

The Verbal Skills Used by Orthoptists During Private Patient Consultations

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ABSTRACT

Purpose: Verbal communication is an essential part of the medical consultation. It can affect the patient's level of satisfaction, compliance to treatment regimes and recommendations, and may impact on the quality of the patient-practitioner relationship. This study aims to explore the form and patterns of verbal communication that are used by orthoptists in private ophthalmic settings when consulting with patients and the impact of external factors such as experience, patient characteristics and initial or return consultations.

Methods: Twelve orthoptists and 49 patients were recruited from 3 private ophthalmic practices in metropolitan New South Wales. A real-time assessment of duration of clinical tasks and coding of verbal communications into categories

was performed and analysed with the SPSS program using correlation and t-tests.

Results: Orthoptists were found to use extensive explanations, delivery of information and use of rapport, which increased with the orthoptists' clinical experience. Patient characteristics such as age, gender, and cultural background did not affect the duration of tests performed or the verbal communication used.

Conclusion: Orthoptists use a wide range and types of verbal communications in their clinical practice. The level of the orthoptists' clinical experience influences the verbal communications used by the orthoptist. Patient characteristics had little influence on the verbal communications used.

Keywords: verbal communication; patient-practitioner relationship.

INTRODUCTION

In health care, verbal communication can influence the patient-practitioner relationship, and can improve the quality of that relationship^{1,2}. It also has the ability to affect a patient's level of satisfaction, awareness and adherence (compliance) to medical treatments, interventions and recommendations^{3,4}.

Communication is the successful sending and receiving of messages^{5,6} and is divided into two broad components, nonverbal (70%) and verbal (30%). Nonverbal communication involves sending messages or communicating through forms of body language. This form of communicating includes the position of the eyes or an individual's direction of gaze, hand gestures, body posture and the distance between the two people. Different tones in voice and hesitations between phrases are also seen as aspects of nonverbal communication⁶⁻⁸. The function of nonverbal communication is to complete, elaborate and give further meanings to verbal

messages⁹. Verbal communication, on the other hand, is the words and phrases of the spoken language. It is a continuous transmission and repetition of signals and messages. Although verbal communication is thought to play a lesser role in communication exchange, Deveugele¹⁰ suggests that it is the main channel by which health care professionals communicate with patients. Deveugele¹⁰ further suggests that this is due to a shift in emphasis of treating diseases where the whole person is cared for.

There is an inevitable need for partnership building between patient and practitioner and one where the patient's expectations and need for reassurance and support are considered. Medical questioning, examination, giving of advice and information, and counselling are also necessary in communication with patients. Since the 1960s, studies of verbal communication in health care have been undertaken in order to understand the relationship between practitioner and patient. Communication has been found to contribute to the detection, management and prevention of disease and the promotion of health and health information^{3-5,11-16}.

Verbal communication is reported in literature to be influenced by many factors. In the patient, it can be influenced by

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patient age¹⁷ and gender¹⁸ and in the practitioner by gender¹⁸, experience¹⁹ and competence^{1,20,21}. All these factors work to develop patient compliance^{3,4,11,18,22} and satisfaction^{1,3-5,8,23-26}. A successful interaction between practitioners and patients aims to develop rapport²⁷, demonstrate competence of the clinician and potentially support patient compliance.

While there are over 100 published studies about the verbal skills of physicians, published information about verbal communication by allied health practitioners with their patients is minimal; and research into the relationship between orthoptists and their patients does not exist. The current project aims to expand the knowledge about orthoptists' patterns and styles of verbal communication with their patients and to explore the impact of external factors such as experience, patient characteristics and initial or return consultations.

METHOD

Orthoptists from three private clinics in metropolitan New South Wales were recruited to participate in the study. Each practice sub-specialised in anterior segment disorders, glaucoma, cataract and refractive surgery. Orthoptists who agreed to participate in the study were provided with information about the study, completed a consent form, and invited patients to participate in the study. To aid ease of data collection, inclusion criteria required the patients to be over the age of 18 and English speaking.

Once the patient had agreed to participate and had provided written consent, the orthoptist conducted a routine clinical assessment relevant to the patients' presenting condition and reason for attendance. Each clinical task undertaken within the consultation was analysed for the verbal skills used by the orthoptist. During each task, the types of verbal skills used by the orthoptist were recorded in code onto a data collection sheet (Table 1). A stopwatch was used to record the time taken to complete each task within the orthoptic consultation. One researcher trained in collecting this data undertook this role.

At the completion of the clinical assessment, the participating orthoptist provided the researcher with information regarding the patient's ocular diagnosis in order to broadly classify conditions as an acute or chronic. This would then enable comparison with other studies using these broad categories. Demographic information was also sought about the practitioner (orthoptist) and the patient, including variables that have been shown to affect interpersonal verbal communication. These included age, gender, and self-identified cultural background, years of practitioner experience, reasons for patient attendance, and diagnosis.

Table 1. Form used to record practitioner and patient information, including verbal communications, during each orthoptic consultation.

SECTION 1: Practitioner and Client Information		
Type of Clinic		
Orthoptist Gender	Male / Female	
Orthoptist Age		
Orthoptist Cultural Background		
Orthoptist Previous Experience (in years)		
Patient Gender	Male / Female	
Patient Age		
Patient Cultural Background		
Patient's Visit	First Visit / Follow Up	
Patient's reason for attending visit		
Broad Diagnosis given		
SECTION 2: Tests Performed & Verbal Communications		
Test Performed	Time Taken	Verbal Communication Type Used*
E.g. History	E.g. 3min 14sec	E.g. X O / C / M M C / O S I I / X X X

* See Table 2 for more information regarding verbal communication types

THE INVESTIGATION TOOL

A number of assessment tools have been used to identify, monitor and interpret the verbal interaction that takes place between the practitioner and the patient. Boon and Stewart²⁸ reported 44 different instruments for assessing practitioner communication developed between 1986 and 1996. With the development of many methods of recording, various sets of categories for coding different types of verbal interactions are available and up to 34 different types of verbal skills have been used to analyse a single medical interview²⁸. As a result many researchers have adjusted and reduced the number of categories in order to make the coding a less complex task and to meet the specific purposes of their study.

The assessment tool created for the purpose of our study consists of two sections (Table 1). The first section related to demographic details of the orthoptic practitioner and the patient, and included items reported in the literature to significantly impact upon verbal communications. The second section provided space for the researcher to identify the tests performed, the time taken for each clinical task, and the coded details of the verbal communication patterns. The 41 well established categories of verbal communication developed by Roter²⁸⁻³⁰ were merged to concentrate on the verbal skills used by practitioners and exclude those used by patients. For example, Roter's categories of "Personal remarks, social conversation and laughs and tells jokes"³⁰ were condensed into one main category "General non-medical comment" for the purposes of this study. This resulted in section two consisting of 14 main categories. Each category was given a symbol for the researcher to document the medical conversations as they occurred (Table 2).

Table 2. Verbal Communication categories and codes used for recording communications

Verbal Communication Category	Description	Symbol
Open medical question	A question asked regarding the patient’s physical or medical condition, previous treatments or family history that enables the diagnosis, treatment or management of the patient’s physical disease. The question requires more than one word to answer. For example, O is coded for “How has your vision changed since your last visit?”	O
Closed medical question	A question asked regarding the patient’s physical or medical condition, previous treatments or family history that enables the diagnosis, treatment or management of the patient’s physical disease. The question requires only one word to answer. Eg. “Do you wear glasses?” is coded as C.	C
Open social question	A question that asks about the patient’s psychological or emotional well being and includes questions that address the patient’s non-medical issues, topics and concerns. These questions require more than one word to answer. Eg., “How are your daughters?”	OS
Closed social question	A question that asks about the patient’s psychological or emotional well being and includes questions that address the patient’s non-medical issues, topics and concerns. These questions require only one word to answer. Eg., “is it very hot outside?”	CS
Instruction	An instruction or a statement of orientation given to the patient. For example, “Hold still” or “read down the vision chart.”	I
Repetition	A repetition of a single phrase or word that a patient spoke.	R
Agreement	A statement of agreement with the patient. For example, “Yes”	Y
Disagreement	A statement of disagreement. E.g., “no” or “I don’t think so”	N
Encouragement	A phrase or word of encouragement given to the patient such as “good” or “well done.”	E
Explanation	A phrase that explains diagnostic tests; treatment, management or diagnosis of the patient’s medical condition	X
Back channel	Words or sounds that imply or indicate attentive listening or encourage the patient to continue talking. Examples are ‘Mm Hmm’, ‘Yeah’. ‘Go on’.	M
Concern	Statements or questions of concern for the patient’s comfort. For example “is the height of the chair reasonably comfortable?”	Co
General non-medical comment	A phrase or statement that does not relate to the patient’s physical status but addresses social topics. Such as “it’s a beautiful day today”.	-
Patient Speaking	Indicative of when the patient speaks. This does not code the number of phrases the patient says or the verbal skills the patient uses.	/

RESULTS

Participants

Twelve orthoptists (1 male and 11 female) aged between 21 and 43 years (mean = 32.6 years, SD = 8.8) participated in the study. Their experience ranged from less than 1 year to 22 years (mean = 5.6 years, SD =9.7). Six orthoptists (50%) described their cultural background as Australian and 6 indicated backgrounds from other cultures.

Forty-nine patients (14 male and 35 female) met the criteria to participate. Their ages ranged from 20 to 80 years (mean = 57.2 years, SD = 16.3). Twenty-five patients self-identified as having an Australian cultural background and 24 identified themselves as having a background from other cultures. Thirteen patients (27%) attended the eye clinics for initial visits and 36 patients (73%) attended for a review consultation. Reasons for attending the consultations are shown in Table 3.

Table 3. Reasons for patients’ attendance at orthoptic consultations.

Reason for Consultation	Number of Patients (%)
Glaucoma or suspected glaucoma	7 (14.3%)
Cataract	8 (16.3%)
Dry Eyes	3 (6.1%)
Regular check-up	5 (10.2%)
Diabetes	4 (8.2%)
Decreased visual acuity	2 (4.1%)
Flashes or floaters	4 (8.2%)
Retina	2 (4.1%)
Cornea	3 (6.1%)
Refractive Sx	6 (12.2%)
Red eyes	2 (4.1%)
Other	3 (6.1%)
Total	49 (100%)

Consultations

A total of 49 consultations were included in this study. The total time for an orthoptic consultation averaged 12 minutes. The range was 42.4 minutes for an initial assessment to 2.8 minutes for a short review. During the consultations, several clinical tasks were undertaken and all involved verbal communications. Some of the tasks consisted entirely of verbal interaction (e.g., history-taking, closing), and other tasks involved a physical action accompanied by verbal interactions (e.g., assessing visual acuity). Within each verbal interaction were several verbal communication subtypes such as explanation, instruction, closed questions and open questions. The definitions of these subtypes are outlined in Table 2.

Clinical Tasks Performed

A total of 19 different types of clinical tasks (such as history-taking and measuring visual acuity) were observed. A total of 347 tasks were undertaken across the 49 consultations, with 81 being primarily verbal interaction only tasks such as history-taking and closing, and 266 being combined physical testing/verbal interaction tasks such as measuring visual acuity. The individual clinical task durations ranged from as little as 4 seconds to up to about 20 minutes. Table 4 identifies the ten most frequently performed clinical tasks observed during the consultations, listed in order of average duration, and identifies tests involving verbal-only interactions.

Verbal Communication Subtypes

Orthoptists were found to use the entire range of verbal communication subtypes included in the study. Statements

Table 4. Most frequently observed clinical tasks, listed in order from the maximum (max.) to minimum (min.) mean duration

Clinical Task	No. of Patients	Time Taken for Clinical Task (Minutes : Seconds)			
		Min.	Max.	Mean	SD
Subjective refraction for distance	23	1:05	18:23	4:56	3:39
History taking	45	0:34	8:19	2:28	1:43
Distance Visual Acuity	43	0:14	8:01	1:46	1:11
Secondary history taking	13	0:22	5:03	1:35	1:19
Applanation Tonometry	34	0:08	4:23	1:32	0:58
Instilling dilating drops	30	0:17	8:58	1:12	1:33
Instilling anaesthetic and fluorescein drops	34	0:15	4:20	0:52	0:42
Near visual acuity	29	0:06	2:33	0:49	0:38
Closing	23	0:07	3:56	0:47	0:52
Pupils assessment	15	0:04	1:05	0:35	0:18

of explanation (mean frequency per consultation = 37.5, or 22.3% of total communications) and instruction (mean frequency per consultation = 29.7, or 17.7% of total communications) were used most frequently during the clinical consultations. Table 5 lists the verbal communications used in descending order from the most frequently used type.

Cumulative verbal communications such as rapport and the exchanging and gathering of information were identified.

Table 5. Frequency and percentage* of verbal communication types used by the orthoptists per consultation.

Verbal Communication Type	Minimum frequency per consultation	Maximum frequency per consultation	Mean frequency per consultation	Standard Deviation	%
Explanation ^	7	141	37.5	25.2	22.3
Instructions ^	2	66	29.7	16.2	17.7
Closed questions ^	2	71	28.0	19.2	16.7
Back channel**	1	68	22.1	14.0	13.2
IEncouragement**	2	68	17.7	12.7	10.5
Agreements ^	0	47	9.1	7.9	5.4
Open questions ^	1	20	7.2	4.3	4.3
Repetitions**	0	23	7.0	5.9	4.2
General comments**	0	43	6.8	7.5	4.1
Concern	0	10	1.4	1.9	0.8
Closed social questions**	0	4	0.6	1.0	0.4
Disagreements	0	4	0.6	1.0	0.4
Open social questions**	0	6	0.4	1.0	0.2
Total	46	376	167.9	77.9	100

* Percentage is the proportion of mean frequency of verbal communications to the total mean number of verbal communications per consultation. Percentages are rounded to the nearest 0.1% ** Indicates the types of verbal communications representing rapport. ^ Indicates the verbal communication subtypes representing the exchange of information.

Rapport is defined as the sum of general comments, back channel, open and closed social questions, repetitions and encouragement. Statements of rapport formed a mean of 32.6% of the verbal communications used by orthoptists in a patient encounter (Table 5).

Practitioner Experience, Patient Characteristics and Consultation Type

Spearman's correlation was used to examine the relationship between the amount of practitioners' experience and the frequency of the practitioners' use of the various communication subtypes during the more common clinical tasks. Spearman's correlation was used as the practitioners' experience was recorded as ordinal groupings covering ranges of years: "0-5 years", "6-15 years", "15+ years".

Patient characteristics such as gender, cultural background, age, and whether they were attending for an initial or return consultation were also recorded and analysed for differences in verbal communications used by the practitioners between the relevant patient groups. In these analyses, only the total frequencies per consultation of each of the verbal communication types were analysed, without further breakdown into clinical task types. Details of the results follow.

Orthoptists' Experience

The results suggested that as practitioners' experience increased, the total number of statements or questions of concern per consultation decreased ($r_s = -0.43$, $p = 0.002$), and statements of agreement increased ($r_s = 0.37$, $p = 0.009$). During the history-taking section of the consultation, which is primarily a verbal clinical task, the number of closed social questions ($r_s = 0.31$, $p = 0.038$), instructions ($r_s = 0.34$, $p = 0.022$) and statements of disagreement ($r_s = 0.36$, $p = 0.014$) all increased as practitioner experience increased. In the closing section of the consultation, another verbal interaction only task, there was also an increase in several types of communication with increasing practitioner experience, namely closed questions ($r_s = 0.44$, $p = 0.035$), agreement ($r_s = 0.45$, $p = 0.021$) and encouragement ($r_s = 0.44$, $p = 0.035$), and also an increase in duration of this task ($r_s = 0.45$, $p = 0.037$).

However, there were generally decreases in verbal communications and clinical task durations with increasing practitioner experience in those sections of the consultation that primarily involved physical testing. When testing for distance visual acuity, there was a decrease in several types of verbal communications with increasing practitioner experience, namely open questions ($r_s = -0.42$, $p = 0.005$), instructions ($r_s = -0.56$, $p < 0.001$), agreements ($r_s = -0.31$, $p = 0.047$), and encouragement ($r_s = -0.47$, $p = 0.001$), and also a decrease in clinical task duration ($r_s = -0.38$, $p = 0.013$). For subjective refraction for distance, there were decreases in closed questions ($r_s = -0.69$, $p < 0.001$),

explanations ($r_s = -0.51$, $p = 0.014$), expressions of concern ($r_s = -0.56$, $p = 0.005$), and duration ($r_s = -0.58$, $p = 0.004$). For instilling drops, there were decreases in instructions ($r_s = -0.49$, $p = 0.003$) and explanations ($r_s = -0.37$, $p = 0.031$). For applanation tonometry, there were decreases in instructions ($r_s = -0.37$, $p = 0.028$), and explanations ($r_s = -0.37$, $p = 0.028$), although there were increases in closed questions ($r_s = 0.47$, $p = 0.005$).

Patients' Gender

Independent groups t-tests revealed that the only significant difference in the practitioners' use of verbal communication between male and female patients was for the total frequency of open questions during the consultation ($t = -2.03$, $p = 0.048$), with open questions being used more often for female patients (mean = 7.9) than for male patients (mean = 5.3).

Patients' Cultural Background.

Patients were grouped into those who described themselves as having an "Australian cultural background" and "Other cultural background". Independent groups t-tests were performed on the frequency of different verbal communication types and on the consultation durations between these two patient groups, but these showed no significant differences between the groups due to the small sample size.

Patients' Age

Pearson's correlation analyses were performed on the relationship between the patients' ages and the total frequency of each of the communication types per consultation. No significant correlations were found.

Consultation Type: Initial Or Return Consultations

Differences in verbal communication and consultation duration between initial and return visits were investigated using independent groups t-tests. It was found that initial consultations (mean = 17.2 min) were significantly longer than return visits (mean = 10.1 min, $t = 3.34$, $p = 0.002$). There were also significant differences in the frequency of many types of verbal communication between initial and return consultations, including open questions (initial mean = 11.1, return mean = 5.8, $t = 4.68$, $p < 0.001$), closed questions (initial mean = 41.41, return mean = 23.2, $t = 3.21$, $p = 0.002$), instructions (initial mean = 38.8, return mean = 26.4, $t = 2.48$, $p = 0.017$), repetition (initial mean = 9.9, return mean = 5.9, $t = 2.17$, $p = 0.035$), explanation (initial mean = 51.5, return mean = 32.4, $t = 2.47$, $p = 0.017$), and back channelling (initial mean = 30.1, return

mean = 19.2, $t = 2.54$, $p = 0.014$). In each case, there was a greater frequency of each type of verbal communication in initial consultations than in return consultations.

DISCUSSION

Verbal communications are an essential component for orthoptist-patient consultations and all related clinical tasks undertaken within the private ophthalmology subspecialty sector. In this study 23.3% of clinical tasks were entirely verbal, including history-taking and closing of the orthoptic consultation. The remaining 76.7% consisted of clinical tasks that required both verbal and orthoptic skills and included testing visual acuity, applanation tonometry, instillation of eye drops and the assessment of pupils. The duration of orthoptic consultations can be minor from 2.8 minutes or up to 42.4 minutes. With this in mind, orthoptists should be aware of the importance of verbal communication during consultations, and use their verbal skills to be effective in the assessment and management of patients.

An overview of the results indicates that the verbal communications of orthoptists during consultations would typically consist of 32.6% rapport, that is, language that addresses the patient as a whole being, and conveys practitioner's care. These verbal skill subtypes include encouragement, repetitions, general comments, closed and open social questions. The exchange of information, particularly explanations of clinical procedures have also been shown in previous research to enhance levels of patient satisfaction²⁴, and are rated as more important than the location or pleasantness of the clinic, cost of surgery and the waiting time for appointments²⁴. In this study a mean of 22.3% of the total verbal communications in the orthoptic consultations were related to explanations of clinical procedures.

The results of this study suggested that the orthoptists' level of experience affected the type and range of verbal interactions. In general, it appears that verbal communication during clinical assessment and duration for the clinical testing parts in the consultation tends to decrease as practitioner experience increases, while the primarily verbal parts of the consultation (such as history-taking and closing) including their duration tends to increase with practitioner experience. These results reflect similar findings for paediatricians in the study by van Dulmen³². Although the practitioners were not asked about their strategies for communicating with their patients in this study, it is possible to speculate that the more experienced practitioners may have developed a deliberate strategy of concentrating much of their communication with their patients in those sections of the consultation that were primarily verbal in character while minimising communication during physical testing, this may be to avoid trying to communicate during those phases of the consultation where the attention of the practitioner

and patient are likely to be distracted by the demands of the test procedures. Future research might investigate orthoptists' conscious use of communication strategies with their patients, and the satisfaction of patients with these communication strategies.

The orthoptists also showed a decrease in the number of statements and questions of concern overall as their years of experience increased. This suggests that as orthoptists' experience increases and they become more competent in the testing procedures, they provide fewer reassurances to their patient in relation to their comfort. It should be noted, however, that most of the correlations that were found between the practitioners' level of experience and their communication styles were only of moderate strength, suggesting that factors other than experience are also likely to be influencing communication styles.

Patient characteristics such as gender, age and cultural group had minimal effect on the type and quantity of practitioner verbal communications during consultations. A higher total number of open questions were used by the orthoptists for female patients compared with male patients, but this was the only significant finding for patient gender differences. Unfortunately, due to the small sample of male orthoptists ($n=1$) in this study, there was insufficient data to investigate similarities and differences in the verbal communication patterns of male and female orthoptists.

Contrary to expectations from previous literature, the cultural background of the patient did not have a significant effect on the orthoptists' use of verbal communications. The results may have been due to the incorrect grouping of cultural backgrounds, a small sample, or problems in defining a person's 'cultural background'. Another possibility for the non-significant findings can be found in the context of the study. Previous studies on the effect of culture took place in areas such as Japan and parts of the America where multiculturalism is not as diverse as the Sydney metropolitan region. The absence of significant relationships may be seen as indicative of the orthoptist's response to the promotion of multiculturalism where individuals are treated with equality.

The results for the effects of patient age on communication types used were also unexpected. There were no significant relationships found between the patients' age and the duration of consultation or total frequency of each type of verbal communication per consultation. However it should be noted that this sample included only adult patients. It's possible that child patients would elicit different communication patterns.

Finally, there were significant differences between initial and return consultations, with longer consultation durations and more verbal communication in initial visits compared with return visits. These results were not surprising given that initial consultations would be likely to require relatively

lengthy exchanges of information, and the results were similar to previous studies where initial consultations had longer duration than review consultations³³.

CONCLUSION

It can be concluded that the verbal communications used by the orthoptists cover a wide range of types. In particular, this study found that practitioners' experience had a significant effect on their verbal communications, while patient characteristics had relative few effects on communication types. This suggests that the orthoptist's own qualities have a greater influence on their verbal communications than the patient's qualities. Further investigation is recommended to understand the communication process and its outcomes on patient satisfaction and adherence to ocular treatment and therapy.

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