

Improving recovery—Learning from patients' experiences after injury: A qualitative study.

Judith Sleney^a, Nicola Christie^{b,*}, Sarah Earthy^a, Ronan A. Lyons^c, Denise Kendrick^d, Elizabeth Towner^e

- a. Department of Sociology, Faculty of Arts and Human Sciences, University of Surrey, Guildford GU2 7XH, United Kingdom
- b. Centre for Transport Studies, Department of Civil, Environmental and Geomatic Engineering, UCL, Gower Street, London WC1E 6BT, United Kingdom
- c. College of Medicine, Grove Building, Swansea University, Singleton Park, Swansea SA2 8PP, United Kingdom
- d. Division of Primary Care, Faculty of Medicine & Health Sciences, Floor 13, Tower Building, University Park, Nottingham NG7 2RD, United Kingdom
- e. Centre for Child and Adolescent Health, University of the West of England, Bristol, Oakfield House, Oakfield Grove, Clifton, Bristol BS8 2BN, United Kingdom.

* Corresponding author: Dr Nicola Christie. Tel: +44 20 7679 2716. E-mail address: nicola.christie@ucl.ac.uk

Abstract

Objectives: To explore experiences of patients after injury and identify implications for clinical care and support within the hospital setting and primary care. Design: Semi-structured telephone administered qualitative interviews with purposive sampling and thematic qualitative analysis.

Participants: Patients who have experienced an unintentional injury and attended hospital. Setting: Bristol, Surrey and Swansea.

Results: Key issues that emerged were: most patients reported mixed experiences of hospital care but some described the delivery of care as depersonalising; the need for clinicians to provide adequate, timely and realistic information to patients about their injury and treatment to inform their expectations of recovery; the impact of pain at the time of the injury and for an extended period afterwards; the experience of injury on patients' emotional state with possible implications for longer term mental health issues; the pivotal role of physiotherapy care in providing practical and individualised strategies for recovery; and the importance of social support for recovery.

Conclusions: Trauma patients' recovery needs to be supported by information protocols. The social circumstances of patients need to be considered at the point of discharge and during recovery. There is a need to identify people who may be experiencing mental health issues for timely referral to assessment services and appropriate care. Signposting to support groups may also be helpful for those with life changing injuries. Improved pain management would help alleviate discomfort and stress. Physiotherapy has a key role to play in supporting patients in recovery.

Introduction

Globally more than 45 million people each year suffer a significant disability following injury, making injuries responsible for around 16% of all disabilities.¹ Unintentional injuries also place a large burden on health care resources in England and Wales. Injuries result in an estimated three quarters of a million hospital admissions in England, 3.6 million bed days and 5.8 million Emergency Department (ED) attendances in the UK.^{2,3} Adults of working age comprise 35% of hospital admissions and 50% of ED attendances indicating significant economic costs to society, employers and individuals due to loss of earnings and reduced productivity.^{2,3} Other indirect costs resulting from injury include the inability to undertake normal activities and consequences for the quality of life of the injured and those dependent on them or on whom the injured person becomes dependant.

The medical and psychological literature on the functional and psychological consequences of injury has tended to focus on severe injury, notwithstanding general agreement that the social and psychological consequences of injury are not necessarily related to the severity of the injury.^{4,5} The psychosocial impact of injury has been researched using mainly quantitative measures linked to psychiatric illness rather than exploring a fuller range of psychological and emotional responses to trauma.⁶⁻¹⁰ There is comparatively little qualitative research with patients who have suffered an unintentional injury and almost none that considers the impact of a range of injury types (both minor and serious) in the context of the individual's age, gender, existing health status, socio-economic circumstances, household composition or other personal factors.^{11,12} There has also been little research on patient perceptions and experiences of health and social care following injury and the extent to which this may influence recovery.

However, concepts such as biographical disruption, developed by sociologists studying debilitating forms of chronic illness, may also illuminate the experiences of people who have been disabled through unintentional injury. The starting point for Bury's original conceptualisation of 'biographical disruption'¹³ was the acknowledgement that chronic illness is a profoundly social as well as physical experience; disrupting sufferers' lives, behaviours, relationships and identity including the individual's sense of their own biography. Bury identified a typology of responses: 'coping' (a cognitive process exploring value and meaning), 'strategy' (dealing with the practical consequences of the condition) and 'style' (related to the individual's cultural background and repertoire). Studies of autobiographical accounts of a range of conditions¹⁴⁻¹⁶ have demonstrated the complexity of 'coping' as an emotional as well as practical response to a changed body and one that may need to be repeated at different stages in the illness. Others¹⁷ have highlighted the paucity of research on the differentiated impact of socio-economic and structural factors on individual experiences of illness – and by extension, the authors here would argue, injury.

The UK Burden of Injury Study (UKBOI) was established to better understand the impacts of unintentional injuries in terms of disability and associated social, emotional and economic costs. The study was a multicentre mixed method study of over 1500 trauma patients, aged 5 years and over, attending an emergency department or admitted to hospital following a wide range of injuries and followed up at several points after leaving hospital.¹⁸ Participants were recruited from September 2005 to April 2007 with follow-up completed by April 2008. Findings from the quantitative data have been reported elsewhere.^{19,20} The focus of the qualitative component of the study was on the personal impact of injury for the individual

patient and their experiences following injury. The aim of this paper is to explore patients' experiences of injury and associated care in hospital and primary care. The paper concludes with a discussion of the implications for better management of the care pathway for trauma patients.

Methods/Design

Quota sampling was used. The sample was constructed to include 30 participants from each of the three centres (Bristol, Surrey and Swansea), with quotas within each centre to achieve ten participants from each age range 5–24, 25–59 and 60+, equal numbers of male and female participants and a range of injury types and time since injury. All patients had to meet the criterion that they did not perceive themselves as recovered at one week post injury. Information on this was identified from questionnaire data that were part of the quantitative study.

Attempts were made to contact 140 potential participants by telephone before the eventual quota sample of 89 participants was achieved. Of those contacted, four potential participants declined to take part and one had died. Another 46 potential interviewees did not answer the telephone or respond to messages left and in most instances the researchers contacted another potential interviewee fulfilling the same criteria.

When participants were contacted by telephone they were told that the interview would explore in more depth their experience of recovery from the injury. Participants were also informed that if they decided to take part in the interview, they could decline to respond to questions if they wished and could end the interview at any point. Permission to record the interview was sought and an explanation given for why this was necessary. The participant's anonymity was also assured. This was particularly pertinent since the participants had been recruited, in the first instance, in the hospital and the researchers wanted to ensure that participants felt they could talk freely and in confidence about any experiences they had in the hospital. For children aged under 12 ($n = 8$) a parent or carer was interviewed.

A semi-structured interview topic guide was developed based on the research aims,²¹ and taking an approach derived from the concept of biographical disruption discussed earlier.^{13–17} The topic guide aimed to explore the experience of the injury and care received and the impact (practical, emotional and social) of injury on different aspects of people's lives. The interviews also explored factors that might have facilitated or hindered recovery, including access to health care; social and emotional support; and issues surrounding employment and leisure.

Five pilot interviews were carried out during development and a minor amendment was made to the topic guide in light of these interviews. The pilot interviews were included in the analysis. The topic guide proved an effective research tool facilitating consistency in approach across the three research centres whilst at the same time providing flexibility for interviewees to recount their experiences in their own way.

All of the interviews were recorded, transcribed and imported into the computer assisted qualitative data analysis software NVivo 7 to enable in-depth thematic content analysis. NVivo 7 was chosen as it allows researchers to catalogue large datasets and access and

code them relatively easily. One researcher carried out all of the data analysis. The researcher read through each transcript and coded sentences or paragraphs of the text under broad general headings or more specific areas. The codes were then explored in more detail, using NVivo and paper copies, and the transcripts were revisited on a number of occasions, comparing and contrasting comments between different participants and within individual transcripts to check consistency of meaning. This technique of constant comparison is a well-recognised means of ensuring reliability in qualitative analysis.²² A senior researcher on the team simultaneously coded 20 out of the 89 interviews to check the validity of code and theme development. This exercise produced very similar coding and interpretation of the data between the two researchers.

The analysis presented below is organised around key themes that emerged from the interview data. The key themes were:

- Positive experiences of care in hospital,
- Negative experiences of care in hospital,
- Delays in receiving appropriate care,
- Communication amongst hospital staff,
- Communication of information to patients,
- Social support after discharge,
- Pain Management,
- Low emotional state,
- Loss of confidence,
- Rehabilitation and the central role of physiotherapy.

The quotes used to illustrate the themes are drawn from a range of participants from different centres, age groups, genders, employment status, time since injury and inpatient or outpatient experiences of hospital care. The participant code that follows each quote provides background information about the participant. The key to this code is shown below.

Example of participant code:

1	2	3	4	5	6	7	8
A	190	59	F	Acute ruptured Achilles tendon right leg	17 months	GP receptionist	Admitted/not admitted

1. A, B, C – Centre code (changed to preserve anonymity),
2. Participant identification number,
3. Age of participant,
4. Male or female,
5. Nature of the injury,
6. Time elapsed since injury,
7. Details of employment/school: if employed (job description is given), self-employed (SE), retired, school student or not working,
8. Admitted as inpatient/not admitted as inpatient.

In the quotes the abbreviations “I” denotes the interviewer and “P” denotes the participant.

Findings

A total of 89 semi-structured interviews were conducted with participants recruited from three hospitals in Bristol, Surrey and Swansea. Fifty-three (66%) of the interviewees had been admitted as hospital inpatients following injury. The other 36 interviewees (40%) had been treated in the Emergency Department (ED) and then either discharged or referred for a follow up appointment at outpatients. Participant characteristics are shown in [Table 1](#).

Table 1
Participant characteristics

	Number	%
Area		
Bristol	29	33
Surrey	34	38
Swansea	26	29
Age		
5-24	24 (19 aged between 5 and 17)	27
25-59	32	36
60+	33	37
Gender		
Male	40	45
Female	49	55
Patient status		
Admitted as in-patient	53	60
Not admitted as in-patient	36	40
Time since injury		
Mean	15 months (SD=5)	
Range	2-28 months	

Positive experiences of care in hospital

Most participants reported mixed experiences of care during their time spent in hospital with some reporting only positive experiences of care and a few reporting only negative experiences. The aspects of care that seemed to have most salience for participants were the promptness or otherwise of treatment, interactions with hospital staff, the general care and comfort they experienced as inpatients, and the information they had been given about treatment or aftercare. Many participants reported that particular members of staff (surgeons, ward medical staff, nurses and physiotherapists) had taken time to explain the treatment that they were to receive or had received and to answer questions and this was much valued. A few participants commented that they were surprised that their experiences were so good:

"You can't fault it. Excellent. I can't believe it after [what] I read in the paper but as far as I am concerned the care is second to none. I admire them for what they do" **(C110:69:F:hip strain:24 months: retired: not admitted)**

Negative experiences of care in hospital

Most of the negative comments made by participants about staff and hospital care were related to the severe time pressures that hospital staff seemed to be under. Some participants observed that it took a long time for nurses to answer call bells and several mentioned that they had seen other patients struggling. Patients were, on the whole, sympathetic to the situation that staff were in:

"I could not believe the lack of staff and in fact one of the nurses said to me one morning, he said, 'there's only two of us on and I don't know how we're going to cope'. And, so obviously, although – they get blamed so often but it's not the individuals that are to blame, it's the whole system that is to blame"
(A190:59:F:acute ruptured Achilles tendon:17 months: receptionist: admitted)

However, participants also reported instances of staff being thoughtless, inconsiderate towards their feelings or even rude:

"One of the staff nurses came by [and we said] can we have some [toilet paper] paper please? [. . .] but I was asking together with this other women and she shouted back to the both of us, "you should get it yourself!". And I was very quick on the draw and I do apologise for this but I said "don't you speak like that" and she looked and then scuffled away." **(B241:69:F:fractured hip and wrist:12 months: unpaid magistrate: admitted)**

Other negative comments about hospital care were that staff had not listened to the participants when they reported that something was wrong, such as a painful cast or a suspected infection in one participant's leg. A number of participants talked about feeling vulnerable or not in control whilst in the hospital. This was generally related to their treatment but several participants had also witnessed another patient being attacked by a member of the public or had seen police officers with a patient:

"But nobody suggested to me that I'd completely torn a muscle insertion deep inside my body and nobody listened when I kept saying 'I've got a dead leg, I kept falling over, I have no proper control over my leg'. I wasn't screaming in pain but apparently that wouldn't have been the right thing to have been doing anyway but the back specialist just nodded when I said no, he said 'you wouldn't have experienced pain'. So I don't think those symptoms, which I did describe very clearly, were properly attended to, properly listened to."
(A259:58:F:pain right hip, right buttock, right knee and coccyx:13 months:part-time teacher:not admitted)

Delays in receiving appropriate care

A number of participants reported that due to bed shortages they had been put on medical wards rather than surgical wards. Some felt that staff on medical wards had been unsure how to treat them and that they had not received the correct care as a result, for example no pain medication when required or a long wait before diagnosis:

P: well the individuals were lovely, I thought the system was ridiculous.

I: In what way?

P: Well obviously turning up at A&E like that I was lucky to get a bed at all, but it was in a medical ward [. . .] As a result nobody could seem to do anything, so when I was sort of crying half the night because I couldn't get comfortable at all, you know, they just couldn't do anything. And, from eight am in the morning the place was full of medical doctors so I didn't really see why they couldn't have authorised some hefty pain relief or something. As it was they kept saying somebody would come down, somebody would come down, and she eventually came down, but half past twelve and then she didn't think there was a great deal to be done. It was just you know, it was so miserable.

(B165:57:F:wrist fracture colles:14 months:not working:admitted)

Some participants had experienced lengthy waits for operations or had been prepared for operations on several occasions only to be told later in the day that their operation had been rescheduled:

"So I was nil by mouth on the Saturday and then it was eleven o'clock at night "oh you can have a cup of tea" and the next day it was you know "you can't have breakfast, you are nil by mouth" and it got to sort of four o'clock in the afternoon "oh I am sorry you are not going to have an operation today you can have something to eat". And it just kept on going a bit like that. Because it was such a traumatic, stressful time for me anyway"

(B208:59:F:left olecranon fracture:19 months:not working:admitted)

Some participants described negative experiences of care in ways that emphasised that they had been made to feel less than a person. These delays in appropriate care made several participants comment that their treatment in hospital had made them feel depersonalised:

"It was crap. I felt like a parcel, I went to four different wards while I was there."

(C232:40:M:fractured medial malleolus, fractured fibula:22 months:own firm glass cutting SE:admitted)

Communication amongst hospital staff

Some participants reported instances of a lack of communication between hospital staff which had resulted in less than satisfactory treatment such as a lengthy wait for pain medication or confusion over treatment:

“A young nurse on the ward came to deal with it and started to cut the remainder of the bandage off and peel open the back slab and I’m sitting there thinking ‘this doesn’t feel right’. And it’s very awkward when you’re in their hands to turn round to somebody and say, ‘I don’t think that’s what you’re supposed to be doing’, but I had to. And she had thought the whole thing was coming off and I was having a crepe bandage put on.”

(A020:56:F:fractured tibia and fibula:8 months:dry cleaning manager:admitted)

Other participants had received conflicting information from different hospital departments over whether or not they should receive physiotherapy. This was confusing for patients and unsettling in what was already a stressful situation.

Communication of information to patients

For many participants, the information that they received in relation to their injury met their needs. Information from consultants and other health professionals about procedures and likely outcomes inspired confidence for many of the participants:

“... the consultant he was... absolutely on the ball and that’s one thing I have to say, he instilled confidence..., you know he kept me fully informed and made sure that I knew what was going on”

(B260:37:M:Multiple trauma:8 months:telephone banker: admitted)

In one or two cases, the language used by healthcare professionals was reported to be too technical for the participant to fully understand although this was not necessarily regarded as problematic:

“I had a letter sent to the doctor with everything stating on it and a copy given to me so I could read it as well. Not that I could fully understand all the terms, but I got the gist of it.”

(B173:74:F:Rib fracture, pneumothorax, tibial plateau fracture:14 months:retired:admitted)

More significantly many participants had received some information but would have welcomed more. In the majority of cases, this related to treatment or aftercare. Participants wanted answers to questions such as when improvements would be noticeable, when they could or should use an injured limb as normal and whether mobility and strength would improve with time. Such questions may be complex to answer from a clinical perspective but are central to the patient’s desire to return to normal life and their ability to manage their injury in the interim:

P: *‘The hardest thing I thought was not any feedback because there was no one there saying like now you can start lifting light weights, now you can do this. Just after they straightened my arm out they just left me. I was ringing them up and they were just saying ‘Just take your time it is a big injury (. . .) back on track. The only thing that has got me back on track is my ambition not so much push*

myself but made sure I was doing things and made sure my arm was all right and trained it up really.

I: *Some guidance might have...*

P: *If I had some feedback from the doctors I might have been recovered quicker maybe, I don't know."*

(C189:20:M:fractured arm:20 months:apprentice carpenter:admitted)

With regard to surgery, some participants reported that whilst information was provided beforehand to gain consent if an operation was required, they were not necessarily in a fit state to take this in. Some participants would have liked to have also seen a member of the surgical team after the operation:

"...I must admit maybe it is just norm but the follow up from the operation was pretty non-existent, in other words I don't know what do you expect? Do you expect the surgeon to come round, sit down and have a long chat with you? I guess he's rather busy. But I must admit he was conspicuous by his absence."

(B251:80:M:fractured neck of femur:12 months:retired:admitted)

For a few participants, conflicting or a lack of information was felt to have resulted in problems with treatment:

"I was quite annoyed really because they first of all said that I had broken something in my neck. Then they said I hadn't. I was very confused. Because they thought I had got a fracture I was, with my head in the vice as it were, the block, and I had to lie on my back for two days. That caused problems with my lower back in a big way...[. . .]I was off with my back for, it must have been seven months."

(A163:53:M:suspected fracture 2nd vertebra:14 months:SE driving instructor:admitted)

Some participants had been given written information, for example about caring for plaster casts or danger signs to look for in the case of a head injury, and this was felt to be useful. More verbal information would also have been welcomed by some, whilst a few participants said that written information was useful to take home because they had found it difficult to take in verbal information from staff while they were in the hospital:

"The leaflets were very useful because it was just enough information without blinding you with science to say she may well react like this or react like that. Don't worry about it, it's quite normal, it's quite an average reaction, but if it's excessive, this is the phone number to ring, which was great. . . . After a while you sort of only take on so much, the rest of it becomes a blur and you only then start hearing key words that they're telling you, and then you start panicking. So it was actually quite good to be able to take something away for me and then read it again when I got home."

(A206:10:F:Pony bit bottom lip and face:5 months:school student:admitted).

Social support after discharge

In the vast majority of cases, participants did have at least one person to support them on discharge from hospital. This was usually a family member, friend or neighbour. In one particular case, however, a participant with a dislocated knee had no family and no friends that lived close by. She had moved into her flat a week previously, did not know anyone in the area and her telephone was not yet connected. The discharge process took no account of these circumstances:

"I had nothing, no particular food or anything, my car was left at [name of hospital] Hospital, so and I live four miles from a local shop, I live in a very rural area on my own. There was no questions about that aspect; you know it's all very well discharging people but what are you discharging them to particularly with a massive injury, which it was. In fact it was so debilitating that it – an arm is quite different, you can walk around with your arm – but with a leg, particularly as I had steps to negotiate to my flat as well. I was totally bed bound, absolutely bed bound, massive pain. [. . .] I had really minimal support and I think that what is worrying is that the patient is not really looked at as a whole but only, in my respect, I was 'a knee' but you know that knee inhabits a person and that person needs to have some sort of support, whether it's food, just being kept in touch with."

(A311:53:F:dislocated knee:12 months:professional horse woman:admitted)

In some cases where participants were older and their children had left home, it was mainly their partner who helped them and this could be problematic if the partner was unwell at the time or in hospital themselves. The quote below is an extreme but not isolated example of the lengths people might have to go to in order to cope:

"So then I had my leg in plaster and my wife had a severe chest infection and was in bed so I then had to, we are in a ground floor flat, so I had to then take food into her on my crutches [. . .] In one pocket I had a mug and in the other pocket I had a thermos flask and in my mouth I was holding a bag with things like boiled eggs, bread and butter and so on and then at one point we noticed that the bag had on it "Help the Aged". (laughing) We are quite versatile you know in our family."

(C269:71:M:fractured ankle:20 months:retired:not admitted)

Pain management

Pain was mentioned by most participants to varying degrees. Some participants commented that they experienced severe pain whilst in hospital and a few felt that it had not been managed well by healthcare professionals:

"I was in agony...I actually kept having to buzzing them about three times to get some painkillers and the first time they said "You will be all right here are some paracetamol". I said "Well it is not working I need something a bit stronger or do something" and it did take them a while to realise and it was like people were saying to me they have never seen a grown man with tears before and I was like well I am actually in agony." (C382:21:M:closed displaced fracture mid shaft left humerus:19 months:armed forces:admitted)

Other participants talked about living with pain on a daily basis months after the injury. For several participants, such pain intruded on their day-to-day activities and made them bad tempered. This was reported particularly among those who had experienced severe fractures but not in all cases:

“Well I haven’t recovered really. Both wrists are still painful and also my left leg and knee and to a lesser extent my left arm and elbow. I’m still recovering”
(A101:61:M:fractured left radius-ulna, abrasion to both knees and facial injury and displaced jaw:7 months:HGV driver:admitted)

Low emotional state

Over half of the interview participants reported that their injury had affected them emotionally in different ways and to varying degrees. For some participants, this low emotional state had followed immediately after the injury occurred and was time limited. For others, it lasted longer and was described by participants as depression. A few of the participants realised that if circumstances been slightly different they could have died or suffered a more serious injury and this realisation had emotional consequences:

“I was off work for five months last year with anxiety and like post-traumatic stress sort of thing you know. I think it just sort of hit home and to what you know has happened because the surgeons and all said I was really lucky and you know no head injury, no pelvic injury, no spinal injury, it could have been a lot worse.”
(B216:32:F:multiple trauma:16 months:office worker:admitted)

For some participants, realising that they were no longer able to do certain tasks or activities and changes that they have had to make to their lives as a result of the injury, had emotional consequences:

I: *What impact do you think that your injury had on you emotionally?*

P: *Oh well it was devastating, I mean it has changed my life completely. I mean I haven’t been to town on my own, I don’t go round, I mean the bus stop is round the corner of the bungalow, we go part of the way by car but I don’t go out without my husband. I don’t even go down the drive, you know, right down the drive and on to the pavement without him, you know, he has got to be there and when I walk on crazy paving, it is not so bad on tar, but crazy paving you know I am always looking to see if (. . .) catching his coat or his arm you know. I mean that is not like me, I used to run everywhere not walk.*
(C379:71:F:injury to left wrist:18 months:retired:admitted)

Loss of confidence

Just over a third of participants reported that since their injury they were more cautious or took extra care when they performed certain activities e.g. sport, or even just carrying out everyday procedures like walking down the road, because they were afraid of injuring themselves again. These participants reported varying degrees of caution that lasted for

varying amounts of time and interestingly, the participants that described a continuing caution were often over 60.

A few of these participant's reported being cautious about carrying out the same activity they were undertaking when they sustained their injury. One particular participant found it so difficult to walk past the site in her garden where the injury occurred that she had sessions with an outreach nurse who helped her to overcome this and has considered moving house as a result:

"yes, the only thing is I won't use that path to come down anymore. I have to walk further (laughing)".

(B201:64:F:fractured distal radius:14 months:retired:admitted)

Other participants reported being more cautious generally, walking, climbing stairs and other everyday activities:

"it has made me more wary of doing things, more cautious and maybe I wouldn't do things now that I would do before because I am afraid that if I fall I am going to break something else, you know."

(C408:53:F:fractured humerus and left shoulder:14 months:local politician:not admitted)

Some of the parents of children who had been injured reported that they expected the children to be wary or cautious about using previously broken limbs but they were not. Furthermore, younger participants (under 30s) tended to report being cautious initially but regained their confidence quickly:

P: *Also I think a mental block I think with an injury overcoming the confidence of impacting it again. That was the hardest thing of it the worry of it getting hurt again*

I: *How did you overcome that?*

P: *I think it is more of doing something more often really, your confidence, started playing again and taking hits etc. it was fine. As I say I have only got the scars there now.*

(C369:25:M:closed displaced fracture mid shaft tibia and fibula:19 months:physical education teacher and physiotherapist in prison service:admitted)

Interestingly, some of the older participants recounted that they have "slowed down" since their injury or family members have suggested that they should slow down. These participants often reported that their injury was either a symptom of or a sign that they were getting old and should perhaps start being more careful. These participants all described themselves as active prior to the accident:

"Yes, I will be honest it shook my confidence. I was (. . .) when I did that until then I was very confident but it did sort of shake my confidence I am terrified of falling again. I suppose it happens as you get older. Even now my daughter says slow down. I was inclined to rush a bit but I have slowed down a lot I think."

(A266:75:F:fractured left humerus:19 months:retired:admitted)

Rehabilitation and the central role of physiotherapy

For many participants, rehabilitation and especially physiotherapy was regarded as very important for recovery. Some participants reported not being offered any physiotherapy but felt that they would have benefited from it. Some participants who did not receive physiotherapy from the NHS paid to access it privately but most did not. Participants who had received no physiotherapy said that they were unsure what to do to improve the strength and mobility of their injured limb or what to expect in terms of the likely completeness or speed of recovery. They were also unsure how much they should use the injured limb or when they would be able to put pressure on it, for example start playing sport again or resume a physically demanding job:

“You don’t really know how much you know you have to push it yourself, how much you can bend things and force things to get it going. It was only my daughter mainly because she’s got a sports science degree and has been involved with injuries herself and it was only from that experience and her experience that we knew basically what we needed to do anyway.”

(A213:53:M:fractured left tibia and fibula:17 months:SE painter and decorator:admitted)

Other participants who received physiotherapy thought it had ended too soon, often just as it seemed to be making a difference:

“... one of the physiotherapists in [name of hospital] could see I wasn’t doing very well and he then took it upon himself to give me some individual attention, which then brought me on tremendously but unfortunately...[. . .] they can only give you six sessions and of course I had six sessions and my time was up so to speak.”

(A100:62:M:Spiral fractured distal left fibula:13 months:retired – electrical engineer:admitted)

The few participants who had been seen by an occupational therapist reported that the ‘gadgets’ they were given, such as bath seats and ‘grabbers’, were very useful. Some participants described actively working on recovery by making sure they listened to the physiotherapist or doctors and acting on that advice. A number of participants reported that it was a physiotherapist that had helped them most in their recovery and provided the most useful information or advice. These participants all had fractures:

“When I did go to the physiotherapy locally [. . .] if it hadn’t been for that it might you know, I don’t think I’d have ever recovered.”

(B267:76:M:bilateral fracture of ankle:9 months:retired:admitted)

For some participants, friends or family played an active role in helping their recovery by watching them do exercises given by a physiotherapist or making them do things for themselves. Other participants said that there was ‘nothing in particular’ that helped them to recover or that recovery depended on “resting”, letting the injury take its course and time.

Discussion

The role of information was very important to patients throughout the process of treatment, discharge and rehabilitation. It was clear that patients wanted non-technical and timely information at many different points and that the type of information required changed over time. This has implications for the development of 'information protocols' throughout the process of recovery and might include signposting to support groups where injuries are perceived as life changing and/or associated with feelings of low emotional state, depression or post-traumatic stress disorder. The fact that so many participants said that their injury had impacted on their emotional state suggests that at the point of discharge patients need to be advised they may experience such symptoms and, if they do, be provided with information about where to seek help. Furthermore, both outpatient clinics and primary care services should be alerted to the recognition and diagnosis of psychological problems and sign post or refer patients to appropriate services. Such approaches to care also need to be appropriately evaluated as there is currently relatively little evidence of the effectiveness of psychosocial interventions following traumatic injury.²³ Cochrane reviews have identified that trauma focused cognitive behavioural therapy and eye movement desensitisation and reprocessing should be considered for use in individuals with PTSD and that pharmacological treatment could be beneficial alongside other therapies.^{24,25}

Both written and verbal information was regarded as useful, because these fulfilled different purposes for the patient and were utilised at different stages in the transfer from hospital to home. Similarly, patients and the carers of young children referred to the stressful context in which information was conveyed in hospital which meant that they could not always take in what staff were telling them. It was also evident that patients need information about the likely timescales for recovery, the extent of recovery they can reasonably expect and how and when to use the injured limb in order to gauge their progress and plan their lives in practical ways. With the exception of those participants who had received physiotherapy (discussed below), very few participants reported being able to discuss such key questions with clinical staff and were left to cope with uncertainty as best they could. Uncertainty about recovery was perhaps particularly stressful for those patients who continued to experience pain for an extended period after the injury had occurred. They felt it hampered their sense of recovery as well as impacting negatively on their quality of life and relationships with others. Better management of pain and better information about what pain signified would reduce the associated stress, improve patients' quality of life and facilitate recovery.²⁶

This research confirms the importance of social support for facilitating recovery from injury.²⁷⁻²⁹ Support from friends, family and neighbours was regarded by participants as extremely important especially during the first few weeks/months after leaving hospital. This is when many were incapacitated and simple everyday tasks were difficult, or for some impossible to achieve. The research also suggests that health services need to take account of the social circumstances of patients, especially where patients have no social support or have carer responsibilities. Health services need to provide a care pathway so that once patients are discharged, community services are notified to ensure that support is provided especially for people whose mobility is compromised. Whilst the role of social support is recognised in the literature, it is clear that many hospitals may discharge people without ascertaining how they will cope or what sort of support needs to be put in place.

Over half of the participants experienced some emotional impact from their injury and a small number had developed what might be termed clinically recognisable mental health issues though it is clear many more participants were describing mental health issues which were not being clinically diagnosed. The depth and duration of this emotional impact varied as did the consequences in individual lives. Many participants experienced a loss of confidence as a result of their injury either because of the physical impact of the injury itself or fear of recurrence. For some participants, this loss of confidence led to fundamental changes in their lives as they ceased to be as active as they had been prior to the injury with implications for their quality of life and mental well-being. For other patients, particularly older people, an injury might devastate fragile care arrangements either temporarily or permanently. Cagnetta and Cicognani³¹ noticed that in their research, older participants decided to change behaviour that, on reflection, they felt was 'risky' or 'reckless' after sustaining an injury.³⁰

It is clear from this research that the emotional and psychological impacts of injury are more widespread and varied than will be captured by measures of post-traumatic stress or psychiatric illness. This has implications for the support of people after discharge and the need to signpost people to support groups and services.³¹ The research also highlights the key role of physiotherapists in recovery. Many patients interviewed received no physiotherapy or felt that they received insufficient amounts. But for those patients who did receive physiotherapy care, this was pivotal in helping them understand how to care for their injury, instilling confidence and facilitating recovery. This confirms research which shows that patients focus on the 'here and now' and work hard at the exercises given to them by specialists (amongst other strategies) and particularly those provided by physiotherapists.^{31,32} Physiotherapists impart specialist knowledge regarding recovery of the injured body and, in this sense, can offer personalised care to patients. This is in contrast to some participants reporting their experience of hospital care as depersonalising which they attributed mainly to staff shortages and failings in communication. Moreover, as noted earlier, physiotherapists often encounter patients at a crucial stage in recovery when they are unsure about their progress and anxious about the future.

Limitations of the study

The study represents the views of the patient participants and does not provide an opportunity for clinicians to respond and provide explanations of clinical practice for different patients. The need to preserve centre anonymity means that data are only reported at the general level and cannot be used to provide 'case studies' of good or bad practice in different hospitals. Most of the quotes presented in this paper are from inpatients who were the majority of participants. Clearly the severity of their injury meant that their experience with clinicians was likely to be longer and, for many, their recovery more prolonged. This may have led to a more detailed account of their experiences over time than those with less severe injuries who were not hospitalised.

Future research

The analysis of participant's views after injury has identified a number of areas of further research. These include, the prevalence of psychosocial problems after injury, the views of service providers about the care of injured patients, and patients information needs with regard to symptoms and care and how they differ through the period of recovery, pain management and support.

Further research is currently being carried out to explore more fully the impact of injuries on patients' psychosocial functioning after injury and to assess the need for early psychological intervention.³³

Conflict of interest statement

There are no conflicts of interest.

Acknowledgements

This study has been funded by the Department of Health (Grant number: 0010009). The authors would like to thank all patients who participated in the study and staff at the four participating hospitals for facilitating the conduct of the study.

References

1. Global Burden of Disease Report; 2004 Update. http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_part4.pdf.
2. Department of Health: HES online: Hospital Episode Statistics. External cause table. 2009–2010 In: <http://www.hesonline.nhs.uk>.
3. Department for Trade and Industry. 24th (final) report of the home and leisure accident surveillance system, 2000, 2001 and 2002 data. London: Department for Trade and Industry; 2003.
4. Mayou R, Bryant B. Outcome in consecutive emergency department attenders following a road traffic accident. *Br J Psychiatry* 2001;179:528–34.
5. O'Donnell ML, Creamer M, Bryant RA, Schnydere U, Shalev FA. Posttraumatic disorders following injury: an empirical and methodological review. *Clin Psychol Rev* 2003;23:587–603.
6. Mayou R, Bryant B. Consequences of road traffic accidents for different types of road user. *Injury* 2003;34(3):197–202.
7. Mayou R, Bryant B, Duthle R. Psychiatric consequences of road traffic accidents. *Br Med J* 1993;307(1):647–51.
8. MacGregor AJ, Corson KS, Larson GE, Shaffer RA, Dougherty AL, Galarneau MR, et al. Injury-specific predictors of posttraumatic stress disorder. *Injury* 2009;40(9):1004–10.

9. Zatzick D, Jurkovich GJ, Rivara FP, Wang J, Fan MY, Joesch J, et al. A national US study of posttraumatic stress disorder, depression, and work and functional outcomes after hospitalization for traumatic injury. *Ann Surg* 2008;248(3):429–37.
10. Bryant RA, Harvey AG. Relationship between acute stress disorder and post-traumatic stress disorder following mild traumatic brain injury. *Am J Psychiatry* 1998;155(5):625–9.
11. Bialocerkowski AE. Difficulties associated with wrist disorders – a qualitative study. *Clin Rehabil* 2002;16:429–40.
12. Griffiths H, Jordan S. Thinking of the future and walking back to normal: an exploratory study of patients' experiences during recovery from lower limb fracture. *J Adv Nurs* 1998;28(6):1276–88.
13. Bury M. Chronic illness as biographical disruption. *Sociol Health Illn* 1982;4(2):167–82.
14. Williams G. The genesis of chronic illness. *Sociol Health Illn* 2000;6(2):175–200.
15. Robinson I. Personal narratives, social careers and medical courses: analysing life trajectories in autobiographies of people with multiple sclerosis. *Soc Sci Med* 1990;30:1173–86.
16. Charmaz K. The body, identity, and self: adapting to impairment. *Sociol Q* 1995;36(4):657–80.
17. Williams S. Chronic illness as biographical disruption or biographical disruption as chronic illness? Reflections on a core concept. *Sociol Health Illn* 2000;22(1):40–67.
18. Lyons RA, Towner EM, Kendrick D, Christie N, Brophy S, Phillips CJ, et al. The UK Burden of Injury Study – a protocol. *BMC Public Health* 2007;7:317. [http:// dx.doi.org/10.1186/1471-2458-7-31](http://dx.doi.org/10.1186/1471-2458-7-31).
19. Lyons RA, Kendrick D, Towner EM, Christie N, Macey S, Coupland C, et al. Measuring the population burden of injuries: implications for global and national estimates. A multi-centre prospective UK longitudinal study. *PLoS Med* 2011;8(12).
20. Kendrick D, Vinogradova Y, Christie N, Lyons R. Making a successful return to work: the UK Burden of Injury multicentre longitudinal study. *Br J Gen Pract* 2012;62(595).
21. Mason J. Qualitative researching. London: Sage; 2002.
22. Green J, Thorogood N. Qualitative methods for health research. 2nd ed. London: Sage; 2009.
23. De Silva M, Maclachlan M, Devane D, Desmond D, Gallagher P, Schnyder U, et al. Psychosocial interventions for the prevention of disability following traumatic physical injury. *Cochrane Database Syst Rev* 2009. [Article no. CD006422].
24. Bisson J, Andrew M. Psychological treatment of post-traumatic stress disorder (PTSD) Cochrane Review. Editorial Group: Cochrane Depression, Anxiety and Neurosis Group. Published Online: 21 January 2009.
25. Stein D, Isper J, Seedat S. Pharmacotherapy for post traumatic stress disorder (PTSD). *Cochrane Database Syst Rev* 2006. <http://dx.doi.org/10.1002/14651858.CD14002795.pub14651852>. [Article no. CD002795].
26. Macdermid JC, Roth JH, Richards RS. Pain and disability reported in the year following a distal radius fracture: a cohort study. *BMC Musculoskelet Disord* 2003;4:24.
27. Gustafsson M, Persson L, Amilon A. A qualitative study of coping in the early stage of acute traumatic hand injury. *J Clin Nurs* 2002;11:594–602.

28. Landsman IS, Baum CG, Arnkoff DB, Craig MJ, Lynch I, Copes WS, et al. The psychosocial consequences of traumatic injury. *J Behav Med* 1990;13(6):561–81.
29. MacKenzie EJ, Morris Jr JA, Jurkovich GJ, Yasui Y, Cushing BM, Burgess AR, et al. Return to work following injury: the role of economic, social, and job-related factors. *Am J Public Health* 1998;88(11):1630–7.
30. Scaf-Klomp W, Sanderman R, Ormel J, Kempe GJMJ. Depression in older people after fall related injuries: a prospective. *Age Ageing* 2003;32:88–94.
31. Cagnetta E, Cicognani E. Surviving a serious traffic accident; adaptation processes and quality of life. *J Health Psychol* 1999;4:551.
32. Harms L. After the accident: survivor's perceptions of recovery following road trauma. *Aust Soc Work* 2004;(2):161–74.
33. Kendrick D, O'Brien C, Christie N, Coupland C, Quinn C, Avis M, et al. The impact of injuries study. Multicentre study assessing physical, psychological, social and occupational functioning post injury – a protocol. *BMC Public Health* 2011;11:963. <http://dx.doi.org/10.1186/1471-2458-11-963>.