The Stanmore Nursing Assessment of Psychological Status: Understanding the emotions of patients with spinal cord injury

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Context: Research has shown that individuals who have sustained a spinal cord injury can experience strong and abrupt variations in their emotional state; however no instrument for nurses has been developed to assess these patients' psychological status.

Objective: To develop a brief, reliable instrument to enable nurses to accurately assess, record and respond to spinal cord injury patients' psychological status.

Methods: In Phase 1, semi-structured interviews were conducted with spinal cord injury patients (n = 10) and nurses (n = 10) which were audio recorded, transcribed and thematically analysed to develop the instrument. The instrument's content validity was then ensured via independent expert review. In Phase 2, the instrument was trialled on 80 spinal cord injury patients to determine inter-rater reliability, internal consistency and test-retest reliability.

Results: In Phase 1, four core themes (emotional impact, coping, relationships and assessment) were identified together with a number of related sub-themes. In Phase 2, the instrument was shown to have excellent inter-rater reliability, acceptable internal consistency and satisfactory test re-test reliability. Subsequently a rating sheet, user manual and prompt card were produced.

Conclusion: The new instrument, the Stanmore Nursing Assessment of Psychological Status, was shown to be valid and reliable. It is anticipated that training nurses to use this instrument may help to enhance good emotional care of patients.

Keywords: Psychological assessment instrument, Emotion, Nursing, Psychological status, Spinal cord injury

Introduction

Spinal cord injury (SCI) can result in a diverse array of physiological and psychological impairments which have long term consequences affecting all aspects of an individual's life.¹ Activities of daily living, lifestyle, family relationships, social roles, career and economic status can all be impacted, creating significant challenges for coping and adjustment.² Loss of self-worth and self-esteem can result from dependency in activities of daily living, and change in the self-concept can be severe.³ With regard to psychological problems, reported prevalence rates are 14% for post-traumatic stress,^{4,5} 20–25% for clinically significant anxiety and 30–40% for depression⁶ with increased suicidal ideation in many; furthermore, these can persist over significant

periods of time.⁷ When compared to the general population, people with SCI experience on average higher levels of distress and lower levels of life satisfaction.⁸ Although many patients with SCI adjust well over time, roughly 10% experience increased psychological symptoms which can possibly be allayed by early interventions emphasising coping strategies.⁹ In a measure of life satisfaction, early adaptation after sustaining an SCI was experienced by some patients.¹⁰

Patients with SCI can have complex physical, psychological and psychosocial needs and may exhibit challenging behaviors during the acute and rehabilitative phases of care.^{7,11} Immediately following SCI in the acute and rehabilitative phases of in-patient care various emotional reactions may occur including dysphoria, irritability and anhedonia.¹² In relation to emotional responses, Attawong and Kovinda¹³ cited sadness, confusion, anger, anxiety and fear and Mohta

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and colleagues¹⁴ suggested that strong emotions and abrupt variations in emotional state could induce distress and affect conduct and receptiveness to treatment in patients with SCI. It is therefore understandable that nursing staff may often struggle with patients with SCI as they may feel ill-equipped to identify and deal with these psychological issues.¹⁵

On the basis of the above, it would appear that the appraisal, recording and monitoring of psychological status is crucial to effective SCI nursing care particularly in avoiding rapid, and at times abrupt, emotional state variations going undetected. However it appeared that no valid and reliable instrument had been designed and developed for nurses specifically to facilitate the assessment of psychological status in patients with SCI. In the current study we aimed to develop such an instrument on the basis of literature relating to the development of assessment instruments within health care settings,^{16–18} a contemporary understanding of emotion,^{19,20} and in accordance with established methods of scale development.²¹

Plutchik's emotion theory,¹⁹ which argues that eight primary emotions are of crucial relevance to adaptation in response to illness, strengthened the focus of our interviews on identifying core emotional and psychological states present in the patients. Our study was also informed by Bowman's work²² on how emotions could provide a basis for nursing interventions and by work undertaken by Belling and colleagues,¹¹ who established that patients with SCI would benefit from regular and accurate assessment of psychological status and developed a preliminary instrument assessing psychological status in patients with SCI with a prompt card, user manual and training programme. The six items of this pilot instrument consisted of mood, worry, challenging behavior, cognition, relationships with family and relationships with staff, however it lacked clinical utility and had not been evaluated for reliability and validity. Therefore the objective of the current study is to develop and validate a brief, reliable instrument to enable nurses to accurately assess, record and respond to spinal cord injury patients' psychological status.

Methods

The instrument was developed in two phases. In Phase 1 we aimed to generate items for inclusion in the instrument. This was achieved by the completion of semi-structured interviews with patients and nurses. The draft instrument was then subjected to content validity via expert review. In Phase 2 we aimed to test, refine and trial the instrument, which was achieved by

testing inter-rater reliability, internal consistency and re-test reliability.

Participants and procedure

Phase 1: Semi-structured interviews

Individuals who were being treated as inpatients at the London Spinal Cord Injury Centre, Royal National Orthopaedic Hospital NHS Trust, Stanmore, UK, who had capacity to give informed consent, were invited to participate. Patients who lacked capacity to consent (i.e. those who fell within the criteria of the mental capacity act) or who did not understand English were excluded from the study as they would not have been able to comprehend the questions. Patients were included from acute admission through to the final stage of their rehabilitation. Registered nurses employed in the same organisation were also included if consenting to participate in the study.

Purposive sampling frameworks were applied to the 10 patients and 10 nurses interviewed for the preliminary fieldwork to ensure they were representative of their populations and that good correspondence was established between the research questions and sampling.²³ The criteria applied to the patient sample included age, gender, ethnicity, level of injury and stage of rehabilitation, while age, gender and length of SCI care experience were applied to the nurse sample. The average age of the patient sample (6 males and 4 females) was 46 years (SD = 19 years; range = 22–72 years). Six patients had paraplegia and four tetraplegia, at the early, middle or end stages of their rehabilitation. The average age of the nurse sample (9 females and 1 male) was 33.3 years (SD = 10 years; range = 26–53 years). The nurses' average SCI experience was 7.5 years (SD = 7.5 years; range = 7 months–20 years).

Interviews of 30 to 60 minutes duration were audio recorded, transcribed and the data coded, categorised into themes and analysed using a structured framework (available on request).²⁴ Transcriptions and the results of the thematic analysis were independently checked by a second researcher. This method of analysis was selected for its appropriateness for developing key themes and for identifying emerging, connected or overlapping themes and sub-themes.²³

A draft instrument¹¹ was developed, and the eight items were selected on the basis of the interview data, earlier pilot studies, and clinical experience. Different versions and formats of the draft instrument were developed for subsequent review by a panel (comprising of patients and senior nurse specialists in SCI rehabilitation) in terms of item and descriptor appropriateness,

clarity and conciseness, and to possibly suggest additional or alternative content areas.²¹ This was carried out to establish “a form of content validity, which is demonstrated by asking experts to review the content of the instrument”.²⁵ (p621)

Phase 2: Investigation of inter-rater reliability, internal consistency and test-retest reliability of the draft instrument

Individuals who were being treated as patients at the London Spinal Cord Injury Centre, Royal National Orthopaedic Hospital NHS Trust, Stanmore, UK, who had capacity to give informed consent were invited to participate. Patients who lacked capacity to consent or who did not understand English were excluded from the study as they would not have been able to comprehend the questions. The instrument was trialled on 80 patients. The average age of the patients (59 males and 21 females) was 50.2 years (SD = 15.9; range = 19–89). Forty-seven had paraplegia and 33 tetraplegia. An assessment guide was developed to ensure standardisation of the process. A suitable time was arranged to administer the instrument, either at the patient's bedside or in a private room.

Scale	AM Score	PM Score
Positive Motivation 0 = is positive/hopeful/motivated 1 = quite unmotivated, positive attitude short-lived 2 = no appreciation of positive possibilities/unable to be inspired		
Anxiety/Fear 0 = appears calm and composed 1 = seems tense and preoccupied much of the time 2 = very wound up, appears panicked or shocked ...		
Sadness 0 = in good mood/reasonable spirits 1 = appears quite sad, sometimes tearful 2 = feels hopeless/worthless/may express wish to die/inconsolable		
Burden 0 = not unduly concerned about burdening others 1 = quite concerned about burdening others 2 = strongly preoccupied by guilt about potential burden on others		
Relationships with Family 0 = generally good family relationships 1 = some tension evident in family relationships 2 = regular and obvious conflict with family		
Relationships with Staff 0 = generally good relationships with staff 1 = some tension evident in staff relationships 2 = regular and obvious conflict with staff		
Anger/Irritability 0 = seems generally to be at peace with self and others 1 = struggling to contain irritability, hostility and anger 2 = angry, frequently frustrated with self or challenging others with attitude, words or behaviour		
Disengagement/Isolation/Withdrawal 0 = mixes freely with others 1 = quite selective about whom they talk to 2 = isolated; frequently spends time on own behind curtains or elsewhere in hospital grounds ...		

Figure 1 The Stanmore Nursing Assessment of Psychological Status

The Stanmore Nursing Assessment of Psychological Status

The instrument, named the Stanmore Nursing Assessment of Psychological Status (SNAPS), is presented in Figure 1. This was developed along with a prompt card (presented in Fig. 2) and user manual (copy available on request). It is designed for nurses to use on all adult patients with SCI daily from their admission throughout their rehabilitation. When using SNAPS, patients are routinely rated in the morning from 0 to 2 against each of the eight domains, depending on how they respond verbally to the questions on the prompt card. For each item a score of 0 indicates a non-concerning psychological status, a score of 1 is suggestive of some concern about psychological status, and a score of 2 indicates cause for major concern regarding psychological status. If a patient is rated 1 or 2 on any item in the morning (AM) the assessment should be repeated in the evening (PM) (Fig. 1). If the patient is still scoring 2 in the evening they are referred immediately to the nurse in charge. Patients scoring 1 on any item are monitored by the nursing staff.

Ethical considerations

Phase 1 and 2 studies were carried out in accordance with the Research Ethics Protocol approved by London South Bank University and the NHS in September 2011.

Results

Phase 1: Semi-structured interviews

The findings from the interviews of the 10 patients and 10 nurses, whose details have been described earlier, have been distilled into four core themes and subthemes.

Core theme: Emotional impact

Where the patient's actions somehow resulted in their injury evidence of feelings of guilt, self-blame and concern for their families, as well as a calmer acceptance, were reported. However if the injury occurred due to the actions of others, feelings of anger, hate, unfairness and depression were more common.

Immediate impact. This sub-theme related to the immediate response patients experienced to their injury. Some of what they described remained unchanged, other feelings evolved as their rehab progressed. They spoke of feeling shocked, anxious, panicky and scared, thinking they were going to die. Feelings of frustration and helplessness were reported where the patient was unable to communicate or do anything for themselves, and in response to the major upheaval in their lives. Some felt that but for their

<p>Positive Motivation You can ask: ‘Do you feel motivated/positive/hopeful about your rehab?’ or ‘Do you feel generally positive and motivated or does it tend to be short-lived?’ And/or ‘Do you find it very difficult to see hope for the future and motivate yourself for rehab most of the time?’</p> <p>Anxiety/Fear Depending on what you observe you can say: ‘You seem relaxed today, is that how you feel?’ or ‘You seem a bit tense and preoccupied, at the moment, is that right?’ or ‘You seem quite unsettled, even panicked much of the time; is that right?’</p> <p>Sadness Depending on how they appear you can say: ‘You seem to be in a good mood today’ or ‘You look sad today’ or ‘I wonder how you feel; you seem quite sad, even hopeless most of the time’</p> <p>Burden You could say: ‘You seem reasonably ok about needing support from others, is this right?’ or ‘You sometimes seem concerned about needing help or support from others is that right?’ or ‘I wonder if you’re being very hard on yourself about needing support from others?’</p> <p><i>Remember in all cases to ask the patient if they want to talk about it, and if they say ‘no’ ask them if they would like to talk someone else.</i></p>	<p>Relationships with Family You might simply ask them: ‘How are you getting on with your family/partner/children?’ or ‘I wonder if there is some tension between you and your family/partner/children?’ or ‘Would you say there is regular conflict between you and your family/partner/children?’</p> <p>Relationships with Staff You can say: ‘Do you feel you work well with the staff?’ or ‘Does it get tense between you and staff sometimes?’ or ‘Do you find yourself in conflict/ at odds with the staff most of the time?’</p> <p>Anger/Irritability It may not be obvious from their expression so you could say: ‘You seem at peace with yourself and others; is that right?’ or ‘Do you sometimes struggle with feelings of irritability/hostility or anger?’ or ‘Do you often find that feelings of irritability/hostility or anger are difficult to manage and may even show in your behaviour with others?’</p> <p>Disengagement/Isolation/Withdrawal You can say: ‘You appear at ease mixing with people on the ward’ or ‘You seem to be selective about who you mix with on the ward’ or ‘I’ve noticed that you spend a lot of time alone behind the closed curtain; is there anything that would be helpful to share?’</p> <p><i>Remember in all cases to ask the patient if they want to talk about it, and if they say ‘no’ ask them if they would like to talk someone else.</i></p>
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Figure 2 The Stanmore Nursing Assessment of Psychological Status prompt card

family they would have just given up, others expressed thoughts of ending their relationships with their partners.

Subsequent emotional impact. The more lasting emotional effects of the injury included feelings of guilt and self-blame, such as where they had done things against the advice of their partner and had an accident.

“To explain this guilt in words...it’s more painful than the accident and makes me want to kill myself.”

Feelings of hopelessness and uselessness were commonly felt, resulting in feelings of low self-worth.

“I said to my wife you would have been better off if I’d died.”

Patients were terrified of how they would be perceived and of how they would cope being unable to move. They spoke of regret, shame, sadness, frustration, and grief about their losses; both physical and in terms of lifestyle and expectations. There was anger about their dependency, as well as disappointment when progress wasn’t made and unfairness especially where the injury occurred due to the actions of others. However many felt the need to remain strong and suppress their feelings in front of their friends and family, not wanting to upset them.

Defining emotions and impact on patients. Nurses identified a range of emotions both positive and negative that the patients went through such as anger, guilt, love, hate, sadness and that emotions might not always be apparent. Most nurses noted the impact of injury on patients to be life changing, complex, devastating and uprooting. They also identified anger, often manifested as challenging and aggressive behavior, due to the unfairness of their situation and frustration at their loss. Feelings of loss, grief, denial, sadness anxiety and depression, fear and shock and rejection of everyone were also suggested along with guilt, jealousy, worthlessness, embarrassment and disgust.

“They push people away, they don’t want to do their education or take things on board.”

“One man told his girlfriend to leave straight away saying go find someone else, I’m no good to you.”

Some reported positive emotions such as feeling happy and motivated, usually in the context of achieving their goals.

Impact on nurses. The majority of nurses found patients who were verbally abusive, rude or aggressive towards them or those with challenging behavior, very difficult. They reported how some patients took their anger out on the staff; sometimes swearing and even in one extreme example spitting at them, that some could be

unpredictable and violent, and how this behavior would influence other patients. Nurses reacted variously; although upset, some challenged the patient; some took it personally, whereas some bit their tongue and didn't react. However, the consensus appeared to be that the impact of this kind of behavior on the nurse is frightening and stressful. Expressions of suicidal ideation or withdrawal of the patients were also very difficult and upsetting for some nurses, leaving one nurse unable to respond and feeling disempowered.

Core theme: Coping

Patients' coping strategies. Many patients dealt with their feelings by internalising and suppressing them, refusing to engage with the nursing staff, rather seeking psychological support or time alone.

"I have these thoughts in my head and I think about something else, the next day it's the same, I'm getting more and more depressed, not interested in doing anything ... I went outside for about an hour and a half didn't realise the time, just sitting there doing nothing and it was a lot more helpful."

Many found it helpful to distract themselves by reading or watching videos; even concentrating on his physical pain was helpful for one patient. Some found working out in the gym and concentrating on their rehab effective in warding off painful feelings. Others found that by keeping positive, focused and realistic, maintaining control of their feelings and situations and being assertive as helpful strategies. Also having daily visits from family and friends was a welcome relief for many.

Motivating factors. Most patients cited their family and friends as their main source of motivation, determined not to let them down when they went home. They all found their fellow patients inspiring, especially seeing those coping with a worse predicament than their own. Some also found inspiration from the staff, such as a nurse or physiotherapist responding sensitively to their needs.

Positive and negative coping (nurses). Nurses felt that patients indicated their inability to cope by crying, showing frustration, having temper tantrums, snapping at people or being verbally abusive. Nurses referred to patients creating distance, not interacting with anyone, showing a lack of interest, not wanting to engage with anything or anyone. Others noted mood changes and sleep disturbances or not wanting to acknowledge their injury. Positive coping was

indicated they felt, when patients became more cooperative, more motivated to progress with their rehab, had a more positive attitude and less dependence on the staff.

Core theme: Relationships

Relationships between patients and staff. All patients felt the relationship with staff was 'mostly good' with a small minority 'not very good' and some just 'doing their job'. Some were thought to be very good and helpful, a few absolutely wonderful, with the rapport between patients and staff being variable.

"The people here are amazing, their empathy outstanding, support brilliant."

From the nurses' perspective, they all felt the relationship was 'generally good' but this depended on the type of injury. They reported that they had very few complaints and some excellent feedback. They felt they were working in the patients' best interests in spite of the inevitable personality clashes.

Facilitators. From the patients' perspective, being treated sensitively and with respect was crucial to a harmonious relationship, along with nurses explaining what they were doing. But patients also felt that it was their responsibility to be polite and engage with the nurses, to do as much for themselves as possible, being sensitive to the nursing staff.

Building rapport, listening, understanding, motivating and encouraging the patients were all felt to be important by nurses for a cohesive bond, as well as having a positive attitude.

"You have to have a need to want to work here."

Also considered key to harmony between the two was good strong leadership, giving clearly defined boundaries and being clear and consistent.

Barriers. Conversely patients felt that being treated insensitively or patronised, being shown a lack of care and concern, or where nurses were inflexible, impatient, too rigid and stern or didn't listen or communicate were all factors that hindered the relationship between staff and patients. Some patients cited arguing, not complying, being obstructive or shouting at the nurses as detrimental to the relationship.

Nurses also felt their lack of communication or their approach to the job a potential hindrance. Others spoke of personality clashes, intimidation by members of the patients' families or circles of friends or patients' perception of nursing objectives as less valuable/

important than those of physiotherapists and occupational therapists putting strain on the relationship.

Family relationships. All patients felt that their injury had changed their relationship in some way, feeling that their views differed from their partner's, such as thinking about ending their relationship while their partner was adamant about staying together. Many felt they had become closer to their partners, others, or siblings. Some found it a strain having to move back home with parents and others found it difficult seeing their children initially.

Core theme: Assessment

Assessing psychological status. This was deemed important when the patient was admitted, to note underlying conditions and gather data. All agreed that timing was crucial to eliciting information, often during morning physical care while making conversation rather than through set questions. Some felt talking and listening to patients throughout the day as helpful, noting behavioural changes or observing their interactions with others.

Facilitators. Nurses felt it was helpful having the pilot instrument available to provide a framework for assessing the patients, even if it was only used as a starting point. It was also helpful that the patients' stay was lengthy, as there was plenty of time to get to know them. Having protected time to do the assessments was also appreciated by the nurses.

"Yeah because rehab is a bit long, a long time ... they stay in the ward for quite a long time um so we develop like families already at times so that makes it easier as well to trust each other."

Barriers. Factors making it difficult to do the assessments included patients' culture and gender, their sensitivities to certain subject matter and bank/temporary/agency nurses' lack of knowledge. A general lack of good communication and experience on the nurse's part would inhibit patients from engaging. Also cited was a lack of privacy, time constraints, being interrupted, and lack of staff or underlying medical or mental health problems of the patient.

Effectiveness. Mostly, the previous instrument was regarded as useful for flagging up issues, monitoring or recording them. Others found it complex and bureaucratic, others that it could be completed without even seeing the patient, that it was dependent on experience, and difficult to rate the patient with it. Some suggested making it more explicit with clearer guidelines and making it impossible to complete without engaging the patient.

"The biggest limiting factor is the experience of the staff that use it ... the only way you can improve it is with people improving their experience and exposure to it."

Communication. All the issues relating to the patients' psychological status were communicated verbally and in writing at handover at the start of each shift. This included whether the patient needed to be reassessed, the frequency of monitoring and whether the issues needed to be escalated. The psychosocial ward round was another useful forum to communicate patients' issues, thus enabling wider professional input. The psychosocial team (psychology and psychiatry) was always their first port of call if issues were serious.

"So everyone's aware that the patient is a bit vulnerable ... that they don't take it personally and they don't feel they're being isolated."

Phase 2: Investigation of inter-rater reliability, internal consistency and test-retest reliability of SNAPS

SNAPS was trialled on 80 patients whose details are described earlier. Patient and researcher ratings on its eight dimensions are presented in Table 1. A Pearson Product-moment correlation between total patient ratings and total researcher ratings was 1.0 ($P = 0.0001$), indicating excellent inter-rater reliability. Cronbach alpha scores of 0.7 for the total patient ratings and 0.7 for total researcher ratings indicated acceptable internal consistency. The Pearson Product-moment correlation between total patient ratings at Time 1 and Time 2 (2 to 6 hours interval) was 0.8 ($P = 0.0001$) and between total researcher ratings at Time 1 and Time 2 was 0.9 ($P = 0.0001$), indicating satisfactory test re-test reliability.

Discussion

This study set out to develop, test and refine an instrument, the SNAPS, with practical utility that would enable nurses to accurately assess and record, on a regular basis, the psychological status of patients with SCI. In order to produce a reliable, accurate and robust instrument, a mix of qualitative and quantitative approaches was employed to both gain insight into the psychological experiences of patients with SCI during their acute care and to empirically analyse the results.

The results from Phase 1 of the study identified four core themes: emotional impact, coping, relationships and assessment and their associated sub-themes. The findings of the 20 patients and nurses revealed that the patients' experience of the immediate impact of SCI

Table 1 Patient and researcher ratings on the eight dimensions of the assessment instrument

	Patients			Researchers		
	Range	Median	Conf. Int. (95%)	Range	Median	Conf. Int. (95%)
Positive Motivation	0–1	0	0.1–0.3	0–1	0	0.1–0.3
Anxiety/Fear	0–2	1	0.5–0.8	0–2	1	0.5–0.8
Sadness	0–2	0	0.3–0.6	0–2	0	0.4–0.6
Burden	0–2	1	0.6–0.8	0–2	1	0.6–0.9
Relationships with Family	0–2	0	0.1–0.3	0–2	0	0.1–0.3
Relationships with Staff	0–2	0	0.0–0.2	0–2	0	0.1–0.3
Anger/Hostility/Irritability	0–2	0	0.4–0.7	0–2	0	0.5–0.8
Disengagement/Isolation/Withdrawal	0–2	0	0.2–0.4	0–2	0	0.2–0.4

involved both negative and positive emotions and that the nurses had a good grasp of these feelings. The range of emotions described resonated with Plutchik's¹⁹ assessment of emotions following acute illness. However patients reported feeling only negative emotions during the subsequent period of their rehabilitation. Patients and nurses reported differing views on coping; whilst patients opted to hide their emotions and stay focused, nurses saw coping in terms of compliance and independence. Although patients and nurses described their relationships as mostly good, patients' positive and negative influencing factors were all related to nursing behaviors and for nurses, relationships were negatively marred by aggression from patients. Nurses' suggested improvements for the development and clinical utility of the new instrument were incorporated. The results from Phase 2 indicated that SNAPS had excellent inter-rater reliability, acceptable internal consistency, and satisfactory test-re-test reliability.

The SNAPS consists of a rating scale, prompt card and a manual and is accompanied by a 1-day training programme for all new staff working in the London Spinal Cord Injuries Centre. The manual provides model questions for staff to ask patients, suggestions for responses to patients depending on their statements and behavior, and instructions for nursing staff to inform colleagues about developments as appropriate. Familiarisation with the rating scale is reinforced during the training day, which as well as a formal talk on SNAPS and its manual, includes talks on the nature and understanding of psychological status and its relevance to health care and simulation enhanced use of SNAPS with the aid of clinical scenarios and the use of professional role players.

The clinical use of SNAPS within the London Spinal Cord Injuries Centre occurs within a holistic and integrated approach to care and includes a weekly psychosocial ward round with multidisciplinary focus on social and psychological needs. These ward rounds are led by psychiatrists and psychologists and attended by

rehabilitation physicians, physical therapists and nurses. To ensure the successful use of SNAPS, specialist mental health professionals review patients promptly when requested by the nursing staff who, by using the instrument, have identified a high or urgent need for this. SNAPS is not a substitute for but a complement to expert psychological and psychiatric input to SCI care.

It is important to emphasise that assessment and discussion of psychological status following a catastrophic injury can place an enormous emotional burden on nursing staff. With this in mind, it was never the intention to aim at a comprehensive assessment of psychological status by nursing staff but to develop a realistic form of assessment that is practically sustainable in daily routine in a very busy SCI center. For example, we did not feel that asking about sexual worries should be a nursing task, even though this was suggested by one patient. It is important to emphasise that having this instrument available for the nurses enhances the support offered by the psychologists and psychiatrists and increases the contact of nurses with patients. Some patients refuse to see psychologists, so helping nurses in this manner changes the culture and emotional environment of the ward in a way that direct involvement with psychologists would not do. Also, by having this instrument nurses are not able to omit this part of their work, so become more confident doing it. For effective use of SNAPS, not only prompt and expert psychological and psychiatric expertise are required to be available but also good clinical governance, nurse mentoring and support and good handover practice in general.

Limitations

The results of this study should be considered in view of some limitations. Firstly, the pool of participants for both the semi-structured interviews and the trial of the instrument was limited to the in-patients that met the criteria on the ward at the time and the turnover was slow. Therefore the study took much longer to conduct than

anticipated. The study would have also benefited from trialling a larger sample. Secondly, patients with language difficulties and those with severe cognitive impairment and severe mental illness were not included in the study, meaning that they weren't able to contribute to the development of the instrument but it is possible for them to be assessed with the instrument. Thirdly, the instrument was not developed to be culturally sensitive and it was not explicitly tested across different age groups. Nor was it designed to capture outcome data which has created the need to develop other means to audit its use by the nurses, its effectiveness and clinical utility, over time. Finally, construct validity of the instrument could have been tested by determining convergent validity (for example with measures of anxiety and depression).

Conclusion

Notwithstanding the above limitations, experience with the use of SNAPS strongly supports its clinical utility with further evaluation meriting consideration.

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