High levels of socioeconomic deprivation do not inhibit patients' communication of concerns in head and neck cancer review clinics

S. Allen [a,*], R. Harris [b], S.L. Brown [c], G. Humphris [d], Y. Zhou [d], S.N. Rogers [e,f]

[a] *Department of Health Services Research, Institute of Psychology Health and Society, University of Liverpool, Room 111, 1st floor, Block B, Waterhouse Building, 1-5 Brownlow Street, Liverpool, L69 3GL, UK*
[b] *Department of Health Services Research, Institute of Psychology Health and Society, Block B, Waterhouse Building, 1-5 Brownlow Street, Liverpool, L69 3GL, UK*
[c] *Department of Psychological Sciences, University of Liverpool, Liverpool, L69 3BX, UK*
[d] *School of Medicine, University of St Andrews, St Andrews, Fife, KY16 9TF St Andrews, Scotland, UK*
[e] *Evidence-Based Practice Research Centre (EPRC), Faculty of Health and Social Care, Edge Hill University, St Helens Road, Ormskirk, L39 4QP*
[f] *Consultant Regional Maxillofacial Unit, University Hospital Aintree, Liverpool, L9 1AE, UK*

Abstract

To examine associations between socioeconomic status and the extent to which patients with cancer of the head and neck expressed concerns to surgeons during routine follow-up clinics, we analysed audio recordings of 110 consultations with one consultant. We used the Verona Coding Definitions of Emotional Sequences (VRCoDES) to measure communication between the doctor and the patient, and grouped the English indices of multiple deprivation (IMD) 2015 scores into deciles to compare the VRCoDES with socioeconomic status. There were no significant correlations between IMD decile and the number and type of cues and concerns, or the type of response by the consultant, but there was a positive correlation between IMD decile and duration of appointment ($r = 0.288$, $p < 0.01$). When the duration of appointment was controlled for, there was a negative correlation between IMD decile and number of cues and concerns ($r = -0.221$, $p < 0.05$). These findings question the assumption that socioeconomic status is associated with a patient's willingness to express concerns. Shorter consultations suggest that less time is spent responding to their concerns or building a rapport. Clinicians might find it advantageous to adopt strategies that will improve their understanding of these patients and help them to communicate more effectively.
© 2018 The British Association of Oral and Maxillofacial Surgeons. Published by Elsevier Ltd. All rights reserved.

Keywords: Doctor-patient Communication; Head and Neck Cancer; Deprivation; VRCoDES; Indices of Multiple Deprivation

Introduction

Cancer of the head and neck can cause a range of long-term problems that include pain, xerostomia, fear of recurrence, disfigurement, and problems with feeding and speech.[1] Research has suggested that patients of a low socioeconomic status are more likely to develop the disease. They also have a poorer quality of life, and lower survival rates than those of higher status.[2–4]

Patient-centred communication, in which patients are encouraged to raise and discuss their concerns, and to participate in the decisions made about their treatment,[5] is linked to positive outcomes. These include a better quality of life, a reduction in anxiety and depression, greater satisfaction, a

willingness to share information, and improved compliance with treatment.[6–9]

Studies, however, have found that communication between the doctor and patient can differ according to the patient's socioeconomic status.[10] Low-status patients tend to participate less actively in consultations, for example, they ask fewer questions, and are not as likely to express emotion and volunteer information spontaneously. Healthcare professionals tend to give them less information, spend a shorter time building a rapport, and do not listen to them as attentively.[9,11,12]

The level of deprivation is an indicator of socioeconomic status in the UK that is based on seven variables that include quality of housing, employment and crime, and living environment.[13] It is the primary indicator of area-based socioeconomic deprivation because it reflects inequalities over a broad range of social indicators. High levels of deprivation are associated with greater morbidity and mortality,[14] and with a prevalence of mental disorders,[15] obesity and smoking,[16] and poorer self-reported health.[16]

To our knowledge, few authors have explored the effect that socioeconomic status has on communication between clinicians and patients with cancer of the head and neck, and none has used the level of deprivation as a measure of socioeconomic status. The UK National Health Service theoretically provides equal access to health services across all levels of society, which allows systematic comparison between different groups. We aimed to explore the association between low socioeconomic status and communication between the doctor and patient in head and neck oncology review clinics. This will improve our understanding of the effect of deprivation on such interactions.

Material and methods

We examined associations between the level of deprivation and the incidence and timing of patients' expressions of concern in 110 audio recordings of head and neck oncology review consultations with a single consultant head and neck surgeon.

We split Index of Multiple Deprivation (IMD) scores into deciles to measure socioeconomic status.[17] IMD scores comprise aggregated summaries of income, employment, education, health, crime, access to housing and services, and living environment, which pertain to areas of around 1500 people in England. They are available on the website of the Department for Communities and Local Government, and can be accessed using postcodes.[18]

The audiotapes were analysed using the Verona Coding Definitions of Emotional Sequences (VRCoDES), which quantify patients' expressions of worry or concern in a medical consultation, together with the responses of the healthcare provider.[19–21] Patients' utterances are coded as cues (verbal or non-verbal hints about negative emotions) or concerns (explicit expressions of emotion that are clearly stated), and

Table 1
Distribution of Index of Multiple Deprivation (IMD) deciles in sample.

IMD decile	Percentage of sample
1	30.9
2	9.1
3	4.5
4	1.8
5	10
6	9.1
7	10
8	10
9	8.2
10	6.4

Table 2
Clinical characteristics of sample.

	Percentage of sample
Treatment:	
Operation only	40.9
Operation and radiotherapy	52.7
Radio/chemoradiotherapy without operation	6.4
Stage at diagnosis:	
Early	50
Late	31.8
Missing	18.2
Primary site:	
Oral	51.8
Pharyngeal	25.5
Other	22.7

each is coded in terms of whether it was elicited by the patient or the healthcare professional.[20] Responses by the healthcare provider are coded in terms of explicitness and whether they provided or reduced the opportunity for further disclosure; in other words, whether the healthcare provider encouraged or discouraged the patient from voicing their emotional concerns, and whether they did so directly or indirectly.[19] VRCoDES have been used to study communication between doctors and patients in a variety of healthcare settings and in many different groups.[22,23]

Pearson's correlation was used to examine associations between the IMD decile and number of cues and concerns, elicitation, and type of response by the consultant. Pearson's partial correlation was used to control for duration of appointment.

Results

The mean (range) age of the patients was 62.9 (29–93) years and most of them were male (n = 70, 64%). The mean (range) duration of appointment was 9 minutes 17 seconds (3 minutes 52 seconds–21 minutes 55 seconds), and the mean (SD) time since diagnosis was 56.85 (51.74) range 6–240 months. Table 1 shows the distribution of IMD deciles and Table 2 the clinical characteristics of the sample.

Table 3 shows the mean number of cues and concerns. As shown in Table 4, there were no significant correlations