, 336 eligible counselees received information about the study and 197 were willing to participate. The response rate was 58.6%. Almost half of the decliners gave a reason (43.9%). Most preferred the visit not to be videotaped (65.7%). Of the 197 participants, 96 (48.7%) had a follow-up consultation which was videotaped. The present study focuses on these final visits. 11 counselees were videotaped but failed to fill in the questionnaires, so the present sample exists of 85 participants (see Fig. 1).

2.3. Procedure

Genetic counseling usually consists of one or two consultations. In the initial consultation the counselees' pedigree and details about family history of cancer are discussed [33]. Furthermore, information on hereditary breast cancer, inheritance and DNA-testing is given [31]. If there is an indication for a DNA-test for the counselee or an affected relative and the counselees proceed with testing, a blood sample will be drawn [33]. The test results and cancer risk estimates are discussed in a follow-up consultation 4–6 months later. The consultations were videotaped. Mostly, recordings showed counselors' full face and counselees from behind. Before the initial visit, counselees completed a questionnaire on anxiety. After the final visit, they completed a questionnaire on satisfaction, needs fulfillment and state anxiety.

2.4. Measures

2.4.1. Counselee characteristics

Counselees' breast cancer disease status and risk to (re-) develop breast cancer (visual analog scale from 0 to 100%) were