

Title:

**Therapists' experiences and perceptions of team work in neurological rehabilitation: critical happenings in effective and ineffective team work.**

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Abstract

This article reports the second part of an exploratory study into occupational therapists` and physiotherapists` perceptions and experiences of team-work in neurological rehabilitation: the factors that were thought to influence effective and ineffective team-work, and the meaning behind

effective and ineffective team work in neurological rehabilitation. The study was undertaken through semi-structured interviews of 10 therapists from three different neurological rehabilitation teams based in the United Kingdom, and used the critical incident technique. Through analysis of the data, several main themes emerged regarding the perceived critical happenings in effective and ineffective team work. These were: team events and characteristics, team members` characteristics, shared and collaborative working practices, communication, specific organisational structures, environmental, external, and patient and family related factors. Effective and ineffective team-work was perceived to impact on a number of levels: having implications for the team, the patient, individual team members, and the neurological rehabilitation service. The study supported the perceived value of team work within neurological rehabilitation. It also indicated the extensive and variable factors that may influence the team working process as well as the complex and diverse nature of the process.

Key words: team work, neurological rehabilitation, critical incident technique, critical happenings, effective and ineffective team work

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## **Introduction**

Team work is a fundamental component of health-care delivery in the United Kingdom, and is utilised in the management and rehabilitation of neurological patients. Team work has been supported in the National Service Framework for Long-term conditions (Department of Health long-term conditions NSF team, 2005), the National clinical guidelines for stroke (Intercollegiate stroke working party, 2004) and the National Institute for Clinical Excellence (NICE) guidelines for Multiple Sclerosis (NICE, 2003).

In 1989 the presidential address at the American Congress of Rehabilitation Medicine (ACRM) described team work and the interdisciplinary team as the cornerstone of rehabilitation (Diller, 1990). Interdisciplinary team work and collaborative methods of working have been reported to have a number of benefits to the organisation and the provision of the service. However, Schmitt (2001), in reviewing the literature concerned with collaborative health care delivery research in the United States, challenged the generally held assumption that interdisciplinary working and collaborative models of care would provide cost effective services and at the same time automatically increase quality of care. Research has so far been unsuccessful in determining whether the causal relationship between team work and improvements in effectiveness and quality of care that have been hypothesised in the literature, can be substantiated. The effectiveness, efficiency, and cost of these specific collaborative methods of working have not yet been established (Barr, 2000).

### **Evaluating the effectiveness of team work in neurological rehabilitation**

Opie (1997) has cited Guzzos' (1986) distinction between the two aspects from which the effectiveness of team work can be measured:

'intermediate' effectiveness (the effectiveness of the team process) and 'ultimate' effectiveness (the group output). Studies that have investigated outcome from an ultimate effectiveness perspective when comparing team and non-team care for neurological patients (Wood-Dauphinee *et al*, 1984) are minimal and have been unable to support the individual benefits of team work. Although some research on Stroke Units has attempted to indirectly support the contribution of team work to the Stroke Unit benefits reported in the literature, (functional ability, survival, and patients placement on discharge) (Indredavik *et al*, 1999, Stroke Unit Trialists Collaboration, 1997), they have not provided conclusive supporting evidence.

### **Determinants of effective and ineffective team work.**

For interdisciplinary team-work to occur effectively group co-operation is required (Barr, 1997, Armitage, 1983, Feiger & Schmitt, 1979). Barr (1997) outlined the actions that may assist in developing interdisciplinary team work processes: development of team aims and priorities, clear lines of accountability, recognition of the importance of operational procedures and culture, evaluation of the meeting of team targets, investment in team training and the provision of time for development, personal commitment to developing new skills, openness to learn from colleagues and reflect on ones own practice, establishing and monitoring agreed understandings for vague concepts, and to be prepared to accept

the difficulties as well as the advantages of team work. Factors that may restrict interdisciplinary working: differences in priorities, aims, and objectives, confusion over accountability, lack of understanding of the team process and the team members' role and responsibility within it, as well as interpersonal skills (Barr, 1997): have also identified. Freeth's (2001) review suggested that a large number of studies highlighted the problems teams face over arguably quite mundane matters (i.e. timing and venues of meeting, and environmental factors). Other factors cited have included staff turnover, lack of team learning, and time from patient referral to service access (Gibbon, 1999). The breadth of literature on this topic has covered health care teams across specialities, but little has been specifically undertaken on teams working in neurological rehabilitation.

Freeman *et al* (2000) found that in a neurological team, the team work philosophy held by the team or individual members had an influence on observed work behaviour. Those holding an integrative team work philosophy (similar to that of interdisciplinary team work) undertook behaviours that supported complex communication requirements, including wide discussion and negotiation, equal status of members and a shared importance regarding the team and how it functions. Sharing the same working philosophy may assist in the team working process. Pound & Ebrahim (2000) demonstrated that physiotherapists based on an elderly care ward communicated and shared information with members of the nursing team who held a similar rehabilitation philosophy.

The importance of team communication in the neurological team working process has been discussed in a number of literary papers and a number of strategies have been reported: joint treatment areas and treatment sessions (Pound & Ebrahim, 2000, Davis *et al*, 1992), team multi-disciplinary note system (Gibbon *et al*, 2002, Molyneaux, 2001), and assessment forms (Stead & Leonard, 1995), shared offices/ team base (Molyneux, 2001), team meetings and ward rounds (Pound & Ebrahim, 2000), weekly case conferences (Molyneux, 2001), specific communication systems (Pound & Ebrahim, 2000, Davis *et al*, 1992), shared responsibility of the team to inform the key worker (Davis *et al*, 1992), and the size of the team (Molyneaux, 2001). However, how these factors influence the team working process and the team working outcome remains unclear due to the complexity of the processes involved and the limited research undertaken. Gibbon *et al* (2002) demonstrated that the introduction of shared notes and integrated care pathways did not result in changes in attitude to team working in the four different stroke units studied.

Greater information concerning the team work process and its influence on the collaborative effort is needed. There may be processes and structures used by neurological teams to promote aspects of team communication, co-ordination, goal setting, joint decision making, problem solving and team reflection and evaluation that have not been identified within the literature. There may be specific issues in each team dependent upon their individual structure and context. Pethybridge (2004) determined that factors perceived to assist good team working in four different medical and stroke teams, in regards to decision making and discharge planning were: sharing, consensus and agreement, trust, being in

a learning culture and good leadership. Opie (1997) when presenting a detailed single team discussion around a complex patient with cognitive and physical impairments; highlighted the team's lack of analytical or reflective practice and suggested that this limited the effectiveness of the team working effort. Molyneux (2001) has reported how open discussion around the management of individual cases and ongoing reflection in a community based stroke rehabilitation team, appeared to assist the team in providing a patient focused model of care and creative and practical solutions. Structured reflection as a team and the commitment to problem solving and open communication to provide solutions may be required for teams to work effectively and adapt alongside the changing face of health care provision.

Joint goal setting is an important process within rehabilitation (Wade, 1998) and a pre-requisite for adopting the interdisciplinary team work model (Schut & Stam, 1994). Additionally it has been perceived to assist the teams' ability to work effectively together (Playford *et al*, 2000). However the process may not be as effective for some patients i.e. those with communication difficulties; and that issues such as time constraints, and difficulties in formulating handicap based goals may be additionally restrictive (Davis *et al*, 1992). Which methods ensure the optimum team work effort have yet to be determined.

The variations in the research designs and outcomes used within the research literature have limited the conclusions that can be drawn from the type of team work model adopted, the team work process, and the context and environment in which neurological rehabilitation teams' work, on



their efficiency and effectiveness. The factors that may influence the team working process may be individual to the neurological team, and also diverse. Studies that have attempted to evaluate factors such as communication have used a variation of research methods and outcome measures.

The limited number of studies and the variations in the research designs and outcomes used within the research literature limit the conclusions that can be drawn regarding the team work process in neurological rehabilitation. The aim of this study was to explore the factors (critical happenings) that were perceived to negatively and positively influence team work. The critical meaning behind these effective and ineffective happenings would also be explored. Due to the scope and aim of the research different neurological teams were selected. This was to ensure that the study explored team working within neurological rehabilitation as a whole, and did not focus on one individual team or aspect of the process. The two professions: occupational therapy and physiotherapy were chosen as they were professions who fulfilled different roles, but who also experienced the blurring of boundaries and role overlap within the provision of neurological rehabilitation.

### **The critical incident technique**

A critical incident is classified as a clearly defined observation or incident where its consequences can visibly be related to their effects (Crouch, 1991). Since its development in 1954 by Flanagan to classify and evaluate the training methods of the American Airforce, the critical incident

technique (CIT) has been used within qualitative health care research as an assessment and evaluation tool (Perry, 1997) and to promote reflective practice (Rich, 1995, Crouch, 1991). Studies using this approach have also investigated nursing issues such as indicators for quality care (Norman *et al*, 1992), and perceptions of the psychological role in treating rehabilitation patients (Rimon, 1979). The technique is based upon the supposition that inferences can be made through the classification of reported or observed specific examples of observed human activity for effective and ineffective or positively and negatively perceived behaviours (Rich, 1995). Within this approach critical incidents can be those perceived to be a slight or substantial deviation away from the norm. In this instance the critical incident technique was utilised to investigate the complex phenomenon of effective and ineffective team working.

Norman *et al* (1992) adapted the approach significantly to investigate indicators for quality nursing care from patients and their nurses. Rather than focusing on the incident itself, the analysed information demonstrated ‘happenings’ that were critical in the quality of nursing care, and “meanings” that were characterised as something that expands the happenings, and can indicate it’s significance in relation to the topic under investigation. This adapted approach (Norman *et al*,1992) was used to investigate the critical happenings in effective and ineffective team work, and the critical meanings behind them.

## **Methods**

The physiotherapy and occupational therapy managers of 13 neurological rehabilitation teams were approached by the researcher to ascertain whether they wished to participate. These teams approached included Stroke Units, specialist in patient/ out patient neurological services, specialist neurological rehabilitation centres, and community neurological rehabilitation teams based in the Thames Region. Four responses from the occupational therapy and physiotherapy staff from two Stroke Units, one rehabilitation centre, and one community team were received. The first three teams that responded were selected to continue. Ethical approval was then obtained from the relevant Local Research Ethics Committees.

Using three different neurological teams allowed the study to explore team working as a whole, not concentrating on one isolated team or one aspect of the team work process.

The research procedure consisted of nine stages (Figure 1). Using a Topic Guide semi-structured interviews were carried out involving five occupational therapists and five physiotherapists working within three teams involved with the neurological rehabilitation of adults.

- Team A: neurological rehabilitation centre team (PTs: **1-3**, OTs: **4-6**)
- Team B: community neuro-rehabilitation team (PT: **7**, OT: **8**)

- Team C: specialist stroke unit based in a General Hospital (PT: 9, OT: 10)

The sample was purposive and occupational therapists and physiotherapists with less than one month experience of working within their team were excluded. The three teams were different in terms of size and structure and the number of available physiotherapy and occupational therapy team members. This meant that a greater proportion of the participants were recruited from Team A.

The number of years since qualification for the study population ranged from 1.5 to 13 years (mean = 5.75, SD= 3.61), and length of time in their current job ranged from two months to five years (mean= 1.9, SD= 1.66). Eight of the participants were female. The remaining two were a male OT and a male PT, both working within Team A.

Within the main section of each interview participants were asked to describe critical incidents of effective and ineffective team work within their current neuro-rehabilitation team, and expand on the perceived critical factors (happenings) and their effects (meanings). Interviews were transcribed and sent for respondent validation.

At the analysis stage, each critical incident was organised into critical happenings and critical meanings (Norman *et al*, 1992) and presented in a summary document (pamphlet) for respondent validation. Respondent amendments were recorded on the original pamphlet and were considered

additional data. The happenings and meanings were then analysed for emerging themes. The themes were developed through the researcher's submersion into the data. The thematic areas were coded, and expanded and collapsed as appropriate (Bryman & Burgess, 1994). Research rigour was increased by the detailed exposition of the procedural methods used and the analysis undertaken.

## **Findings**

Figure 2 demonstrates the critical happenings and meanings that were produced from a single critical incident. The influencing factors (critical happenings) for effective and ineffective team work as a whole, are presented in Figure 2.

The largest proportion of the critical happenings were organised under the *communication* theme, followed by *team members characteristics*. *Team members` characteristics* were most frequently reported as influencing ineffective team work, and for *communication*: both effective and ineffective team-work. Factors discussed under the *shared and collaborative working* theme were perceived to influence effective team work more often than ineffective team work. However as there were a disproportionate number of subjects from each team, these estimated frequencies have to be considered with an element of caution.

The following sections present the critical happenings in effective and ineffective team work. Where appropriate the critical meanings are presented alongside.

### **Communication**

Whether communication occurred, who it involved, and the timing, frequency, and type of communication were all reported as critical happenings in both effective and ineffective team work (Figure 2). The type of communication that could facilitate effective team working included the following: updates, meetings, discussion, communication with family, whether it raised issues, was consistent, constructive, and informal. Ineffective subthemes included miscommunication between those involved: the team, and the team and external services (i.e. referring hospital), and a lack of clear communication to the patient.

In the instances where communication was perceived to be important, it was believed to influence the team work outcome on a number of levels. It was thought to benefit the patient, the team, the individual team members, and the service. In the following incident it was reported to affect the ultimate effectiveness of the team: better rehabilitative outcome.

“..discussion between the team...again communication and constant updating within the team, regular communication in that sense ...to actually push the patient forwards and onwards”

**1:** PT: Team A

*Critical happening: communication*

*Critical meaning: patient benefits*

*Subtheme: type and frequency*

*Better rehabilitative outcome*

### **Team events & team characteristics**

The *team events and team characteristics* that were perceived to be critical are summarised in Figure 2. Team events included problem solving, planning and organisation, and agreeing shared plans and aims. Team characteristics varied from having a team leader, to being open and accessible, cohesive, consistent, supportive, responsible and realistic.

In one critical incident the teams’ acceptance of equal responsibility, shared aims and experience, and its supportive nature, (as well as informal communication, meetings, and having the time to meet) were perceived to influence the teams’ intermediate and ultimate effectiveness when developing their service for people with multiple sclerosis. The team members reported that they felt supported, that they had learnt though other peoples’ experience, and had also built good working relationships as a result of the process. It was also thought to have beneficial effects for future patients and the service:

“the clients in the long run will benefit.”.....“client is identifying which areas are a problem and a priority to them, and which they want to work on first”

“..we`ve benefited ...by focusing the time and we`ve built a certain working relationship”

“..it`s something we can probably share with people around the country as an example of some work that we`ve done and help [*the service*] promote its name ...”

**8: OT: Team B**

*Critical happening: team characteristics*      *Critical meaning: service, team*

*(& communication)*

*members & patient benefits*

*Team members: supported, learning,*

*Team: works effectively, builds team*

*relationships*

*Patient: patient centred rehabilitation*

*Service: raised reputation*

Other team characteristics such as the inaccessibility of the treating team out of working hours, lack of team openness, poor planning and organisation, as well as a lack of team problem solving and the presence of conflict/ dispute within the team, were perceived to influence the team working process. The critical meanings included team benefits and disadvantages. In a number of these instances the patient was also perceived to be disadvantaged. They did not receive the answers, equipment, joint approach, or rehabilitation that they needed, or that their rehabilitation was not patient focused.



## **Team members` characteristics**

Individual *team members` characteristics* were perceived to influence the team working process in a number of ways. Characteristics that were perceived to influence ineffective team work were knowledge, experience, personality, interpersonal skills, and holding different opinions and perceptions.

“I think it`s a personality problem, maybe I`m working with someone who hasn`t got the same understanding of team work than me, who doesn`t behave the same way.”

“...it has affected only myself...it could have affected the patient because I feel like not trusted...not respected...it`s really hard to keep your enthusiasm and motivation...and your...you need lots of support in rehabilitating patients with stroke.”

### **9: PT: Team C**

*CH: team members` characteristics*

*Personality*

*Opinions*

*Understanding*

*CM: team member disadvantaged*

*Reduced motivation & enthusiasm*

*Does not feel trusted, respected or*

*supported*

Having a desire to work on the same goals, listening skills, good interpersonal relationships between team members, as well as being open and willing to explore role overlap, secure in their understanding of their own role and other disciplines', were all reported as effective team members characteristics.

### **Shared and collaborative working**

*Shared and collaborative working* related to a number of factors. These were specific events, methods of working and shared and collaborative techniques (Figure 2). Aspects of team working such as joint sessions, joint working, joint decision making and setting of team objectives, were perceived to have critical benefits or disadvantages for the team members, the team, and the patient.

“we had decided to keep him and extend his stay and then it was overridden without an explanation really” “..and then nobody knew why he`d gone” “...the patient was the person who was affected most. We were quite angry and upset by it because we had wanted him to stay and had goals set for him and it was him that was not going to get the benefits of it [*rehabilitation*].”

**3:** PT: Team A

*CH: shared and collaborative working*      *CM: team and patient disadvantaged*

*lack of joint decision making*      *Team: angry & upset*

*Patient: would not benefit from the  
rehabilitation planned*

This theme also included reference to overall patient and family involvement in joint working and goal setting. The inclusion of the patient and their family was perceived to assist the team functioning, as well as the achievement of the team aims:

“and it was that team approach... we sort of sat down and talked to the family, and also what we did was ....when the daughter was there we knew that we would always...you know if they asked questions we would answer them, but keep to the fact that we felt that she would be better...and it worked, it took a while but it worked, and they both decided that ...that she`d go to a residential..”

**10:** OT: Team C

*CH: shared and collaborative working  
patient & family involvement*

*CM: patient & team benefits  
appropriate discharge placement*

“ this case has really shown me how much I do depend on...” “....depend on really working alongside the patient and their family for planning discharge”

**4:** OT: Team A

Despite this, some of the therapists suggested that their team was not working as patient-centred as they would like:

“I think there`s still...there`s ...” “...a little bit of lip service played to client centred practice I think in most settings.” “I still think that most therapists and most members of the team probably have their own goals to a certain extent, of what they want to work on with a patient.”

**6:** OT: Team A

## Organisational structures

Within the *organisational structures* theme (Figure 2), goal planning, and team meetings were perceived as contributing factors in effective team-work. In an ineffective incident, a lack of goal planning was perceived to negatively influence the development of a team plan and the outcome for the patient: aspects of both intermediate and ultimate effectiveness.

“...poor planning and goal planning, no early goal planning for the patient. ....therefore the team really, in terms of working together were not focused early on. people working in separate boxes and this patient desperately needed a joint approach to have any impact...on his..... disability and impairment.”

1: PT: Team A

*CH: organisational structures  
goal planning (quality & timing)*

*CM: Team: lack of focus  
Team: limited cohesive approach  
Patient: limited affect on rehabilitative*

*outcome*

The inaccessibility and quality of goal planning, its` timing, and the lack of a chairperson were perceived to influence ineffective team-work. Other perceived ineffective structures included a lack of clear policies, protocols, and guidelines.

The remaining themes for effective and ineffective team-work: environmental, external, and patient and family related, were less frequently reported. The environmental factors reported affected the team, the patient and family-related factors: the patient. The external factors were

reported to influence the service provided by the team as well as the client. There were also a few references specifically to time constraints in the critical happenings: the chairperson/ team members working hours, and the inaccessibility of the treating team after hours (i.e. for family and goal planning) (Figure 2).

## **Discussion**

The findings of this study are not new or unexpected. However, this is the first study that has explored team work in neurological rehabilitation in its entirety, and across different teams. It has investigated the factors that are thought to influence team work, and the perceived effects on the intermediate process and ultimate outcome. The extensive factors involved in the team work process in neurological rehabilitation, their interdependence and perceived cumulative effects was a significant finding in this small scale study. It provides a spring board for further research as well as a baseline from which the team work process and outcome can be evaluated at a more detailed level.

The findings of this study correspond with research that has supported the positive and negative influence of communication on the team working process in neuro-rehabilitation (Freeth, 2001, Molyneux, 2001, Stead & Leonard, 1995). In fact communication may be one of the most crucial factors (Molyneux, 2001).

Other subcategories that emerged from this research such as having a team leader, a plan, being open, consistent/ cohesive, and sharing responsibility have also been supported by Barr (1997). However, one of the most significant findings of this study was the reported benefits of the involvement of the patient and their family within the team approach. A number of critical happenings under the *communication* theme related to communication with the patient, and, or their family, and this was perceived as important for the team-working effort. If one of the aims of the team-work effort is rehabilitative (i.e. to maximise the patients recovery, or optimum discharge placement) there may be significant perceived benefits to both the team and the patient for their inclusion in the team-work process. However there may also be times when less patient-centred practice and the exclusion of the patient within the team is appropriate. As yet this has not been highlighted within the literature, and would be a requirement for future research and investigation.

A lack of client centred goal planning has been reported by other rehabilitation teams (Pethybridge, 2004, McGrath *et al*, 1995). Whether the patients' involvement in goal planning in these three teams was dependent upon the aims of the team at the time, the patients cognitive or communication abilities, or the particular perceptions of the team members as to the extent to which they should be involved, was not clear.

Schut & Stam (1994) have suggested that the benefits of goal planning included improved planning, evaluation, problem solving, communication and motivation. This was partly supported by the findings of this study. The teams reported using different goal planning

structures, a similar finding to Playford *et al* (2000). Whether the goal planning process was individually tailored to each team or to the patient could not be determined and further research is required. External and environmental factors have also been discussed as influencing effective and ineffective team work (Strasser *et al*, 1994, Armitage, 1983).

Team-work is a complex process, and as such there is a large degree of overlap between the perceived influencing factors and the outcome of effective and ineffective team work in neurological rehabilitation. In addition it is important to note that some of the subcategories under each theme may have included only one critical happening. Others were supported by a number of similar critical happenings. This indicated that a number of factors were perceived to influence and jointly contribute to the team working process in the three neurological rehabilitation teams, and that the list was extensive. At a service delivery level these findings may support the multiple dimensions under which health-care teams function (Boaden & Leaviss, 2000).

The critical meanings for effective and ineffective team work corresponded with the findings from the first part of this study, where participants provided their opinions on why they worked within a team (Suddick & DeSouza, 2006). The five occupational therapists and five physiotherapists studied reported diverse benefits for the patient, team, individual team members, and for improving the effectiveness and efficiency of the service. They also supported a perceived influence of the team work process on rehabilitative outcome. These critical meanings

included aspects of both immediate and ultimate effectiveness. Some aspects of the team working process resulted in intermediate effects such as good working relationships, improved communication or satisfaction within the team. Some of these effects went on to become critical happenings that either led and/ or contributed to other outcomes. These often resulted in critical meanings that were more related to group output (ultimate effectiveness) such as cost efficiency, placement on discharge, and rehabilitative outcome. Clear causal relationships between the intermediate and ultimate effects of team work could not be established due to the complicated nature of the interlinking events and effects.

By establishing the specific quality dimensions under which the neurological rehabilitation team works, research can be structured to investigate the contributing factors. Future research needs to focus on individual teams, and team members, and establish their context and priorities for the intermediate and ultimate effectiveness of their team work. Team members of in patient acute neurological services may work to different team priorities that focus on service efficiency. In this study, participants based in the Stroke Unit team did not report any patient benefits from team work. These perceptions may have been influenced by a number of factors, including the team context and their individual beliefs. The occupational therapist from the Stroke Unit provided reasoning for team-work around service efficiency/ effectiveness issues, and the physiotherapist from the same team focused on individual team members, and team benefits. Other research has demonstrated that team members can hold different or shared philosophies regarding team work (Freeman *et al*, 2000) as well as their role, priorities and successful outcome from rehabilitation (Pound & Ebrahim, 1997). Having a shared philosophy can promote communication (Pound & Ebrahim, 2000). On



the other hand, if team members hold different opinions as to what they want their team-work to achieve, and if they are not openly communicated or discussed, they may lead to discord and disenchantment. The perceived rewards from team-work may not be met, and other team members may be perceived to be working in opposition to those aims.

Variations in the reported critical happenings between participants, and between the three teams were also observed. All responses relating to ineffective team work under the *communication* theme, and the *patient-related* theme (effective and ineffective team work), had been provided by physiotherapists and occupational therapists from Team A. This finding may have been reliant purely on the type of critical incidents given by the participants. On the other hand, it may represent a team culture or specific areas in which each team is thought to perform well or not so well. Two participants provided considerable contributions to *team members` characteristics* under ineffective team-work. Again, the type of critical incidents reported may have been responsible for this finding. Equally these team members may have perceived specific factors as more important when working in a team.

The findings were generated from the critical incidents provided by the respondents. The results therefore represented only a small number of instances where the teams studied were perceived to work effectively or ineffectively. The findings are exploratory and cannot exclude any other factors and variables that may be perceived as influencing the team working process. Neither could specific causal relationships be drawn from

the findings due to the multiple factors reported, the perceived interdependence of the factors, and the nature and scope of the research undertaken.

This study has established that a number of factors already discussed within the literature may be important to neurological rehabilitation teams. The findings have highlighted that client and family centred approaches, collaborative goal setting, team reflection and training, as well as other components of team work, may require further development. Other aspects that relate to the patient and their family have not been previously acknowledged as influencing the process. The findings support key roles for communication, organisational structures and shared and collaborative working practices in neurological teams. These findings could contribute to the development of appropriate team work strategies for specific teams and best practice models urgently required for those working with clients with neurological and long term conditions.

This project has also provided findings that may assist in the development of future studies to evaluate the effectiveness of the neuro-rehabilitation team work effort. This study has generated a number of possible areas for the development of future research. Some of the critical happenings may have been of a greater perceived influence to the team work process than others- this was not investigated in this piece of work. Neither was the perceived weighting of the critical happenings and meanings. Focus groups could then be used to explore the priorities for neurological rehabilitation teams within the context within which they work.

Further research is required to directly substantiate the benefits of team work in neurological rehabilitation. It will need to take into account the intermediate and the ultimate effectiveness of the team-work process, the team context, and that the team outcome may be evaluated from the team, team member, patient and service perspective. Further study of the experiences and perceptions of other members of the neuro-rehabilitation team is also required, including those of the patient and their family.

Using the critical incident technique allowed the complex process of team-work to be explored. Norman et al (1992) went some way in developing the critical incident technique so that it could deal with complex interlinking events and their meanings. The technique requires further development and investigation to deal with cumulative happenings and meanings, and could be developed as a tool for structured team reflection and evaluation.

A key element of the research method was the use of respondent validation. Respondent validation of the pamphlet information ensured that the inferences drawn by the researcher during the analysis stages were checked by the study participants as being an accurate representation of their views. The minimal amendments that were required at this stage of the procedure supported the methods for collecting, organising and analysing

the data. The addition of respondent validation of the themes and subthemes as well as a second researcher to verify the thematic analysis would have increased the validity of the findings.

The study was also limited in its scale. It only focused on the opinions and perceptions of a small number of therapists from only three neurological teams and two professions. It cannot provide substantive evidence or a causative link between team work and its effects. The findings of this study could not exclude the existence of additional factors that may have influenced the team working process. In fact the extensive range of factors that related to effective and ineffective team work from a small number of subjects could indicate that this study has only scratched the surface.

## **Conclusion**

The study indicated that effective and ineffective team work was perceived to be influenced by an extensive number of factors, which affected the team outcome from the perspective of the patient, the team, individual team members, and the service. The results supported previous literature that has investigated aspects of team-work in other health care teams, neurological teams, and in different contexts (Freeth, 2001, Molyneux, 2001, Freeman et al, 2000, Pound & Ebrahim, 1997, Stead & Leonard, 1995, Strasser et al, 1994). The findings highlighted a need for further development of patient and family centred practice, collaborative goal setting, team reflection, and other aspects of the team working

process. They suggested that communication, collaborative and organisational strategies can be used to assist the team working process and outcome, and that the team and individual team members have a key role to play.

Team work is a complex, constantly-changing process that brings with it its own rewards and benefits on a number of levels. It may also bring multiple challenges, and require extensive resources, investment and commitment if the team is to work to its optimum. The results from this study were the organised reportings and perceptions of people who were experiencing working within the neurological rehabilitation team on a regular basis. Therefore they provided a rare and valuable insight into the complex processes occurring in the neurological rehabilitation team.

The nature of this piece of research was exploratory and as such cannot provide definitive conclusions. However, the findings support the perceived value of team work within neuro-rehabilitation. The team-work effort was perceived to have rewards for the team, the patient, individual team members, and the neurological rehabilitation service. However, the flip side of the coin cannot be ignored. Equally, if the team does not work well together, occupational therapists and physiotherapists perceived the negative effects to impact on a number of comparative levels.

There needs to be a frank discussion between team members working in neurological rehabilitation, and within the scientific literature. The reality of providing an efficient collaborative team effort needs to be addressed. Further research is required to directly substantiate the benefits of team work in neurological rehabilitation, to determine how these factors influence each other, and to explore the priorities for neurological team work in different contexts. It will need to take into account the prioritised aims of each individual team in regards to the intermediate and ultimate effectiveness and that team outcome may be evaluated from the team, team member, patient, and service perspective. Further study of the experiences and perceptions of other members of the neuro-rehabilitation team; including those of the patient and their family, as well as further investigation into their level of involvement in the process, is also required.

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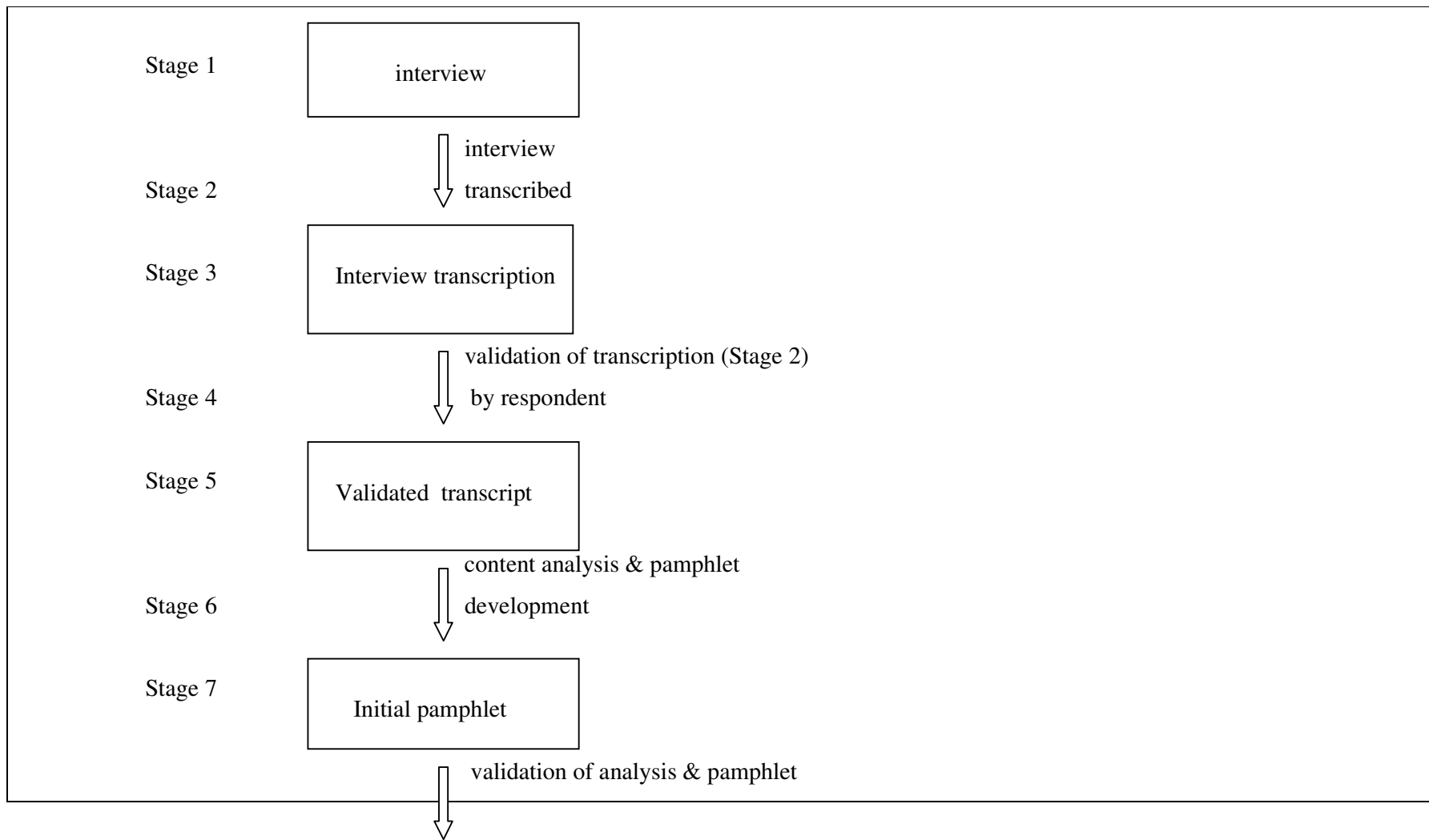
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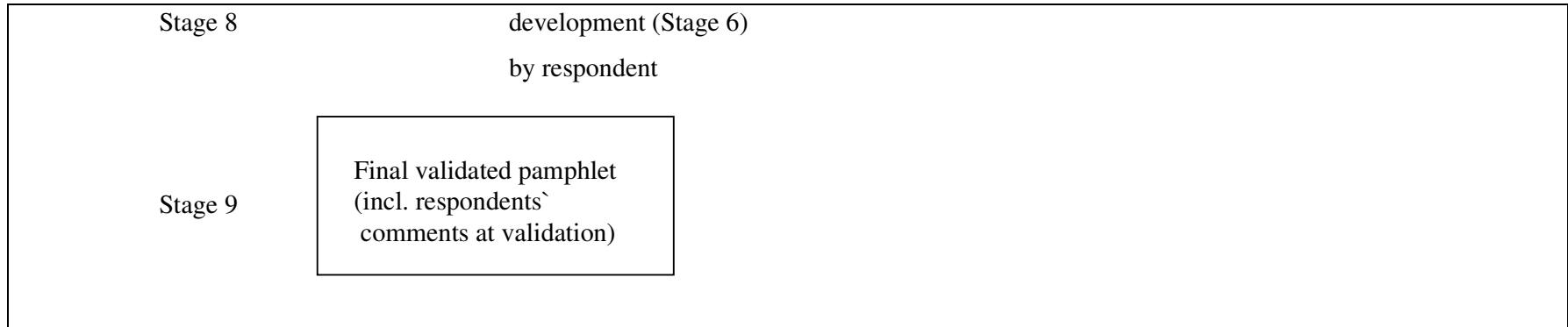
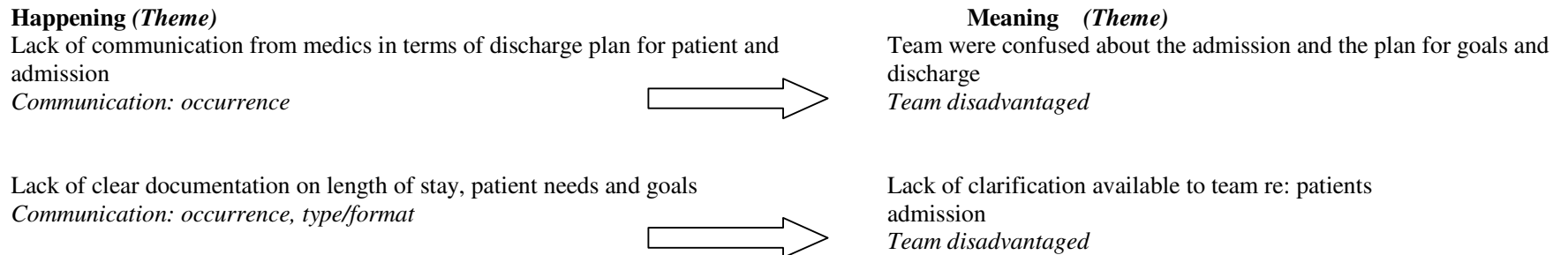


Figure 1.  
A flow diagram demonstrating the procedure for the data collection and processing.

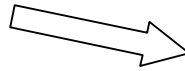
**Figure 2 Critical happenings and meanings arising from a single ineffective team work incident.**



Different opinions were held by team members as to the aims of admission

*Team member characteristics: Opinions/ perceptions*

*Team events & characteristics: Shared plan, aims and tasks*



Team members were working towards different goals, to different time scales, and discharge placements

*Team members disadvantaged*

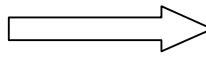
Lack of communication and clarification within the team re: goals for admission

*Communication: occurrence, within team, type/format*



Team were not kept informed by the medical team members

*Communication: occurrence, timing*



Chinese whispers began as to when the patient was to be discharged.



Team were unsure of what to say to the patient.

*Team disadvantaged*

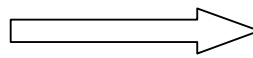


Patient was not informed

*Patient disadvantaged*

Lack of definitive answer for team when asking medics about discharge plan and their medical reasoning

*Communication: occurrence, type/format*



Team remained unclear on the aims of the admission, and length of admission

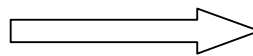


Team were unable to plan

*Team disadvantaged*

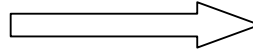
Non team decision re: discharge of patient

*Shared & collaborative working: joint decision making*



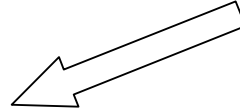
OT returned from holiday to find patient had been discharged back to their referring hospital.

Team not informed re: discharge of patient  
*Communication: occurrence*

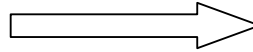


*Team members disadvantaged*

Lack of opportunity for team members to  
argue and put their case forwards  
*Team members disadvantaged*



Sudden change of plan for discharge  
*Team events & characteristics: planning & organisation*



Patient distressed  
*Patient disadvantaged*

**Participant 6:** OT : Team A

**Figure 3 Influencing factors (critical happenings) for effective and ineffective team work.**

