illness has highlighted their difficulties in selecting, organising, valuing, enjoying and competently performing occupations. Although occupational therapy literature consistently identifies environmental factors as key in facilitating successful and valued engagement, few authors have studied the implications of detention in secure mental health settings for this population.

This study investigated the occupational experiences of five people with schizophrenia in two forensic regional secure units. Quantitative and qualitative methodologies were used, with semi-structured interviews adding depth and subjectivity to Occupational Questionnaire (Smith et al 1986) responses. The quantitative data were analysed using non-parametric analysis, with content analysis applied to the qualitative data.

Time-use was characterised predominantly by engagement in passive leisure and rest occupations. This reflects the findings of both inpatient and community-based studies elsewhere and suggests that mental illness is a common factor influencing time-use. The participants chose occupations based on expectations of enjoyment and success, and associations with independence and normality. Significant correlations were found between perceived competence, value and enjoyment ($p<0.01$), and the participants were more likely to enjoy self-chosen occupations ($p<0.05$).

Forensic occupational therapists must use evidence to optimise resources and deliver interventions that facilitate choice and autonomy and reflect individual needs. Further research with larger samples and longitudinal methodologies will facilitate generalisation and establish temporal perspectives.

Occupation, Mental Illness and Medium Security: Exploring Time-Use in Forensic Regional Secure Units

Paul Stewart[1] and Christine Craik[2]

Introduction

Forensic mental health care, according to McKeown et al (2000, p4) refers to the 'treatment and rehabilitation of mentally disordered individuals who also exhibit a degree of criminality, with the context of this care more often than not involving placement in some sort of secure institution'. Regional or medium secure units represent

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the second tier of secure care provision in the United Kingdom. They were established in response to the Butler (1975) report in order to bridge the gap between general mental health settings and high secure hospitals. Forensic occupational therapy developed alongside the introduction of these units (Chacksfield 1997), the majority of which now boast well-resourced occupational therapy departments. Little has been written, however, about the occupational implications for individuals who are detained in forensic mental health settings. Although a small number of studies have been published, there is a lack of occupational therapy research evidence in this field (Lindqvist and Skipworth 2000, Duncan et al 2003).

Literature review

Schizophrenia and occupational engagement

Recent studies have demonstrated statistically significant relationships between competent engagement in meaningful

occupations and improved quality of life for people with a mental illness (Aubin et al 1999, Boyer et al 2000, Laliberte-Rudman et al 2000, Mayers 2000, Eklund et al 2001, 2003, Goldberg et al 2002). Research investigating the quality of occupational engagement, however, has consistently found that people with a mental illness are likely to experience limited engagement in meaningful occupations. Harvey (1996), Jeffreys et al (1997) and Shimitras et al (2003), for example, described the lives of mentally ill respondents in two epidemiological surveys in North London as characterised by isolation, boredom and a lack of daily structure and meaningful activity. Studies making comparisons between occupational engagement among mentally ill and mentally well people showed that those with a mental illness were significantly less likely to be engaged in active, productive or social occupations (Hayes and Halford 1996, Krupa et al 2003). They were also less likely to value, enjoy and feel competent in relation to occupational engagement (Crist et al 2000).

Environmental influences on occupational engagement

The studies by Nagle et al (2002) and Chugg and Craik (2002) highlighted the fact that occupational choices and experiences appear to be strongly influenced by environmental as well as personal factors for people with mental illness. Kielhofner (2002a) suggested that the environment contributes to how people choose, organise and enact occupations and that the environment can offer opportunities and choices or impose constraints and demands. According to Farnworth et al (2004), institutional environments exert considerable control over residents' day-to-day lives, and Suto and Frank's (1994) investigation of time-use in an American residential home for people with schizophrenia found that environmental expectations play a key role in recovery.

Studies exploring occupational engagement in forensic residential settings have demonstrated that time-use is largely characterised by engagement in personal care, and passive leisure and rest occupations, with limited engagement in active or productive occupations (Helbig 2003a, Farnworth et al 2004). Furthermore, environmental restrictions represent a barrier to meaningful engagement (Farnworth et al 2004) and impede role development (Schindler 2004). Helbig (2003a) found that limited choice and autonomy often led to poor motivation and inactivity over time, something that Lindqvist and Skipworth (2000) suggested was a particular challenge associated with forensic residential settings, with rehabilitation programmes required to sustain engagement over extended periods. On a positive note, occupations can be meaningful if they provide opportunities to socialise, pass time, develop skills and make links with the outside world (Helbig 2003a). Self-initiated and solitary occupations, such as reading, can also provide meaning (Farnworth et al 2004), and carefully developed occupational interventions can produce positive

outcomes, in terms of developing valued social roles, in otherwise restrictive environments (Schindler 2004).

These studies represent a process of academic inquiry into the impact of forensic environments on detained patients and the relationships between the person, his or her environment and the occupational opportunities therein. Such studies are few in number, however, and methodological limitations such as small sample sizes restrict the generalisability of some. Although there is the beginning of an evidence base, issues around mental illness and the subjective experience of occupational engagement in restrictive environments require further investigation.

Aim of the study

This study aimed to explore how people with schizophrenia experience occupational engagement in forensic medium secure units. To achieve this, the nature of occupational engagement for participants was determined over a 24-hour period.

Method

Participants

This multi-site design involved two regional secure units. Site one was a 65-bed facility serving urban and rural populations, with both medium and low secure service provision. The medium secure unit had a therapy area, which comprised a gymnasium/sports hall, education centre, art and craft room and woodwork facilities. Ward-based interventions included self-catering, work-schemes and groups. Site two was a large urban service with 265 beds, providing a range of medium, low secure and specialist services. There was a wide range of off-ward therapeutic interventions, including work rehabilitation, woodwork and other craft occupations, education, gymnasiums and other sports facilities. The ward-based interventions varied, depending on the nature of the ward. The participants were a convenience sample from the inpatient populations of these two services.

Convenience sampling was used because the research question pertained to specific populations and settings and the methodology was largely qualitative in nature. According to Greenhalgh and Taylor (1997), qualitative research aims to gain an in-depth understanding of the experience of particular individuals or groups and, therefore, researchers must deliberately seek out participants who fit the relevant criteria. The inclusion criteria were that participants were detained under a section of the Mental Health Act (1983), had a primary diagnosis of schizophrenia, were able to speak reasonable English, and were determined by their clinical team to be capable of engaging with the requirements of data collection and able to give informed consent. The exclusion criterion involved individuals experiencing an acute crisis or a relapse of their mental illness. Table 1 provides demographic data on the

Table 1. Demographic data

	Simon (Site 1)	Linda (Site 1)	Andrew (Site 2)	Sharon (Site 2)	Mark (Site 2)
Age	40-49	20-29	20-29	30-39	40-49
Gender	Male	Female	Male	Female	Male
Marital status	Divorced	Widowed	Single	Divorced	Single
Education	'A' level	GCSE	None	None	'A' level
Previous employment	Yes	No	Yes	Yes	Yes
Lived independently	Yes	Yes	No	Yes	Yes
Duration of detention	8 years	5 years	3 years	3 years	7 years
Legal status	Section 37/41	Section 37/41	Section 37/41	Section 3	Section 37/41

participants, where pseudonyms have been adopted to preserve anonymity.

Efforts were made to recruit six participants from each site to protect against drop-out. Owing to recruitment difficulties, the actual sample was two participants from site one and three from site two. In qualitative research, an in-depth examination of small numbers of participants is of greater value than a superficial examination of larger numbers (Buston et al 1998). Therefore, although the actual sample was smaller than expected, it was still considered viable for the purposes of this study.

Data collection

Quantitative and qualitative methods of data gathering were used in a complementary manner, which strengthens the reliability and trustworthiness of a study and generates results that are more compatible with the study of human occupation (Carlson and Clark 1991). Quantitative data were gathered using the Occupational Questionnaire (OQ) (Smith et al 1986), and a semi-structured interview was used to gather qualitative data. Data gathering occurred on the participants' wards and took approximately one hour in total. A risk assessment, which involved identifying and problem solving potential risks associated with the data-gathering sessions, was conducted in collaboration with occupational therapists at the respective research sites to ensure the safety of the interviewer and the security and comfort of the participants.

The Occupational Questionnaire

The OQ was chosen to gather quantitative data because of its capacity to determine the nature and perceived quality of time-use. Furthermore, previous publications using the OQ with similar populations provided valuable (if limited) information about its reliability and validity (Oakley et al 1985, Smyntek et al 1985, Barris et al 1988, Ebb et al 1989, Kielhofner and Brinson 1989, Aubin et al 1999, Crist et al 2000). Using the OQ, the participants recorded their time-use over the previous 24 hours in half-hourly intervals; categorised occupations according to work, daily living tasks, recreation and rest; and

considered each occupation in terms of perceived competence, value and enjoyment. Completing the OQ generally stimulated discussion, and probing questions elicited more in-depth insights regarding the ways in which participants spent their time (Patton 1990).

Semi-structured interview

The semi-structured interview determined the participants' understanding of the personal and environmental influences on time-use. The questions were derived from evidence pertaining to the influences of social and physical environments (Suto and Frank 1994, Rebeiro and Cook 1999, Helbig 2003a, Farnworth et al 2004), as well as to mental illness and the factors associated with mental illness (Harvey 1996, Jeffreys et al 1997, Crist et al 2000, Tek et al 2001, Chugg and Craik 2002, Shimitras et al 2003). The eight questions ranged from general enquiries about influences on time-use to specific questions about medication, routine, time of day/week and the influences of people and places.

Ethical considerations

Approval was gained initially from the Research Ethics Committee at Brunel University, and subsequently from an appointed Multi-site Research Ethics Committee (MREC). Amendments were made to the research design based on feedback from the MREC, the Local Research Ethics Committees and regional Research and Development Consortia for the two National Health Service trusts.

The processes of identifying and approaching potential participants, gaining informed consent and gathering data were designed to protect potentially vulnerable individuals. Initial contact and obtaining informed consent were facilitated by occupational therapists at the respective research sites to ensure that the identity of potential participants was masked from the researcher until they had given written informed consent. Signed consent was gained for data-gathering sessions to be audio-taped and this was confirmed with the participants at the start of the session. The participants were reassured that they could withdraw from the study at any time without consequence or giving reason.

Data analysis

Quantitative data

Data from the OQs were analysed to determine distributions of time-use according to work, daily living tasks, recreation and rest. Distributions of time-use were also calculated according to perceived competence, value and enjoyment, and in relation to self-initiated occupations and those initiated by others. Calculating time-use distributions involved collating the number of half-hourly intervals associated with each domain and combining the totals for each participant to achieve an overall score. All quantitative data analysis was based on combined scores in order to present an overall picture of time-use rather than individual case studies. A further domain of sleep was added by the researchers during data analysis to distinguish between occupations associated with relaxation and sleep. This was done by counting the number of half-hourly intervals that the participants actually described as 'sleep'.

The mean values for perceived competence, value and enjoyment, in relation to occupations initiated by self and by others, were then compared to determine any statistical significance, using the non-parametric Wilcoxon Signed Ranks Test for within-sample comparisons. This test was chosen because it is designed for use with ordinal data and determines the significance between scores as well as the direction of the difference (Heyes et al 1990). The data pertaining to perceived competence, value and enjoyment were also compared using Spearman's rho, non-parametric correlations, chosen because they are designed predominantly for use with ordinal data (Hazard-Munro and Batten-Page 1993).

Qualitative data

Audio-taped interviews were transcribed verbatim and content analysis employed using the principles of Miles and Huberman (1994). The process involved coding and developing themes for each transcript separately, and then making comparisons between those emerging themes in order to organise and establish a coherent and meaningful presentation of the participants' views.

Strategies to ensure the trustworthiness of the study

Triangulation enhances the credibility of research by using more than one method to investigate a particular phenomenon (Robson 2002). In this study, triangulation of data sources (Krefting 1991) involved gathering data at two different sites and on four different wards. Ward environments, although all medium secure, were varied in terms of the degree of environmental structure and the nature of therapeutic interventions. Triangulation of data methods (Duffy 1987) was employed by using quantitative and qualitative techniques to provide different perspectives on occupational experience.

Member checking had been proposed to enhance objectivity, but was considered during the ethics review to be too demanding owing to the vulnerable nature of the population. Instead, two transcripts and corresponding audio-tapes were randomly selected and senior colleagues confirmed their accuracy. Objectivity was also checked by asking a senior colleague with relevant clinical experience and experience in qualitative research to analyse one of the transcripts independently in order to determine whether corresponding themes would be developed (Mays and Pope 1995). Negative case analysis was employed to enhance objectivity further (Robson 2002). It was not proposed that the results of this study would be transferable to the general forensic inpatient population because of the small sample involved.

Results

Quantitative results

Distributions of time-use

The overall distribution of time-use according to the four occupational domains of the OQ, plus the added domain of sleep, is shown in Fig. 1. This simple representation of time-use shows that the participants spent the majority of waking hours engaged in 'rest' and 'recreation' occupations. The raw data from the OQs pertaining to the nature of time-use were recategorised according to the actual occupations identified by the participants (that is, the occupations that the participants actually entered for each half-hourly interval rather than the broader domains of, for example, work and recreation) to provide a more detailed analysis (Fig. 2). Only daytime data are presented in Fig. 2 (including daytime sleeping data). From the recategorisation, the data recorded on the OQ as 'recreation' are predominantly passive leisure occupations, which are largely characterised by occupations such as watching television.

Fig. 1. Distribution of time-use according to the Occupational Questionnaire (Smith et al 1986) domains (plus sleep).
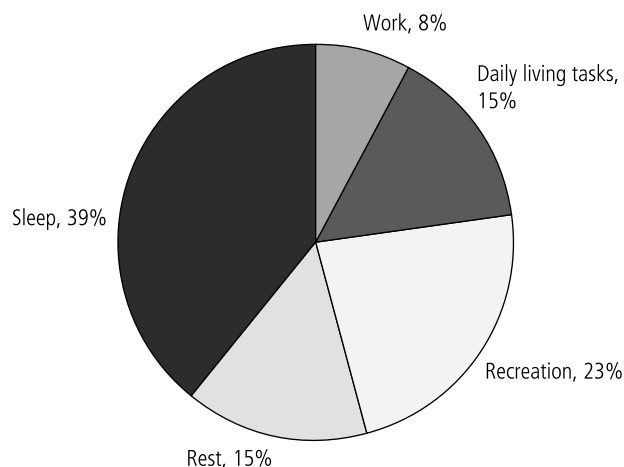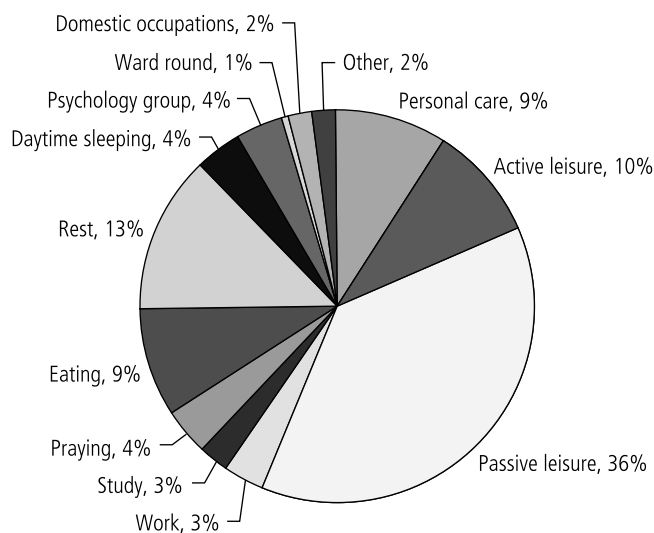

Work, 8%
Daily living tasks, 15%
Sleep, 39%
Recreation, 23%
Rest, 15%

Fig. 2. Distribution of time-use during the daytime according to actual occupations recorded.

Domestic occupations, 2%
Ward round, 1%
Psychology group, 4%
Daytime sleeping, 4%
Rest, 13%
Eating, 9%
Praying, 4%
Study, 3%
Work, 3%
Other, 2%
Personal care, 9%
Active leisure, 10%
Passive leisure, 36%

Perceived competence, value and enjoyment in relation to time-use

From this point onwards, only data pertaining to waking hours are presented. The participants spent the majority of time engaged in occupations that they felt they performed 'well' (48%) or 'very well' (32%). They spent approximately two-thirds of their time in occupations that they felt were 'important' (33%) or 'extremely important' (34%), with just over a quarter of time (27%) spent engaged in occupations that they did not feel were important. The participants spent just over three-quarters of their time doing things that they 'liked' (46%) or 'liked very much' (31%). No one felt that he or she performed occupations 'very poorly', 'strongly disliked' occupations or thought that his or her occupations were a 'waste of time'.

Relationships between the variables competence, value and enjoyment were explored using Spearman's rho, non-parametric correlations, in relation to all occupations

Fig. 3. Mean values for perceived value, enjoyment and competence in relation to occupations initiated by self and others.

□ Competence ■ Value □ Enjoyment

2.5
2
1.5
1
0.5
0

Initiated by self   Initiated by others
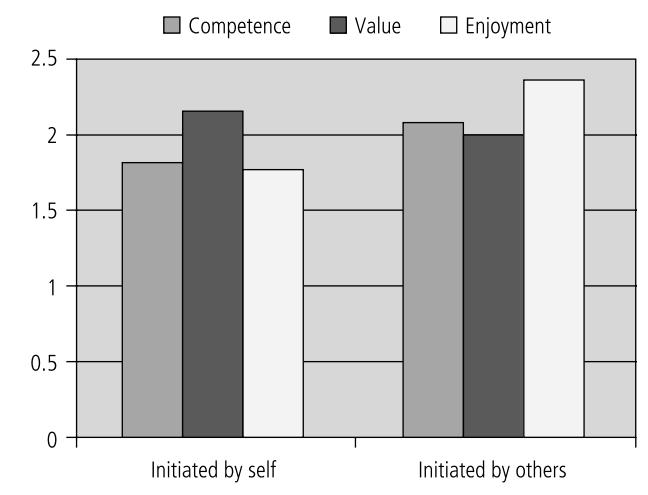
during waking hours. Significant correlations were found between competence and enjoyment ($\tau = 0.603$), competence and value ($\tau = 0.493$) and value and enjoyment ($\tau = 0.527$). All correlations were two-tailed and were significant at the $p < 0.01$ level.

Occupations initiated by self and by others

The majority of the participants' time (73%) was spent engaged in occupations that they initiated themselves. The occupations initiated by others included mealtimes, occupational therapy sessions, other groups and meetings and the dispensing of medications. Fig. 3 shows the differences in mean values for perceived competence, value and enjoyment in relation to the occupations initiated by participants and those initiated by others. The Likert scale on the OQ considers the number '1' to be high (that is, 'like it very much' or 'extremely important') and, therefore, lower mean values represent higher scores here.

Using the non-parametric Wilcoxon Signed Ranks Test for within-sample comparisons, the mean values for occupations initiated by self and by others were compared. Although no significance was found between mean values for perceived competence and value, the participants were significantly more likely to enjoy the occupations that they initiated themselves compared with those initiated by others ($Z = -2.023$, $p < 0.05$).

Qualitative results

Four main themes emerged: motivation for occupation; the value of occupation; choice and autonomy; and patterns of occupation. Independent thematic analysis produced very similar themes to those of the researchers, although there were some minor differences in process.

Motivation for occupation

Simon, Andrew and Mark referred to engagement in some aspects of occupational therapy as a means to pass time. These occupations ranged from a discussion group to creative groups. Andrew stated: 'I think to myself that I'm here anyway so I might as well do it.' Occupation as a means to 'escape' from the realities of the environment was a strategy identified by the same participants. Such occupations included sleeping, reading books and grounds leave. Simon said:

> Unescorted grounds leave: very, very important to me … because I can walk out and be myself. I don't have to present in any way in particular?

Simon and Mark described engaging in occupations because they felt a personal sense of obligation to spend their time productively. Simon explained:

> I try to think on my own volition. So I'm not the kind of patient … who don't have much motivation, you know, lie in bed a lot. I just can't do that.

Although Simon, Andrew and Mark reported that their mental health was good at the time of data gathering, Linda and Sharon described ongoing symptoms. Linda did

not think that mental illness had a major effect on her ability to get on with daily living, whereas Sharon's illness had a profound impact on her daily life, preventing her from going out and doing things.

Sharon portrayed her relationship with her clinical team as collaborative and motivating. She felt that staff encouraged her rather than placed expectations on her to engage:

> [Staff] encourage you to go out, to keep your rooms clean. They keep an eye on people's personal hygiene … make sure that everybody's doing stuff that they would normally do on the outside.

On the other hand, Simon, Andrew and Mark felt, to varying degrees, that there were expectations on them to engage in occupations. Simon and Mark considered these expectations to be largely implied and not affecting them directly because they were self-motivated. Andrew, however, identified clear and explicit expectations from his clinical team:

> I've got a tribunal coming up and the doctor's telling me that if I don't do this and don't do that, he won't support me. That's what I'm striving for, to get my doctor's support so I can get out.

Andrew and Linda stated that their medication caused tiredness and affected their ability to engage in occupations. Linda described her coping strategy of going to bed for half an hour and then feeling refreshed. Mark admitted that tiredness affected his motivation to engage in valued occupations, such as reading, although he was not sure about the cause.

The value of occupation

Andrew, Sharon, Simon and Mark ascribed greater value to certain occupations because they were detained in a restrictive environment, for example occupations associated with moving on and having a 'normal life'. Mark valued occupations that took him out of the ward and Simon sought opportunities to reduce his sense of isolation:

> Watching the news is [important]. I need to know what's happening in the world. I don't want to be closed down, just existing in a tiny pocket here.

Linda, Andrew, Sharon and Mark valued occupations that were intrinsically beneficial or enjoyable, for example watching television or reading. Linda valued praying and Sharon said that her psychology group increased her understanding and provided an opportunity to talk. Andrew and Mark thought that occupations were more important if they experienced a sense of purpose through doing. Mark found reading purposeful and Andrew looked forward to being productive during work rehabilitation. Andrew, however, ascribed less value to certain occupations because they were associated with his detention:

> There's more important things that I should be doing on the outside … instead of being in here, locked up … doing things that are against my will.

Simon would avoid certain occupations if he thought he would not perform them well:

> I just don't play football or tennis, what's the point … I know it would be an awful mess if I did.

Choice and autonomy

Simon and Andrew felt frustrated and devalued by having meaningful occupations cancelled because of perceived mistakes or poor planning by staff or because of staff sickness or maintenance work causing disruption. Mark relied on staff to organise community leave although there were few problems on his ward, but Simon explained:

> I'm very much at the mercy of the nurses being efficient or pulling their heads together. They can make a little mistake which means that my day is written off so that's a big thing for me. You know for them it's just another part of the day.

The four participants detained under section 37/41 of the Mental Health Act (1983) referred to the power that the Home Office held over them. Linda was not able to see her daughter and was restricted in her use of tools: 'I'm not allowed knives, sharp knives and things.' Simon and Andrew described a frustratingly slow rehabilitation process associated with detention in a secure unit. Andrew complained: 'Two years of just sitting in here, just wasting away.'

Sharon appreciated the level of support that she received, realising that although she wanted to be at home she was not ready yet. Furthermore, although Andrew felt restricted in most aspects of daily life, Linda, Sharon and Mark did not feel significantly restricted. Sharon said that she was totally independent and Linda did not feel compelled to do things, recognising that she had some choice. Mark felt that, despite some restrictions, there were more opportunities for him in a medium secure unit than when he last lived in the community:

> There was a couple of years where I didn't do anything … I was just sort of killing time you know. Now I'm forever going up to places like [local town], forever going up to the library, going to the cinema.

Choice and autonomy were important to most participants. Mark reflected on how much he enjoyed being on his own for his first unescorted community leave, Linda was proactive in organising her time and Simon made the most of the few choices he had:

> I try somehow to engineer that I'm, like, I'm doing something and it's not something horrible. You know, I've exercised a bit of choice.

Patterns of occupation

Most participants identified daily and weekly routines initiated by themselves or by others. Generally, the participants felt more motivated to engage later in the day, and weekends were considered a time of rest. Linda had a

routine for praying and Andrew for personal care. Mark and Simon had habitual routines during the evening. Simon described his evening routine:

> Book at Bedtime on the radio. I put it on so that it closes off after an hour and I'm never awake when it closes.

Most participants felt that structure and routine were important. Simon considered that life was less tolerable without routines; Linda and Andrew were more satisfied when their time was occupied; and Mark felt dissatisfied and 'in a rut' when he did not have the motivation to get up and do things. Simon and Mark used routines to fill time during the day and for Mark routines also reduced boredom:

> … every day I go to my room at about 5 o'clock or 6 o'clock and start reading, I read a chapter, have a cup of tea, come back, read another chapter, have a shave, read another chapter … set myself little goals you know.

Sharon, however, did not think that there were any routines in her day. She could cook and go out when she wanted to and preferred it that way.

Discussion

Distributions of time-use

The findings of this study, in relation to distributions of time-use, support those of the study by Farnworth et al (2004) on time-use in an Australian secure unit. Although differences were noted in the way that time-use was categorised, there were similar quantities of time spent engaged in passive leisure and rest occupations, which represented the vast majority of time-use during the day. Helbig's (2003b) study on time-use and quality of life in a United Kingdom high secure hospital found a similar predominance of passive leisure and rest occupations, as did Suto and Frank's (1994) investigation in an American residential home for people with schizophrenia. Although these studies generate a picture of restrictive and/or institutional settings depriving people of occupational opportunities, community-based studies demonstrate largely similar findings (Hayes and Halford 1996, Jeffreys et al 1997, Crist et al 2000, Krupa et al 2003, Shimitras et al 2003). Such similarities suggest that mental illness may be a common factor, with environmental factors differing widely.

Competence, value and enjoyment

The majority of the participants' time was spent engaged in occupations that they valued and enjoyed and felt they did well. One explanation for this is that the participants were more likely to feel positively about solitary and passive occupations that they chose and initiated themselves and which dominated their days. Because such occupations are less likely to be challenging (Kubey and Csikszentmihalyi 1990, cited in Wilcock 1998), perceived competence may be higher. Helbig (2003b)

suggested that the participants in her study may have actively sought less demanding occupations because they lacked self-efficacy. Certainly, the participants in this study felt more competent in relation to self-chosen occupations compared with those initiated by others and were significantly more likely to enjoy the occupations that they chose and initiated themselves (p<0.05).

Interestingly, there were some differences in the results pertaining to value, with the OQ responses showing that the participants were more likely to value occupations initiated by others. Semi-structured interviews, however, indicated that they were more likely to value self-chosen occupations because they were enjoyable and purposeful, gave them independence, reflected normality or provided links with the outside world. Statistically significant correlations were found in the relationships between all three variables (p<0.01). Although a correlation does not imply a causal relationship (Hazard-Munro and Batten-Page 1993), the implication is that these variables are interrelated in some way, which supports Kielhofner's (2002b) assertion that:

> We want to be competent at doing the things we value. We tend to find enjoyable those things we do well and dislike those that overtax us. We suffer when we cannot perform well the things about which we care deeply (p49).

These findings do not appear to have been demonstrated elsewhere in mental health research literature and, although the relatively small sample represents a limitation, the results of this study support previous research involving the OQ in determining the instrument's internal validity.

Environmental influences

Expectations

Although most participants felt that there were implied expectations to engage in rehabilitation occupations, one participant perceived an explicit link between engaging in rehabilitation and being recommended for discharge. He was also less likely to value occupations because they were associated with detention. Molineux and Whiteford (1999) suggested that activities imposed upon individuals would diminish their sense of control or choice, and were less likely to be valued. Similarly, Helbig (2003b) found that coercion did not foster intrinsic motivation. There is clearly an important distinction, however, between coercion and providing expectations. Suto and Frank's (1994) study described an environment in which staff had few expectations and residents made little progress. So it would seem that environmental expectations are critical and, certainly, other participants in this study appreciated perceived expectations and preferred structure and routine in their day.

Restrictions

Most time-use studies in secure settings describe environmental restrictions having a negative impact on occupational behaviour (Helbig 2003a, Farnworth et al 2004, Schindler 2004) and the same is true here. The

participants detained under section 37/41 of the Mental Health Act (1983) referred to the power of the Home Office in restricting access to tools, slowing rehabilitation and limiting choice and autonomy. There were individual differences in the degree of perceived restrictions, however, with only one participant expressing strong views about his lack of autonomy. Others had chosen to integrate with their environments to make the most of their situation, suggesting that attitudes to detention and rehabilitation are important. Interestingly, the two participants who were most proactive in this respect had both spent over 7 years in secure forensic settings, including significant periods in high security. Farnworth et al (2004) reported similar findings, with one participant who had spent the majority of his adult life detained in forensic secure units suggesting that people adapt to such environments over time.

Disruptions

The participants were occasionally prevented from engaging in their usual occupations. Communication errors, staff sickness and maintenance work meant that some groups and community leave were cancelled. Such cancellations often occurred at short notice, were beyond the control of the participants, often caused frustration and sometimes contributed to perceived powerlessness and dependence on others. Whiteford (2000) called this occupational disruption, a temporary inability to perform one's normal pattern of occupational engagement due to external circumstances, in contrast to occupational deprivation, which takes place over an extended period of time. There were indications here that daily disruptions may be more prevalent on certain wards.

Limitations of the study

The OQ does not distinguish between data pertaining to sleep and rest, which was an important distinction in this study. Aubin et al (1999) developed and validated a French version of the OQ, which incorporated the domain of sleep. In this study, the researchers used written responses to determine whether the participants were asleep or not.

The researchers aimed to sample between 8 and 12 participants, but recruitment difficulties led to 5 participants being involved. The people who declined generally cited a lack of incentive to give up their time, and some incentive payment could have been advantageous. According to research ethics guidelines (Brunel University 2003, College of Occupational Therapists 2003), such payments are permitted provided that they are approved by an ethics committee. Furthermore, the absence of incentive payments may have created a bias, with the less motivated patients perhaps not getting involved.

The statistical analyses conducted in this study were post-hoc, that is, no *a priori* hypotheses were established. Testing for significance in these relationships, therefore, was purely speculative and should be considered with this in mind.

Finally, because data gathering was limited to a single interview session, there were few opportunities to make meaningful inferences about the relationship between mental illness and time-use. According to Mays and Pope (1995), observing participants in their surroundings allows for a better objective understanding of their motives and barriers to engagement. Although field observations would have been impossible as several wards were involved, the reviewing of background information was feasible and would have provided some objectivity.

Implications for occupational therapy

The participants were more likely to engage in occupations towards the end of the afternoon and into the evening. As most occupational therapy departments work a nine to five day, there is a strong argument for forensic occupational therapists to consider evening work or flexible hours. Although there are benefits for patients in terms of regular sleep patterns and observing the hours that society dictates are normal, the provision of occupational opportunities during the evening may better suit levels of arousal.

Daily disruptions to planned occupations caused frustration, compounded the participants' sense of powerlessness and diminished their sense of personal value. Although some disruption is inevitable, daily meetings between staff and patients to plan and prioritise daily events, such as escorted leave and group attendance, can minimise this. These meetings can instil a sense of responsibility in patients, who have an opportunity to exert some control over their day rather than being the passive recipients of bad news at short notice.

This study showed that the participants found occupations valuable and enjoyable for a variety of reasons, with many individual differences. Whether the OQ or another method or assessment is used, it is essential that occupational therapists develop an understanding of patients' unique view of their world and the meaning that they ascribe to the things they do. Without this level of understanding, occupational therapists may prescribe interventions with little appreciation of their therapeutic value. Clinical teams should also validate occupational choices made by patients when such choices are personally meaningful.

Suggestions for future research

There remains a need for a better understanding of the relationship between mental illness, occupation and the environment. Longitudinal studies that also involve the type of field observation described by Farnworth et al (2004) would enable the identification of factors associated with mental illness more effectively. Furthermore, making comparisons between occupational engagement among hospital-dwelling forensic patients and those living in the community may provide some more clarification, if the factors associated with mental illness are controlled for. Studies using larger samples, as well as more multi-site studies, will help to establish a sound evidence base for this area of practice.

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