

Do all health and social care professionals interact equally: a study of interactions in multidisciplinary teams in the United Kingdom

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Problems around deficits in interprofessional collaboration have been identified since the National Health Service (NHS) was introduced. It is within the context of the current policy focus on improving collaborative working that this study was undertaken. A direct observational study using the Bales' Interaction Process Analysis tool was carried out in two older persons teams to explore patterns of interaction in the multidisciplinary team meetings. Analysis revealed some key differences in the way in which different professions interacted. Occupational therapists, physiotherapists, social workers (SW)

and nurses rarely asked for opinions and for orientation. The consultant (the individual in charge of the medical team) tended to have high rates for asking for orientation, giving opinions and giving orientation. Although some nurses did have high individual rates for the giving of orientation. The data from the research has highlighted that therapists, SWs and nurses are reluctant to voice their opinions in multidisciplinary teams and thus conformity may dominate its culture. It is suggested that therapists, SWs and nurses need to cite their opinions in teams more effectively if they are to be competent and committed patient-centred practitioners.

Keywords: teamwork, multidisciplinary, interaction.

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Introduction

Multidisciplinary teamwork is one of the key processes through which care is currently managed in the British National Health Service (NHS). The election of a new labour government in 1997 saw a radical change in health and social care policy that was based upon competitiveness, partnership working and collaboration (1). Furthermore, recent policy changes have resulted in older adults becoming a government priority needing reform and investment (2) In the UK multidisciplinary teamwork is an integral part of older adult medicine. It developed during the 1970s and 1980s when there was a realization of the importance of holistic medicine and the recognition that no one person had the skills and or the knowledge to deliver high quality care (3–5) However, the primary role

of hospital-based older persons teams is to focus upon discharge planning (6). In the hospital setting the range of professionals involved in the care of individual clients varies not only across clinical specialities, but also within those specialities. Teams in the hospital will vary not only in leadership, but also in culture, participation and in professional status. The way in which a health and social care professional becomes part of the team will largely depend on the way in which the service is organized in any given ward or department.

Whilst interprofessional collaboration is an essential component of best practice the rules of collaboration and teamwork are often difficult to put into practice (7, 8). Working together in an interprofessional health care arena requires competence, commitment and the desire to cooperate. In order for a team to work effectively, its members must be 'competent to collaborate' (9). Teams are considered to have numerous advantages. Frequently cited advantages include improved planning, more clinically effective services, a more responsive and patient focused service, avoidance of duplication and fragmentation and more satisfying roles for health care professionals (10). However, professionals may have to overcome

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numerous obstacles to ensure that such teams function effectively. These factors include professional jealousies, role boundaries and communication problems (11, 12). As the culture of health and social service is changing health and social care practitioners have a prime opportunity to look at ways of delivering innovative services.

Background

This study is part of an action research project, located in a large acute NHS Trust in London. Action research is defined by Carr and Kemmis (13) as a:

'Type of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practice, their understandings of these practices and the situations in which these practices are carried out'.

This project aimed to analyse and improve multidisciplinary teamwork in discharge planning, and was supported by both the hospital management and the Local Research Ethics Committee. The total project involved a series of inter-related stages.

1 Interviews with 48 health care professionals using the critical incident approach to explore their perceptions and attitudes relating to discharge planning.

2 A Delphi survey which aimed to ascertain consensus regarding the formulation of an interprofessional model.

The action research comprised:

1 The development and implementation of an interprofessional discharge model.

2 The evaluation of an interprofessional discharge model, including stakeholder interviews, an interprofessional audit and analysis of case notes to determine variances (14).

This paper focuses on the preliminary stage of this research project, namely:

1 A direct observational study carried out in two older persons multidisciplinary team meeting to record interactions of the team members using the Bales' Interaction Process Analysis (IPA) (15). In total 14 meetings were attended.

The researchers assumed that interaction within a team in the context of team meetings is an important component of team functioning. Therefore, the research question being addressed in this stage of the research project was:

'Do all health care professionals interact equally within older persons multidisciplinary team?'

Research design

This study required an approach that would allow observations from the group to be recorded systematically, and had to meet three important criteria. It must have been standardized for use with diverse groups within the health care arena. Secondly, it is able to identify complex interaction which occurs within group interaction and thirdly it

needed to be both 'user friendly', cheap, easy to administer and to train others. There are many published accounts of the various structured observation tools that have been used to observe individuals and groups in many different contexts (16, 17).

The Bales' IPA (15) is a tool that has been designed specifically to measure and observe group behaviour. It originated from research on problem solving and has been used to identify complex group interaction (18, 19) and doctor/patient communication (20, 21). The founder of this tool has performed most of the research on the Bales' IPA; however, Brown (22) suggests that the Bales' IPA has been proven to be particularly useful in classifying interaction. Although, Inui et al. (23) suggest that the Bales' IPA (15) is not as sensitive as the Roter' interactional analysis (24) or the Stiles' verbal responses modes (25) to measure the complexities of doctor/patient communication. Elliot et al. (26) concluded that generally there is not a best response-mode system after comparing six-rating systems.

An instruction manual is provided by Bales (15) which gives clear and precise instruction related to how this tool should be used (Table 1):

1 Each member of the group is given an arbitrary number by the observer.

2 Each interaction is classified into one of 12 categories.

3 Categories 1–3 and 10–12 are concerned with socio-emotional activity.

4 The other six categories refer to task activity or behaviour that focuses on the problem that the group is trying to solve.

Table 1 The categories of the Bales Interaction Process Analysis System (15)

Positive actions

1. Show solidarity (raises other's status, gives help, reward)
2. Show tension release (jokes, laughs, shows satisfaction)
3. Agrees (shows passive acceptance, complies, understands, concurs)

Attempted answers

4. Gives suggestion (direction, implying autonomy for others)
5. Gives opinions (evaluation, analysis, expression of feeling)
6. Gives orientation (information, repetition, confirmation)

Questions

7. Asks for orientation (information, repetition, confirmation)
8. Asks for opinion (evaluation, analysis, expression of feeling)
9. Asks for suggestion (direction, possible ways of action)

Negative actions

10. Disagrees (shows passive rejection, formality, withdraws help)
 11. Shows tension (asks for help, withdraws, out of field)
 12. Shows antagonism (deflates other's status, defends or asserts self)
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The observer screens each act or gesture to determine which of the functions it is most directly relevant to, being sure to adhere to three basic principles.

- 1 Every action is treated as an interaction and there is no set time limit.
- 2 Each act is viewed as a response to the last act or as anticipation of the next act.
- 3 The originator and recipient of each act are recorded.

Observation of interactions in older persons care

Seven meetings with consultant A and seven meetings with consultant B were attended; all of which were video recorded. The research took place in a large London teaching hospital. Two consultants from a team of four agreed to participate in this study. In older persons medicine a formal meeting is held in a designated room. The meetings occurred either on a Tuesday or a Thursday. The consultant is the person in charge of the medical team and they also chaired these meetings. Occupational therapists (OTs), physiotherapists (PTs) and social workers (SWs) are assigned to assess and treat individual consultant patients who can be based on numerous wards across the hospital. Therapists and SWs in this study often attended two consultant ward rounds per week. This study observed two different teams. These patients are often placed on different wards in the hospital. Consequently nurses from different wards attended these meetings. It was noticeable that the doctors were the most consistent in terms of attendance. The length of meetings varied considerably with consultant A's lasting two and a half-hours and consultant B's meetings about 50 minutes. Most of the nurses (90%) were female, as were all of the therapists and SWs. One consultant was female whilst all other members of the medical team were male.

Ethical issues

Ethical clearance was obtained by meeting the criteria set by the Hospital Ethics Committee. For the observational study it was imperative to gain the informed consent of all health care professionals.

Data analysis

Data analysis began by adding together the number of interactions from each individual member of the multi-disciplinary team. The raw data frequencies were then transferred into rates to ascertain the amount per minute engaged by each individual per category (number of events divided by the length of time within the room). The total rate per professional of these categories was then collated and used to calculate the average rate per minute for each professional.

Validity and reliability

In this study two independent raters were recruited to undertake rating of the videos and of the transcripts. Each rater received 4 hours of special training, which included watching a training video, and reading a research-training handbook that was formulated by the researcher. To measure the level of the agreement of the categories of the raters' observations, two independent observers and were asked to rate each video and or transcript. Any disputed sections were then worked out between the researcher and the two independent raters.

Results

Bales interaction analysis is a tool that investigates both task-orientation interaction and socio-emotional interaction. Indeed, it has been suggested that both types of interaction drive interaction between individuals (27). However, in this study it became apparent that socio-emotional interaction categories were used much less frequently than task orientation. Indeed socio-emotional positive interactions were used predominately by medical consultants. There was relatively little disagreement, tension and antagonism. Furthermore, this is to be expected when a meeting requires information exchange and interpretation in order to formulate a decision. Hence, in this paper only task-orientated interactions are reported (Tables 2 and 3).

Table 2 Team led by consultant A: average rate per minute

Team A	Asks opinion	Gives opinion	Asks orientation	Gives orientation
Consultant	0.387	1.145	0.896	0.927
SHO	0.076	0.485	0.306	0.907
HO	0	0.08	0	0.496
SOT	0.019	0.189	0.103	0.181
SPT	0.021	0.316	0.07	0.298
SW1	0.036	0.12	0.048	0.061
SW2	0	0.064	0.004	0.017
SN1	0	0.083	0	0.75
SN2	0	0	0.055	0.571
SN3	0	0.125	0	2.2
SN4	0	0.161	0	2.2
SN5	0	0.285	0.09	1.636
SN6	0	0.363	0.047	0.952
SN7	0	0.095	0	0.625
SN8	0	0.466	0.066	0.212
Senior SN	0	0.21	0.088	0.705

SHO, senior house officer; HO, House Officer; SOT, senior occupational therapist; SPT, senior physiotherapist; SN, staff nurse.

Table 3 Team led by consultant B: average rate per minute

Team B	Asks opinion	Gives opinion	Asks orientation	Gives orientation
Consultant	0.034	0.489	0.372	0.330
SHO	0.21	0.445	0.27	0.334
HO	0	0.162	0.037	0.308
SOT	0.011	0.156	0.039	0.198
PT	0	0.102	0.027	0.155
SW1	0.03	0.038	0.12	0.196
SW2	0.083	0.219	0.125	0.519
SN1	0	0	0.321	1
SN2	0.083	0.095	0.047	0.285
SN3	0	0.5	0	0
SN4	0	0	0.055	0.571
SN5	0	0.326	0.33	0.527
SN6	0	0.583	0.066	0.066
SN7	0	0.066	0	0
Senior SN	0	0.588	0.47	0.705

SHO, senior house officer; HO, House Officer; SOT, senior occupational therapist; PT, physiotherapist; SN, staff nurse.

Rates of interaction: consultants (C) and Medical Staff (SHO and HO)

Consultant A had a relatively high rate of interruption for: asks opinion (0.387), gives opinion (1.145), asks orientation (0.896) and gives orientation (0.927) when compared with consultant B. The more junior members of the medical team [senior house officer (SHO) and House Officer (HO)] did not frequently use the category asks opinion or asks orientation. The most junior members of the medical team used the categories gives opinion and gives orientation the least. The SHO A and Consultant A had similar scores for give orientation.

Rates of interaction: SW

Social workers have an important role within the discharge process. However, within the team meeting the rates of interactions for all four categories were low. Although social worker 2 (B) had a respectable score for gives orientation.

Rates of interaction: nurses (SN and senior SN)

Individual nurses had different rates for each of the categories. Asks opinion and asks orientation were not used frequently by any of the nurses. However, some nurses were actively involved in giving orientation (SN3A, SN4A, SN5A, SN6A, SN7A, Senior SN A and B, SN4B and SN5B) but less likely to give an opinion. It is noticeable the nurses in multidisciplinary team meeting A had higher scores for gives orientation than the participants of meeting B. This

could be a reflection of the high usage of asks orientation by consultant A.

Rates of interaction: OT, senior occupational therapist (SOT), PT and senior physiotherapist (SPT)

All of the occupational therapists (OT) and PT regardless of their seniority had similar rate of interaction in both team meetings. Unlike some members of the nursing team therapists did not frequently use the category gives orientation.

Discussion

This study of the interaction patterns of multidisciplinary teams suggests that the team was task-orientated and that suggests that doctors and in particular consultants had a more dominant role in teams. Within the nursing team in particular it was apparent that there was unequal participation between different nurses. However, amongst SWs and nurses similar rates of participation occurred in the different teams. The function of team ideology is successful only when team members put its ideology into practice. The differing types and amounts of interaction that occurred in all four teams may suggest that the teams were not working effectively. Furthermore, people generally report being more content in a group when the participants contribute equally (28).

Why do some professionals not interact in team meetings? It is suggested that the size of the group could influence interaction as therapists, SWs and nurses may have to compete against each other and the medical team in order to be able to express an opinion. Furthermore, status could be one of the factors that affect levels of participation, for in this study doctors dominated communication within teams and used the categories giving opinions, asking for orientation and giving orientation frequently. Hence, in this study members of the medical team were a central focus for all communication in teams. Gibbon (29) suggests the doctors' role in a team was to sanction decisions made by the team, whilst nurses actioned them. Likewise, Fewtrell and Toms (30) found that in traditional psychiatric ward rounds Medical Staff talked considerably more than all the other participants put together. If perceived status differentials exist then this is more likely to mean that professionals who are not regarded as an equal member will have their standards of performance and techniques defined by other members of the profession. Consequently professionals who are subjected to this type of professional hierarchy will not be able to contribute effectively to patient care, as they may feel unable to resist their demands and or expectation. In practice it is essential that professionals are equipped not only with a body of knowledge that shapes their professional identity but is

relevant to the speciality they are working in. Furthermore, if differential status are perceived to exist than it is essential that teams participate within interprofessional education. Indeed, it is essential that practitioners continue to develop teamworking skills both at an undergraduate and postgraduate level.

The rate of interaction per minute for OTs, SWs and PTs in all four teams was remarkably similar. It is suggested that professionals may lack confidence to voice opinions and ask for orientation in team meetings. Hence, in practice this means that professionals are not respecting their own individual autonomy or being an effective advocate for the client. Furthermore, in practice this may mean that whilst achieving the medical aims for the patient the other aspects of the patients goals such as functional and social needs are ignored. Hence, the needs for effective patient goal setting in practice as a means to guide interprofessional interaction. Mackay (31) found that nurses were often reluctant to voice their opinions even if it was a 'Matter of life and death'. Gibbon (29) found that in a team meeting where doctors were not present the role of the OTs was to second decisions that were proposed by the PT. It is suggested that nurses in elder care had a high rate per minute for gives orientation as each nurse attended these meetings specifically to give information. Once the information had been given the staff nurse would leave and the next nurse would arrive. Mallik (32) and Busby and Gilchrist (33) found that nurses on medical ward rounds answered doctors' questions only as opposed to giving unsolicited information.

Multidisciplinary interaction is an important component of decision-making. A decision is defined by Bachrach and Baratz (34) as 'A choice of alternative modes of action'. A nondecision occurs if conflict is absent and or a decision-maker suppresses opinions that contradict those of the decision-maker. In this study, PTs, OTs and SWs had low rates for give orientation. Thus, by not expressing opinions or volunteering orientation it is suggested that OTs, PTs, SWs and nurses are not working as an effective member of the team. Furthermore, by not giving orientation this may result in the wrong decision being made. Sands (35) carried out an analysis of an interdisciplinary team meeting and found that whilst 20 minutes was spent on a detailed case presentation whilst only 5 minutes was needed for questions.

The leader of the team can determine how a team functions. It is suggested that the leader of a team must have a good understanding of team members' roles and be able to listen to other peoples' opinions. Manias and Street (36) found that nurses often found it very difficult to present relevant patient issues during medical ward rounds. Furthermore, very rarely did they introduce a new problem into the discussion. This in turn should ensure that both medial and social issues are discussed. Rintala et al. (37) found that on a multidisciplinary ward in

rehabilitation setting the physical content of interactions was overemphasized (65%) whilst the psychosocial area was underemphasized (14%).

It is important to consider the influence of gender in the interaction process. In this research 90% of nurses were female, whilst all the therapists and care managers were female. There was one female consultant, and in this team there was a considerable lower rate per minute for both asks opinion, gives opinion, asks orientation and gives orientation. Mackay (31) found that male nurses felt a greater equality with doctors than their female colleagues. Furthermore, male nurses felt that they are more able, and more likely than female nurses to voice their opinion to members of the medical profession.

Limitations of the study

The study was done in one health care trust and thus represents the actions of these staff only. Therefore, it is suggested that it should be repeated in other health care settings.

Conclusion

The findings from this study revealed some key differences in the way in which different professions interact in multi-disciplinary teams and that there is a degree of inequality in levels of participation. Furthermore, members of the medical profession dominated team meetings with OTs. Within the nursing team it was apparent that there was unequal participation between different nurses. However, amongst SWs, OTs and PTs similar rates of participation occurred in the different teams. If members of the multidisciplinary team are not communicating within teams this can influence quality of care for the patients. In addition, they need to value their own vital contribution to effective and efficient interprofessional working. It is suggested that therapists, SWs, nurses and doctors should participate in postgraduate training in order to further develop interprofessional and leadership skills. Further research is needed to how professionals interact with other professionals in team meetings within the different clinical areas.

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Author contribution

Dr Anita Atwal conducted the fieldwork for this study as part of her PhD study. The overall PhD study was supervised by Dr Kay Caldwell. This paper was jointly authored.

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