NOTE

This online version of the thesis may have different page formatting and pagination from the paper copy held in the University of Wollongong Library.

UNIVERSITY OF WOLLONGONG

COPYRIGHT WARNING

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site. You are reminded of the following:

Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material. Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.
DO THE CHARACTERISTICS OF HIGH SUPPORT ACCOMMODATION PREDICT THE NEEDS OF MENTAL HEALTH CONSUMERS?

A thesis submitted in fulfillment of the award of
Master of Science – Research

University of Wollongong

Adele Freeman BSc (Hons.) Psychology

November 2004
I, Adele D. Freeman, declare that this thesis, submitted in fulfilment of the requirements for the award of Masters of Research, in the Department of Psychology, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution. The document was submitted for examination in June 2004 and re-submitted incorporating examiners comments in November 2004.

Adele D. Freeman

21st November 2004
ACKNOWLEDGEMENTS

Many thanks to Aftercare who granted permission for me to utilise data collected during the course of my work there to undertake this research. I am also grateful to the consumers who participated in the original Aftercare project and to the staff of mental health services who completed surveys and helped to arrange interviews.

My sincere thanks to my supervisor Dr. Lindsay Oades whose unwavering belief that I would complete this study provided the encouragement and support I needed to make it happen.

I would also like to express my gratitude to the following people:

Dr. Glenn Hunt, Research Fellow at Sydney University for his considerable expertise in data analysis and research practice in general. I learnt an enormous amount from him thanks to the support he provided for the project which pre-ceded this study and I know that my work is better for it.

Mr. Peter Caputi and Ms. Judith Fethney for their statistical expertise and Dr. Michelle Cleary for her encouragement and advice during the final stages of writing-up.

My friends and family (especially my husband) for their words of encouragement and belief in me.

Many thanks to all those involved in the study.
LIST OF FIGURES AND TABLES

Figure 1: Number of consumers with met and unmet needs in each CAN domain ..........................................................344
Figure 2: Influences of and upon need.........................................................................................................................64

Table 1: Summary of differences between the linear continuum/transitional supported housing models.........................................................10
Table 2: Consumer preferred characteristics (CPCs) and their basis in research.................................................................17
Table 3: Relationship between need and support..............................................................................................................22
Table 4: Prevalence of needs (including met and unmet needs)..........................................................................................33
Table 5: Percentage of met and unmet need for different age groups ..................................................................................35
Table 6: Correlations between help received from friends or relatives vs. services, and help received from services vs. help needed from services ........................................................................36
Table 7: Satisfaction with the kind and amount of help received............................................................................................37
Table 8: Correlations between need and satisfaction with help received................................................................................38
Table 9: Stepwise regression analyses of the effect of consumer preferred characteristics on need.....................................................39
Table 10: Stepwise regression analyses of the effect of consumer preferred characteristics on total needs in the five a priori CAN sub-domains .............................................................................41
Table 11: Stepwise regression analyses of the effect of consumer preferred characteristics on satisfaction with the kind and amount of help received .................................................................42
Table 12: Age, gender, length of stay, need and satisfaction amongst consumers with and without 24-hour support..................................................................................................................43
Table 13: Total needs in each CAN sub-domain amongst consumers with and without 24-hour support..................................................................................................................43
Table 14: Satisfaction with the amount of help received by consumers with and without 24 hour support..................................................................................................................44
Table 15: Mean LSP-16 subscale and total scores for consumers of services with and without 24-hour support..................................................................................................................45
ABSTRACT

Objective

The primary aim of this study was to explore the relationship between key accommodation and support characteristics and the needs of mental health consumers in high support accommodation. The second aim was to ascertain whether consumers in these settings had levels of need and functioning commensurate with the high levels of support being provided.

Method

A sample of consumers accessing high support, very high support and residential rehabilitation services (as defined by NSW Health, 2002) were identified. Interviews were conducted using the Camberwell Assessment of Need to assess consumer perceptions of need and satisfaction with the type and amount of help received. Staff ratings of functioning were collected using the Life Skills Profile–16. Thirteen characteristics of the accommodation acknowledged in published research as being preferred by consumers were identified: (a) Service is no further than 1km away from transport; (b) service is no further than 1km away from community facilities; (c) the service does not own the property in which consumers reside; (d) the service separates the management of the property (e.g. rent collection, maintenance etc.) from the provision of support; (e) each consumer signs a separate lease; (f) consumers are not required to adhere to service-specific ‘house rules’; (g) consumers are not required to move out of their accommodation when their needs change; (h) one and two bedroom facilities are available; (i) consumers are offered a choice of housing options on application; (j) each consumer has their own bedroom; (k) staff are not based at the accommodation; (l) staff are not present 24 hours a day; and (m) support is available on an outreach basis.

The relationship between these characteristics and consumer perceptions of need and satisfaction were explored. Comparisons were also made between services providing 24-hour staff support and those less intensively staffed.

Results

One hundred and sixty-five consumers from 26 services across New South Wales and the Australian Capital Territory were interviewed. Seventy-five percent of the sample was male and the mean age was 43 years. Consumers had on average 7.6 needs of which 2.1 were unmet. Of the thirteen ‘consumer preferred characteristics’ identified, only on-site staffing, property ownership, signing a lease and 24-hour staffing predicted the number of needs identified by consumers. There were six characteristics which predicted the types of needs consumers expressed with the availability of 1 and 2 bedroom accommodation featuring in models which predicted need in the health, basic and service CAN sub-domains.
Consumers of 24-hour services had a significantly shorter length of stay and more unmet needs than consumers of less intensively staffed services. They were also significantly less satisfied with the amount of help they received than consumers without this level of support. Needs in the basic and services sub-domains differentiated consumers of 24-hour services from those receiving less staff support.

Consumers with a high level of need did not have a correspondingly low level of functioning and consumers residing in services with 24-hour staffing had significantly higher levels of functioning.

Conclusions

Results did not support the hypothesis that consumers of services implementing higher numbers of consumer preferred characteristics have fewer unmet needs and higher levels of satisfaction. Whilst increasing the availability of consumer preferred models of accommodation remains a priority, this may not lead to a reduction in need and associated reduction in the intensity of service required. However, the identification of specific areas of need could lead to better targeted service provision. The fact that consumers of very high support services have almost the same number of needs as consumers of high support services raises questions about the screening processes used by services to assess the suitability of referrals and the availability of less intensively staffed accommodation for consumers whose needs for care reduce.
INTRODUCTION

Access to appropriate accommodation is regarded by many as the most important determinant in the success or failure of people with chronic mental illness living in the community (Human Rights and Equal Opportunity Commission, 1993). Similarly to the general population, people diagnosed with a mental illness will find it hard to manage their health, maintain relationships, secure employment and pursue other life goals without stable and appropriate housing. High support housing is considered to be in particularly short supply in Australia with the International Mid-Term Review of the Second National Mental Health Plan identifying an increase in capacity for high support care as one of the ‘ways forward’ for mental health policy and services (Thornicroft & Betts, 2002).

Despite several decades of deinstitutionalisation programmes, there is insufficient research on the benefits of supported community accommodation and a somewhat fragmented approach to its implementation and evaluation. Whether as a cause or effect of this, only 2.8% of expenditure on societal mental health care and other sector costs in Australia have been for supported community accommodation compared with 11% in Canada (Neil, Lewin, & Carr, 2003). NSW has actually reduced its supply of 24-hour staffed, community residential beds since 1993, and despite the key role played by the non-government sector in providing accommodation support and rehabilitation, per capita funding to non-government agencies in 1999-00 was 69% below the national average, the lowest of the jurisdictions (Commonwealth Department of Health and Ageing, 2002).

A literature review returned no citations looking specifically at high support accommodation which is at odds with its perceived importance by service providers and carers. A recent survey of the 43 high support, very high support and residential rehabilitation services in NSW and the ACT revealed that most conformed to a conceptual model which has been superseded by more ‘consumer preferred’ models overseas (Freeman, Hunt, Evenhuis, Smith, & Malone, 2003). The study described in this paper is the first conducted in Australia to focus specifically on high support accommodation and assess the needs, satisfaction with care, and functioning of residents.

THE IMPORTANCE OF ADEQUATE HOUSING

Research has shown that housing has an independent association with common mental disorders (Ludermir & Melo Filho, 2002) and features of the domestic environment are significant predictors of self-reported general and mental health status (Dunn, 2002). Rohe (1985) found that high residential density, high traffic levels, poor block upkeep, and the presence of commercial facilities and high-rise housing had negative mental health consequences under certain conditions. Conversely, neighbourhood renewal in deprived areas is likely to have a role in improving mental health among local populations (Blackman & Harvey, 2001).

There also appear to be some specific effects attributable to housing characteristics, for example,
Kuo and Sullivan (2001) found a relationship between reduced levels of aggression and violence and the presence of trees and grass, with residents living in relatively barren buildings reporting more aggression and violence than their counterparts in greener buildings. ‘The way forward: affordable housing for all’ (National Shelter, 2001) highlights the importance of housing in facilitating people’s participation in employment. The paper asserts that adequate and affordable housing provides an essential stable base from which people can focus on issues other than accommodation, including seeking and maintaining employment. The report goes on to say that the consequences of poor housing amount to the social exclusion of a significant section of the population from effective participation in society.

**HOUSING FOR PEOPLE WITH MENTAL ILLNESS**

The influence of housing outlined above pertains to the general population, and so for people whose mental health is already compromised and who have difficulty actively participating in the community, the consequences of not being adequately housed could be even more serious.

Research suggests that inadequate housing and support can precipitate deterioration in mental health, put strain upon family relationships, increase risk of suicide, homelessness and involvement with the criminal justice system, and lead to inappropriate hospitalisation or unnecessarily long stays in hospital (Babidge, Buhrich & Butler, 2001; Clarke et al., 2000; Drake et al., 1991; Newman, 2001; Wong & Solomon, 2002).

Those mental health consumers most in need often receive the least health and social care and there are several factors that make securing housing particularly difficult for people with a severe mental illness. These include the lack of affordable housing, the reduction in public housing stock and increased emphasis on rental assistance, lack of co-ordination between government departments, low income, the symptoms of mental illness itself and inadequate community supports (Affordable Housing National Research Consortium, 2001; Jablensky et al., 1999; Slade, Lees, Taylor, & Thornicroft, 1999; Thornicroft & Betts, 2002).

Report 4 of the National Survey of Mental Health and Wellbeing found there is a general lack of support services to people with psychotic disorders and a need for better access to public housing, for supports linked to accommodation of various types, and for a range of residential disability support services. There is also good evidence that improved access to accommodation and support would reduce the rates of homelessness among those living with mental illness. People with stable accommodation are more likely to be linked with specialist mental health services and to have their needs met, thus attaining a better level of functioning and improved quality of life. The report found that one in ten people with a psychotic disorder had been in hospital continuously for 12 months during the year preceding the census which suggests there is a persisting problem of long-stay patients whose management and care needs cannot be adequately met in the community (Jablensky et al., 1999).
In May 2000, the Centre for Mental Health, NSW completed a survey of current housing and accommodation support services for people with mental health problems in NSW. The survey revealed that the availability of places (beds) varied from 7.6 per 100,000 to 55 per 100,000 depending on the geographic setting. One of the key issues identified was the need for more services that provide high levels of support (NSW Health, 2002).

Most recently, the urgent need for clear direction (and decisive action) to address the housing and accommodation needs of people with mental illness was spelt out in the final report of the Select Committee on Mental Health (NSW Parliament, 2002). Committee members heard overwhelming evidence that support services for people with a mental illness living in NSW communities are under funded and in critically short supply. The report made 15 housing-related recommendations including increasing the number of supported accommodation places by 1000 over the next two years, and having NSW Health report annually on outcomes of the Framework for Housing and Accommodation Support for People with Mental Health Problems and Disorders (NSW Health, 2002).

CONCEPTUAL MODELS OF HOUSING AND SUPPORT

Mental health services in Australia are under pressure to develop more effective methods of responding to residential needs. Similar pressures in the US led to a change in the ‘paradigm’ or model underlying the field of supported accommodation and in particular, a move away from a linear continuum / transitional model of care to a ‘supported housing’ approach (Ridgway & Zipple, 1990a).

The Linear Continuum/Transitional Model

The linear continuum contains several settings that provide different levels of service and/or supervision and the consumer is matched to an appropriate setting based on his or her level of functioning. In each setting on the continuum, the consumer learns specific skills and if his or her level of functioning improves and their need for service lessens, they move to a more normalised and less restrictive setting. Often moves are based on a prescribed time frame or length of stay and in the event of a consumer experiencing a decline in functioning, he or she can move along the continuum to a setting which offers more support. Finally, the consumer moves out of the continuum and into independent housing outside of the mental health system, at which point he or she is considered to require little or no continuing support from the accommodation service.

A review of 109 studies of residential programs indicated that transitional housing may have limited effectiveness in reducing recidivism, improving financial self-sufficiency and facilitating community living (Carling, 1993). Carling (1993) claims that although transitional residential programs may be preferable to institutional care, they fall short of helping people achieve community integration. Other problems with this model include:
1. The fact that consumers have to agree to engage in treatment in order to acquire housing.
2. The lack of choice provided to consumers leading to disempowerment and inappropriate placements.
3. Increased risk of stigma due to the placement of consumers with a similar level of functioning in one building.
4. Problems with skills transfer as skills learnt in one setting are not necessarily the ones required for independent living.
5. The concept of independence as the ultimate goal, when for some people, on-going support may be required. (Ridgway & Zipple, 1990a)

**The Supported Housing Model**

The supported housing model (also known as ‘open-ended or permanent’, ‘housing with support’ and ‘supported living’) has been put forward as an alternative for some consumers to the one described above and a valuable addition to a comprehensive housing solution for people with psychiatric disabilities. Some of the key elements of a supported housing model include (adapted from Ridgway & Zipple, 1990b):

1. Consumers have a right to a stable home and are not limited to residential treatment settings. The supported housing model does not promote congregate or specialised settings. The use of typical housing used by non-disabled community members serves as a tool in the rehabilitation process.
2. The individual must play a primary role in determining where, with whom, and how he or she will live. It is assumed that a place that was not chosen by the person is unlikely to be perceived as a true home and that success and satisfaction in the community depends on the degree to which one’s home matches one’s own personal preferences and subjective criteria.
3. The primary role of the service recipient changes from being a consumer of mental health services to being a community member, tenant, or householder and the expectations associated with these roles form the basis for the development of individual service plans. Consumers can interact socially with others in the community on the basis of these more acceptable social roles and may suffer less stigma as a result.
4. There is a shift in the locus of control from the staff to the consumer. Staff members may help consumers to structure their own time and develop positive daily activities, but consumers can choose to conduct themselves as they wish. Access to a consumer’s home is usually by their permission and invitation so staff members must rely on developing a positive relationship with the consumer rather than on imposed structure or rules.
5. Consumers are dispersed throughout a community rather than housed in a cluster based on their level of functioning. Living in a socially integrated environment offers opportunities for social participation and encourages consumers to enter into the life of the community.

6. In vivo service provision, in which consumers learn and practice skills in the real life environment where they will be used, is considered to be the most effective approach to rehabilitation. In transitional, preparatory settings, consumers are sometimes required to learn or practice skills they will not need in the next environment and it may be difficult to then transfer these skills to a new setting.

7. Services are decoupled from the building or facility and linked to the individual. The consumer does not move as his or her needs change but remains in stable housing while the services are altered. The consumer’s needs rather than the program’s criteria dictate programming.

8. In response to the realisation that some formerly institutionalised individuals may always need some ongoing support and services, the concept of independence is modified and ‘supported’ or ‘assisted’ independence is viewed as success. This paradigm assumes that the consumer may need a personalised support system for a long period of time and that formal supports are only withdrawn when the consumer is firmly established in the community and has no further need for them.

Differences between the linear continuum/transitional model and the supported housing model as described by Ridgway and Zipple (1990a) are summarised in Table 1.

**Table 1: Summary of differences between the linear continuum/transitional supported housing models**

<table>
<thead>
<tr>
<th>Linear Continuum/Transitional</th>
<th>Supported Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential treatment settings</td>
<td>A home</td>
</tr>
<tr>
<td>Placement</td>
<td>Choice</td>
</tr>
<tr>
<td>Consumer role</td>
<td>Normal roles</td>
</tr>
<tr>
<td>Staff control</td>
<td>Consumer control</td>
</tr>
<tr>
<td>Grouping by disability</td>
<td>Social integration</td>
</tr>
<tr>
<td>Transitional preparatory settings</td>
<td>In vivo learning in permanent settings</td>
</tr>
<tr>
<td>Standardised levels of service</td>
<td>Individualised, flexible services and supports</td>
</tr>
<tr>
<td>Least restrictive environment, independence</td>
<td>Most facilitative environment, long-term supports</td>
</tr>
</tbody>
</table>


The current situation in Australia is that there are accommodation support services adhering to both of the conceptual frameworks described above but unfortunately, this range of options is not available in each state or geographical area. In a study of high support services in NSW and the
ACT, Freeman et al. (2003) identified no services that met all (or even most) of the supported housing criteria described by Ridgway and Zipple, (1990b). The foremost conceptual model of support in NSW can best be described as a linear continuum or transitional model with NSW Health acknowledging that the property frequently defines the level of support, resulting in people moving from property to property as their support needs change (NSW Health, 2002).

**CONSUMER PREFERENCES**

One of the factors influencing the shift to a supported housing model in the USA was the growing consumer voice and research on consumer preferences (Ridgway & Zipple, 1990a). People with mental health problems have the same expectations about housing as other people in the community and expect the same opportunities to choose their accommodation and live independently. Furthermore, congruence between residential arrangements and consumer needs, capabilities and demands has been shown to improve outcomes; in particular, consumer housing preferences are more accurate predictors of community adjustment than other factors (Goldman, Rachuba & Van Tosh, 1995). An overview of surveys of mental health consumers’ preferences for housing and support services conducted by Tanzman (1993) found that consumers prefer:

1. To live in their own house or apartment and not in residential mental health programs or facilities.
2. To live alone or with a spouse, romantic partner or friend.
3. Not to live with other mental health consumers.
4. Outreach staff support available on call.

Independent living arrangements have not been construed as living without support from mental health staff but rather that supports are available as-needed rather than constantly. Few respondents wanted to live with staff and the importance of material supports such as money, rent subsidies, telephones and transportation was emphasised.

Keck (1990) found that most people with severe mental illness, when given a meaningful choice, choose to live in normal housing located in desirable areas of the community. Respondents in this study also indicated a need for very practical kinds of assistance (e.g. locating an apartment, paying rent etc.) plus continuing support from a mental health agency. Sixty-five percent of consumers wanted help to avoid emotional upsets or crises.

Owen et al. (1996) looked at the demands on consumers’ behaviour associated with various housing options and how this related to consumer preferences for accommodation. Consumers most preferred environments that ensured living alone in settings of ‘low behavioural demand’; living in one’s own home was the most preferred option, followed by living in government subsidised housing. For-profit boarding houses were preferred over psychiatric group homes and homelessness, long-term hospitalisation and crisis accommodation were least preferred. Owen et
al. (1996) concluded that consumers’ resistance to psychiatric group housing with high levels of behavioural demand is unrelated to their personal characteristics and should be considered when arranging accommodation for people with psychiatric disabilities.

Rose and Muijen (1998) found that 33 people who were judged by their clinicians to be in need of 24-hour nursed care expressed a preference for independent living with some input from psychiatric staff. The most popular aspects of a ‘24-hour beds’ proposal were having a private room and bathroom and having access to cooking and laundry facilities (features that do not distinguish 24-hour nursed beds from ordinary living). The least liked features were the size of the houses (12 residents), the 24-hour staffing and the proposal that the accommodation be on a hospital site.

Service providers, consumers and carers differ in their perceptions of the importance of different housing characteristics. In a paper by Massey and Wu (1993), consumers considered independence and personal choice, convenient location and proximity to mental health services to be significantly more important in community housing than did their case managers. Goldfinger and Schutt (1996) found that clinicians recommended independent living much less often than did consumers although the groups varied less on specific housing features such as consumers’ need for part-time staff help. Research with families of a person with a long-term mental health problem found that carers and consumers agreed on the need for more social contact with others but that only carers expressed a need for consumers to find new interests and a place of refuge when situations become difficult at home (Orford, 1986). A survey of 350 members of an organisation of parents of mentally ill adults, found that parents reported their offspring had a high degree of residential instability, and expressed the need for wider choices in housing options and more vocational and rehabilitation programs. Parents reported that consumers were most satisfied with living at home or in semi-independent living situations and least satisfied with living on the streets or in state hospitals (California Alliance of the Mentally Ill, 1986).

Shepherd (1998) stated that although it is preferable to go along with consumers’ expressed preferences, the settings in which people are cared for must be cost effective and safe. He suggests the only way forward is to continue with the development of ordinary housing options but combine this with intensive support from specialised teams. Consideration of residents’ preferences appears to increase satisfaction with housing (Levstek & Bond, 1993) and symptoms of mental illness do not interfere with consumers’ rational decision making about where to live (Schutt & Goldfinger, 1996). Clearly, aligning supported housing options with consumer preferences is a worthwhile goal in itself but in a climate where resource allocation decisions are under increasing scrutiny, efficiency must also be considered.

**EFFECTIVENESS OF SUPPORTED HOUSING**

As deinstitutionalisation gained momentum, research initially focused on comparing outcomes for consumers living in traditional, hospital-based services, with those of the increasing number of
people living in community settings. Overall, studies indicated that community-based treatment is virtually always at least as effective as hospital-based treatment in helping people with psychiatric disabilities to achieve employment outcomes, gain re-entry into the community and reduce the use of medication and outpatient services (Carling, 1990a).

By the mid-nineties, the volume of research into community housing options had increased with the emphasis shifting away from comparisons with institutional care to studies focusing on community accommodation options e.g. living alone, living with family, living independently and living in sheltered accommodation. Some studies focused specifically on different models of sheltered accommodation and compared the outcomes of consumers living in hostels or boarding houses (Horan, Muller, Winocur & Barling, 2001), group or individual housing (Schutt, Goldfinger & Penk, 1997), group homes, board and care homes and supportive apartments (Nelson, Hall & Walsh-Bowers, 1997) and boarding houses and private homes (Browne & Courtney, 2004). A study focusing specifically on supported housing compared extremely disabled consumers assigned to a supported housing program, with consumers who had voluntarily selected the program. The involuntary consumers shared many risk factors with the group defined as needing ‘very high support’ (24-hour care) by NSW Health (NSW Health, 2002) including a history of suicide attempts, self-neglect and medication non-compliance. The study showed that although both voluntary and involuntary consumers were severely disabled, the involuntary consumers were much higher users of supported housing services, case management, psychiatric services and shelter services. However, during the study period, about 75% of the involuntary consumers’ time was spent in independent or supervised living situations, and days spent in hospital were reduced by more than 50% (Brown, Ridgeway, Anthony & Roger, 1991).

In her literature review of supported housing, Ogilvie (1997) breaks research down into three major areas: (a) studies related to changes for consumers in quality of life, social networks, psychopathology, hospitalisation, satisfaction and independent functioning; (b) studies related to the housing setting and services provided; and (c) studies related to establishing supported housing. For example, Baker and Douglas (1990) researched the relationships between the quality and appropriateness of housing environments and the community adjustment of previously hospitalised individuals who were severely mentally ill. They looked at the type of setting (e.g. group home, boarding or rooming house, private residence), the people, if any, the consumer shared the residence with, and the case managers’ ratings of the physical condition, adequacy for basic life activities and appropriateness of the residential environment. The study found that those living in the worst residential environments had the greatest number of unmet service needs and a decrease in quality of life. The study concludes that simply providing housing is not enough and that ensuring housing is of a reasonable standard and appropriate to consumers’ needs is crucial.

Goering et al. (1992) examined the social support networks of residents living in supportive housing
compared with those of other psychiatrically disabled populations. Although their findings indicated that living in supportive housing has a positive effect on the social networks of residents, staff members and co-residents appear to partially replace rather than add to the network of family and friends. Ogilvie (1997) calls for additional research linking environmental conditions to consumer outcomes and concludes that very few studies on supported housing currently exist. It is important to clarify this statement further by explaining that despite making reference to the supported housing model described above, Ogilvie includes studies on a variety of community housing options (including group homes and residential care facilities) in her review. This suggests that the number of studies on supported housing in its truest sense is even smaller than she asserts.

The same proviso must be made in regard to a more recent Cochrane Review of supported housing for people with severe mental disorders (Chilvers, Macdonald & Hayes, 2002). The review sought relevant randomised or quasi-randomised trials dealing with people with severe mental disorders allocated to supported housing, outreach support schemes or standard care, and focusing on outcomes including mental state, satisfaction with care, social functioning and quality of life. In this instance, supported housing includes hostels, group homes, therapeutic communities and supported independent tenancies. The model of care most closely aligned with the supported housing model described above, is described by Chilvers et al. (2002) as ‘tenancies with outreach support schemes’.

Despite this broad definition of supported housing, none of the 139 citations acquired met the inclusion criteria. The paper concludes that there is an urgent need to investigate the effects of supported housing on people with severe mental illness and that the lack of research into supported housing compared to treatments such as medication and case management may be seen as an indication of the complex issues at hand. In order to address some of these complexities and increase the body of research in this area, underlying principles which encompass the large variations in the terminology and definitions of schemes must be identified to allow for the development of standards which can then be evaluated.

An alternative approach to exploring relationships between supported housing models and consumer outcomes is to focus on the impact of individual housing attributes. This approach can be used regardless of the definition and functional objectives of the housing scheme, which is beneficial given that even the clearly defined term ‘supported housing’ is used to describe service models which do not demonstrate its key characteristics. In a review of studies published between 1975 and 2000, Newman (2001) identified 32 studies which met her criteria and asserted that they relied on one or more of three conceptualisations of the role of housing: housing attributes as an outcome or dependent variable; housing attributes as independent variables where outcome is a non-housing factor e.g. mental health; and housing as both an input and an outcome. The types of housing settings ranged from group homes to independent apartments.
Half of the six studies that examined housing as an outcome included measures of satisfaction with housing. The results were inconclusive and it was not possible to separate the relative importance of housing factors versus service factors on housing satisfaction. Newman (2001) recognises the benefits of housing satisfaction on quality of life but asks whether these humanitarian benefits can be justified unless satisfaction is also cost-effectively related to improved mental health outcomes. In terms of housing as an input, obtaining independent housing was associated with reduced levels of depression and less time spent in a mental health setting. Positive outcomes appeared to be a function of the attainment of independent housing as opposed to simply having access to it. The strongest finding from the studies that examined housing as an input and an outcome was from the same draft article which proposed that living in independent housing is associated with greater satisfaction with housing and with neighbourhood (Newman, 2001).

Newman concluded that (as at October 2001), research had not demonstrated which housing attributes are critical to a mentally ill person’s capacity to live independently, it had not described types of residential alternatives that are most effective, it had not identified specific housing attributes that can be systematically associated with the best type of residential setting and it had not produced any agreement on the most appropriate way to conceptualise and measure the effectiveness of the housing setting. She proposed that a systematic body of knowledge about housing and mental illness had not been compiled due to mental health professionals’ strong views about what is and is not effective, the inherent complexities of research in the area, the challenge of carrying out experimental studies in ethically appropriate ways, a failure to consider housing as key component of mental health care and the absence of a strong theoretical base or accepted measures for future work.

**SUPPORTED ACCOMMODATION STANDARDS**

Clearly, lack of clarity and disagreement surrounding the definitions of supported accommodation models, methodological issues in separating the relative influence of housing attributes and the provision of support, and differences in the functional objectives of services make research in this area challenging. Both of the most recent and comprehensive reviews in the area have called for the development of a basic set of measures so that the variation in schemes is not an obstacle to researching their effects (Chilvers et al., 2002; Newman, 2001). Newman (2001) also recognised that studies must address both the housing and the services provided, in recognition of the fact that both are necessary for successful community tenure.

The current study attempts to attend to these issues by moving away from the characteristics determined by service providers, researchers and policy makers as being important, and focusing on characteristics known to be important to consumers. This approach is considered worthwhile for a number of reasons:
1. There has been a paradigm-shift in the provision of supported accommodation in the USA (and in some Australian states) from the transitional or continuum model to the supported housing model which encapsulates many of the characteristics preferred by consumers. It seems important therefore to also look to consumer preferences for guidance in the development of evaluation and research parameters for these models.

2. Supported accommodation varies across a variety of dimensions including property ownership, size, property management arrangements, staffing arrangements, the types of support provided, the length of stay and the source of funding. There is little consistency in the way existing research has used these dimensions to group supported accommodation making it extremely difficult to make comparisons between services. Consumer preferences can be applied to a service regardless of its profile, allowing for objective comparisons to be made.

3. Consumer preferred characteristics span specific attributes of housing and programmatic interventions, encapsulating the need for both of these domains to work in tandem for the consumer to experience the optimum outcome.

4. There is currently very little research on the supported housing model of care and very few services implementing this model in NSW. Despite the provision of consumer preferred models of care being a desirable end in itself, funding will not be forthcoming without evidence that such models lead to improved outcomes. Focusing on consumer preferred characteristics allows for research into services which do not yet meet all the criteria of a supported housing model; this is useful given that a paradigm shift is a gradual process. It also has the potential to uncover those characteristics which have the greatest influence on consumers’ outcomes.

A thorough review of the literature on consumer preferences (some of which is introduced above), was undertaken in an effort to identify the characteristics of housing and support consistently cited by consumers as being preferred e.g. ‘support is available on an outreach basis’ (Rose & Muijen, 1998). In addition, literature on supported housing was searched to determine key features of the model in response to research which suggests that consumers have a preference for this approach (Friedrich, Hollingsworth, Hradek, Friedrich, & Culp, 1999; Tanzman, Wilson & Yoe, 1992). Some papers clearly listed characteristics which must be present in order for a service to be defined as providing ‘supported housing’ (Carling, 1990b; Ridgway & Zipple, 1990b) and these were extracted as ‘consumer preferred characteristics’ e.g. ‘consumers are not required to move out of their accommodation when their needs change’.

Where research highlighted principles relating to community integration and the reduction of stigma e.g. ‘housing should enhance stability’ (Hogan & Carling, 1992), a concrete definition was developed to provide clear guidance as to whether a service possessed this characteristic or not.
e.g. 'each consumer signs a separate lease'. This process resulted in a list of thirteen ‘consumer preferred characteristics’ or CPCs which are listed below in Table 2 with the research from which they were derived.

Table 2: Consumer preferred characteristics (CPCs) and their basis in research

<table>
<thead>
<tr>
<th>Consumer preferred characteristics</th>
<th>Basis in research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Service is no further than 1km away from transport</td>
<td>Keck (1990) found that most people with severe mental illness, when given a meaningful choice, choose to live in normal housing located in desirable areas of the community; such areas are invariably well-served by public transport. Massey and Wu (1993) compared perceptions of consumers and case managers with regard to important housing characteristics. Convenient location was considered significantly more important by consumers than their case managers. Linney, Arns, Chinman, and Frank (1995) found that consumers attached more importance to community accessibility and the availability of health services and social and recreational activities than community care home operators.</td>
</tr>
<tr>
<td>2. Service is no further than 1km away from community facilities</td>
<td></td>
</tr>
<tr>
<td>3. The service does not own the property in which consumers reside</td>
<td>All these characteristics clearly differentiate residential mental health facilities from independent living in the community. Tanzman’s (1993) review of surveys of mental health consumers’ preferences for housing and support services found that consumers prefer to live in their own house or apartment and not in residential mental health programs or facilities. Hogan and Carling (1992) emphasise the importance of being able to exercise control over the environment and opportunities to do this are enhanced when the property is not owned by the mental health service, when the person signs a lease and when consumers do not have to adhere to ‘house rules’.</td>
</tr>
<tr>
<td>4. The service separates the management of the property (e.g. rent collection, maintenance etc.) from the provision of support</td>
<td></td>
</tr>
<tr>
<td>5. Each consumer signs a separate lease</td>
<td></td>
</tr>
<tr>
<td>6. Consumers are not required to adhere to service-specific ‘house rules’</td>
<td></td>
</tr>
<tr>
<td>7. Consumers are not required to move out of their accommodation when their needs change</td>
<td></td>
</tr>
<tr>
<td>8. One and two bedroom facilities are available.</td>
<td>Once again, Tanzman’s (1993) paper found that consumers prefer to live alone or with a spouse, romantic partner or friend, and prefer not to live with</td>
</tr>
</tbody>
</table>


other mental health consumers. Owen et al. (1996) looked at the demands on consumers’ behaviour associated with various housing options and how this related to consumer preferences for accommodation. Consumers most preferred environments that ensured living alone in settings of low behavioural demand.

9. Consumers are offered a choice of housing options on application

Massey and Wu (1993) found that personal choice in community housing is significantly more important to consumers than their case managers. Choice has also been found to be positively related to housing satisfaction, residential stability and psychological wellbeing (Srebnic, Livingstone, Gordon, & King, 1995).

10. Each consumer has their own bedroom

In addition to research indicating that most consumers prefer to live alone, sharing a bedroom is in direct contravention to the notion of ‘normal’ housing (Keck, 1990). Rose and Muijen (1998) found that the most popular aspects of a ‘24-hour beds’ proposal put forward to consumers were having a private room and bathroom.

11. Staff are not based at the accommodation

Consumers prefer outreach staff support that is available on call and few respondents wanted to live with staff (Tanzman, 1993). Rose and Muijen (1998) found that one of the least liked features of a ‘24-hour beds’ proposal was 24-hour staffing. Ridgway and Zipple (1990b) assert that consumers should be able to choose the level of support they receive and it should be available on a flexible basis.

12. Staff are not present 24 hours a day

13. Support is available on an outreach basis

The consideration of consumers’ perspectives when deciding upon which service inputs to focus on is only half of the picture. The growth of the consumer movement has also placed pressure on service providers to consider consumers’ views when deciding what to measure and how to measure it. Focusing solely on outcomes best able to demonstrate the effectiveness of an intervention from a service provider’s perspective is no longer acceptable. Andrews, Peters, and Teesson (1994) consulted with service providers, consumer and carer organisations and found that of the four areas of assessment considered, ‘disability’ and ‘quality of life’ were regarded as the most important, followed by ‘satisfaction with service’ and symptoms’. The most important outcomes for the recipients of services define what the program should be aiming to achieve (Cummins &
Baxter, 1994) but assuming consumers contribute to the choice of outcome measure, many measures continue to rely solely on the opinions of clinicians. In contrast, this study has chosen an outcome which is inherently subjective and which may be more reliably rated by consumers than staff (Slade et al., 1999).

NEED
Need is a multidimensional concept with no generally applicable and clear cut definition. Maslow (1954) set out a hierarchy of universal needs as a model for understanding human actions proposing that people will only strive for higher-order needs (e.g. esteem or artistic achievement), when lower-order needs (such as security) are satisfied. Bradshaw (1977) described need from a sociological perspective and made the following distinctions:

1. Normative: expert or professional defined need. A desirable standard is laid down and is compared with the standard that actually exists.
2. Comparative: when people with similar characteristics are not in receipt of a service then they are deemed to be in need.
3. Felt: this is equated with want and is therefore defined by the perceptions of the individual.
4. Expressed: this is felt need turned into action and is therefore defined by those who demand a service.

This approach reflected the fact that need is a subjective concept and that the judgement of whether a need is present or not will depend on whose viewpoint is being taken.

With a specific focus on health, Hawe, Degling and Hall (1990) defined need as being the absence of conditions and factors in the community preventing people from achieving optimal physical, social and mental health. Stevens and Gabbay (1991) distinguished need (the ability to benefit in some way from health care), demand (what is asked for by the service user) and supply of services. This distinction provides an explanation for the fact that needs can be met or unmet depending upon demand from the consumer, and the supply of services. For example, a person in a 24-hour supported accommodation service may have a high level of need for supported accommodation which is currently met whilst someone in a hostel for the homeless may have an equally high degree of need which remains unmet. The difference in circumstances between these individuals is not necessarily due to their level of need or the severity of their illness but rather their demand for services or the services available to meet that demand.

Factors influencing the need for mental health care services can be loosely categorised into four groups: (a) consumer determinants (marital status, age, housing situation, employment status, education, knowledge of disorder, symptomatology etc.); (b) social determinants (network of family/friends, cohabitees, informal care details, attitudes of others etc.); (c) service determinants
(type of setting, entry point to service, purchaser/provider influences etc.); and (d) outside
determinants (unemployment, degree of urbanisations, political climate etc.) (McCrone & Strathdee,
1994). There are also a variety of determinants which can influence whether that need is met or
unmet. For example, building-based programs that provide services to single people, little or no
access to interpreters, requirements for potential service recipients to have a long-term address in a
specific catchment area, services focused on the 18-64 year age group and requirements that
potential service recipients do not use alcohol or other drugs, may all prevent someone with a
mental illness accessing housing and support services. In addition, the small number of programs
specifically for people with challenging behaviour, dual disorder and high-level disability increases
the likelihood of some people with a mental illness having a range of unmet needs across a broad
spectrum of areas.

In order to more accurately plan for services, some service managers and policy makers have
looked to need as a way of helping them identify service gaps and target resources (McCrone &
Strathdee, 1994). The needs model is a ‘bottom up’ approach whereby the range of needs of
individual consumers (primary, secondary and dental health, housing, social and financial,
advocacy, work, education and day care needs) are identified and aggregated to allow the
cumulative needs of consumers to be converted into an aggregated service (McCrone & Strathdee,
1994). In Australia, Parker (1997) advocates for a ‘needs-based’ model, due to its responsiveness
to shifting priorities, it’s applicability to both hospital and community domains, the fact that it can be
consumer or practitioner-defined and its relevance to both individual consumers and general
service delivery. Neil et al. (2003) distinguish between micro-level or clinical services research, and
macro-level or service systems research in their commentary on the allocation of resources and
psychosis. At a micro-level, the effectiveness of an intervention is best described in terms of
symptom, disability or quality of life improvements and such findings would be preferred as a basis
for costing and choosing between specific interventions. At this level, comprehensive assessments
of need should ideally be the starting-point in the development of psychiatric services, be used
periodically in monitoring whether services are needs-led, and also be used as an integral part of
the evaluation of the effectiveness and efficiency of services (Hansson, Bjorkman & Svensson,
1995). Macro-level analysis is better for providing a guide for policy change and for targeting further
research and development resources into health programs and systems. This author proposes that
the concept of need provides important information at both the clinical services and service systems
levels, with the potential to demonstrate the relative effectiveness of traditional community
accommodation and consumer preferred options.

The concept of need also marries well with psychiatric rehabilitation theory or the rehabilitation
model (Bond & Resnick, 2000; Corrigan, 2003) which forms the basis of the supported housing
model. The key principles of psychiatric rehabilitation include viewing each individual as a person
first, enhancing skill development, using an eclectic approach to meet complex needs across all life
domains and providing individualised supports chosen by the consumer. This approach demands a move away from symptomatology or functioning towards quality of life, which better reflects the complex impact mental illness has on peoples’ lives.

Quality of life is gaining recognition as an important outcome by service providers, consumers and carers (Andrews et al., 1994) but it is a complex concept and subject to many influences. One factor known to predict quality of life is unmet need (UK Group, 1999). Clinical, social and unmet needs variables account for 27% of the variance in subjective quality of life of severely mentally ill consumers and efforts to improve consumers’ subjective quality of life will need to take account of consumers’ own reports of unmet needs in several domains (UK700 Group, 1999). Other research by Slade et al. (1999) found that as needs increase, quality of life decreases and that unmet needs have more influence on quality of life than met needs. If the goal of a mental health services is to increase quality of life, supports should be targeted based on consumer ratings of need.

In attempting to assess an individual’s level of need, a consensus is required about which dimensions are important. What is a need to one person in a particular context may not be to another. Over time, a person’s expectations and perception of their rights may change leading to new beliefs about their needs. Increasingly, need is acknowledged as being socially negotiated i.e. a collaboration between the views of professionals and the demands of consumers (Carroll & Mortimer, 1998). This conceptualisation of need is reflected in some recently developed measures of need such as the Camberwell Assessment of Need (CAN) and its shorter version, the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) (Phelan et al., 1995). The CAN is a structured interview in which staff, consumer and carer views of need can be recorded separately which is consistent with current policy which calls for consumers and carers to be involved in all stages of treatment and rehabilitation planning (Commonwealth of Australia, 1996).

The importance of not relying solely on the views of service providers when assessing needs is illustrated by the body of research using the CAN which has compared consumers and staff ratings of need. Slade, Phelan, Thornicroft and Parkman (1996) found that staff and consumers rated similar numbers of needs, but not in the same areas. Agreement between staff and consumer ratings of help received, help given and service satisfaction was low, although there was better agreement between staff and consumers regarding needs with a specific service intervention. Further work conducted by Slade et al. (1999) found that staff and consumers moderately agree about met needs but agree less often on unmet needs. Differences in staff and consumer ratings have also been identified in two Australian studies (Gallagher & Teesson, 2000; Issakidis & Teesson, 1999) one of which suggested that this may be because clinicians rate needs in the same way as they rate a consumer’s disability, whereas consumers may be more likely to include the social consequences, thereby rating their own handicaps (Issakidis & Teesson, 1999).

The Camberwell Assessment of Need has also been used to evaluate housing support
programmes and the impact of psychiatric reform (Arvidsson, 2003; Middelboe, Mackeprang, Thalsgaard & Cristiansen, 1998), to explore associations with the costs of supported housing (Järbrink, Hallam & Knapp, 2001), to compare consumers in different geographical and treatment settings, (Brunt & Hansson, 2002; McCrone et al., 2001), to explore change over time (Foldemo & Bogren, 2002; Wiersma, Nienhuis, Giel & Slooff, 1998) and to investigate the relationship between need and other outcome measures (Gallagher & Teesson, 2000; Slade et al., 1999).

**NEED AND SUPPORT**

In the current study, the Camberwell Assessment of Need will be used to ascertain whether consumer preferred characteristics of high support accommodation are related to consumers’ met and unmet needs and satisfaction with the help received. NSW Health (2002) provides the following definition of high support:

1. medium to long-term duration
2. 8-16 hours per day, 5-7 days per week with 24 hour on-call availability
3. outreach clinical care and rehabilitation provided by specialist mental health staff
4. other support provided by disability support workers
5. outreach clinical support provided by general practitioners
6. provides symptom stabilisation, maintenance of functioning and facilitates community participation

Residents are considered to have a history of mental health problems, active psychiatric symptoms, a need for assistance with medication, be at risk of self-harm or suicide, have a low level of functioning and have minimal contact with family or community (NSW Health, 2002).

One cannot assume that because a person is in a ‘high support’ environment, he or she necessarily has a high level of need, or indeed that those needs are being met. Many consumers are not given a choice of housing (Freeman, Malone & Hunt, 2004) and find themselves living in a high support setting based on an assessment made by their case manager or psychiatrist. It is likely that some of these consumers have been inappropriately placed and a reduction in the risk of this occurring is another benefit of a need-based approach. The relationship between need and support can be viewed in Table 3:

<table>
<thead>
<tr>
<th>Table 3: Relationship between need and support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low need</td>
</tr>
<tr>
<td>Low support</td>
</tr>
<tr>
<td>High support</td>
</tr>
</tbody>
</table>

A: This group might include people living independently in housing they own or rent with few if any hospital admissions in the last 5 years, who are able to function effectively in the community and have little or no contact with community mental health services.
B: People with a psychiatric disability living on the street or in temporary crisis accommodation. Numerous physical health problems, drug or alcohol issues, poor management of symptoms. People in boarding houses may also be included in this group as although they receive a high level of practical support, there is little/no rehabilitative support.

C: This group may be in an environment which provides more support than necessary due to an inadequate assessment of need or because of a lack of alternative options. For example, Rosen (1999) describes the term ‘met unneed’ as being psychiatric treatment for people without a recognised psychiatric disorder.

D: People with a history of mental health problems and active psychiatric symptoms who are appropriately placed in high support accommodation.

The focus of this study is on individuals in categories C and D, specifically those people living in high support accommodation as defined by NSW Health (2002). Whether or not this group have a high level of need and the degree to which these needs are being met will be examined using the Camberwell Assessment of Need. In addition, the support level categories utilised by NSW Health will be tested empirically by comparing the needs and level of functioning of consumers in ‘very high support’ settings (where staff are on-site 24-hours per day), with the needs of consumers in ‘high support’ settings (where staff are available for between 8-16 hours per day). Trainor, Morell-Bellai, Ballantyne and Boydell (1993) suggest that it is difficult to know whether or not the high level of support being provided by Canadian housing programs is necessary or appropriate without knowledge of the residents’ actual needs. The proven ability of individuals who had previously resided in long-term institutional settings to live in the community suggests that community living may be more indicative of the availability of appropriate accommodation than the individual characteristics of the consumer.

RATIONALE FOR THE STUDY

The majority of high support, very high support and residential rehabilitation services in NSW are yet to implement many of the characteristics known to be preferred by consumers. How can services be persuaded to make a paradigm shift from transitional housing in congregate settings to a model of care which is more aligned with consumer preferences? And how can funding bodies be convinced to resource alternative models without demonstrated positive outcomes at both a service and systems level? Despite increasing awareness of consumer preferences and the role appropriate housing has to play in positive outcomes for consumers, interactions between housing and support characteristics and need, satisfaction and functioning continue to be poorly understood.

The subjective nature of need makes it a complex concept to explore with Ochoa et al. (2003) finding that needs are only partially related to the clinical status and disability of the consumer. Baker and Douglas, (1990) reported that inappropriate housing (from a case managers’
perspective) is related to greater numbers of unmet needs. Like need, the ‘appropriateness’ of housing is intrinsically linked to the experiences and expectations of the individual concerned and this study sought to explore ‘appropriateness’ from a consumer perspective by using information gleaned from research into consumer preferences. It could be surmised that housing will be considered appropriate by a consumer if it is aligned with their preferences and living in such housing will therefore be associated with fewer unmet needs.

Consumer satisfaction is also related to housing characteristics with independent housing, personal choice, privacy and social desirability linked to enhanced resident reported satisfaction (Hansson et al., 2002; Shepherd, Muijen, Dean, & Cooney, 1996; Srebnik et al., 1995). Conversely, Nelson et al., (1997) reported that poor quality housing is related to dissatisfaction. Once again it was considered likely that individuals living in housing demonstrating characteristics known to be preferred by consumers would report higher levels of satisfaction with the amount and type of help received.

In addition, despite the increasing use of both the Camberwell Assessment of Need and the Life Skills Profile-16 in everyday clinical practice, the ability of these tools to differentiate between people needing very high support and those able to manage in more independent settings is unknown. However, research suggests that consumers living in supported accommodation have a greater number of needs than those receiving standard psychiatric services (Freeman et al, 2004; Macpherson, Haynes, Summerfield, Foy & Slade, 2003). With regard to functioning, Trauer et al., (1997) found that consumers in the community scored significantly better on the LSP than those in hospital. Therefore, do consumers in 24-hour supported accommodation have more needs and poorer functioning than consumers in accommodation without overnight staffing? Lelliott et al., (1996) found that the more ill, vulnerable and less competent people with mental illness need more care and are more dependent whilst Gallagher and Teesson (2000) reported that consumers receiving assertive case management had greater levels of need and disability than consumers receiving standard case management. However, people sometimes find themselves placed in a particular setting for reasons other than their need for support including physical health issues and the composition of the team managing their care (Hampton & Chafetz, 2002). This study provides an opportunity to test the assumption that consumers in 24-hour settings have more needs for care and to inform future decisions regarding appropriate placement of consumers in supported accommodation.

Finally, the use of both a staff rated measure of functioning and consumer rated measure of need will allow for an exploration of the relationship between these two concepts. Ochoa et al., (2003) found people with a higher disability have more unmet needs and Velligan et al., (1997) reported that cognitive function is a significant predictor of functional needs amongst people with schizophrenia. It was therefore considered likely that consumers with a low level of functioning as
assessed by staff would have a correspondingly high number of self-rated needs.

The stage is set for an increase in the provision of supported accommodation and there is increasing pressure for resource allocation to be informed by efficacy and efficiency considerations. There is a paucity of research into supported accommodation and a literature review found no research which concentrated specifically on high support options. Previous studies have called for further research to continue around key hypotheses of housing and mental illness and this study will attempt to do this by using existing research on consumer preferences as a starting point. A shift from research defined by mental health professionals to that defined by consumers is consistent with calls for studies in this area to focus more on the commonalities between people with and without disabilities and to incorporate variables intrinsic to quality of life. Taking a ‘bottom-up’ approach by looking at consumers’ needs meets both of these requirements whilst still providing the quantitative information required by service planners.

A comprehensive literature review suggests that this is the first Australian study to investigate the needs, satisfaction and functioning levels of mental health consumers considered to require high and very high levels of support. It seeks to focus some long-overdue attention on a group of individuals marginalised by society as a whole and at times by the system which seeks to support them. This research is expected to be of benefit in the following ways:

1. Consumer preferred models of care are more likely to be funded if funding bodies can see quantifiable benefits. A reduction in need has the potential to improve consumers’ quality of life and relieve pressure from many other health and allied services. This could provide the leverage needed by consumers to push for a greater range of supported housing options.

2. Strengthening quality is one of the four priority themes of the National Mental Health Plan 2003-2008 (Australian Health Ministers, 2003). If services are to meet specified quality criteria, like services will need to be benchmarked against performance indicators. Identification of accommodation characteristics associated with fewer unmet needs may form the basis for the development of standards for high support accommodation services. The development of standards based on consumer preferences will help to ensure their relevance for people with high needs.

3. Previous studies on housing and support emphasise the need for widely applicable principles of consumer preferred housing which will not only facilitate the development of standards, but will also allow for more research linking environmental conditions to consumer outcomes (Newman, 2001; Ogilvie, 1997). This study provides a platform from which to do this and integrates both environmental and support characteristics in recognition of the crucial role both have to play in helping consumers to live successfully in the community.

4. Comprehensive assessment of need amongst a group of consumers considered to require
a high level of support provides a starting-point in the development of these services, an opportunity for ongoing monitoring, and an evaluation as to their effectiveness (Hansson et al., 1995). The author found no other published research using the CAN in high support community settings and the data presented in this paper will provide a valuable addition to the growing understanding of needs amongst different population groups.

5. Trauer, Duckmanton and Chiu (1997) assessed the sensitivity of the Life Skills Profile in differentiating between hospital- and community-based consumers. The 16-item version of the tool is more commonly used since the implementation of Mental Health Outcome and Assessment Training (MH-OAT), a state-wide initiative to ensure that consumers are accurately assessed and provided with appropriate interventions. Consequently, this study will assess the sensitivity of the LSP-16 to differences between consumers in 24-hour settings and those receiving less intensive support. Identification of LSP-16 scores which can discriminate between these loci of community care could provide a useful guide for the interpretation of LSP-16 scores.

6. Issikidis and Teesson (1999) clarified the relationship between the CAN and a widely used measure of disability, the Health of the Nation Outcome Scales (HoNOS). The CAN is being used increasingly in Australian mental health settings and an examination of its relationship to other components of MH-OAT (i.e. the LSP-16) is required.

RESEARCH QUESTIONS
What is the need profile, degree of satisfaction and level of functioning of consumers in high support, very high support and residential rehabilitation services in NSW? Specifically:

(a) What are the predominant areas of need and in particular, which of these continue to be unmet?
(b) What are the differences in the needs of subgroups of consumers with regard to age and sex?
(c) In which areas of need is help predominantly offered by friends or relatives or local services?
(d) Is there a relationship between the help received and the help needed in different areas?
(e) What is the general acceptability of the help received with different areas of need?
(f) How do the need profiles of consumers in high support settings compare with those published in other studies undertaken with consumers in settings providing less intensive support?

HYPOTHESES
1. Consumers of services implementing a greater number of consumer preferred characteristics will report a lower number of unmet needs than consumers of services implementing fewer consumer preferred characteristics.

2. Consumers of services implementing a greater number of consumer preferred characteristics will
report higher levels of satisfaction with the amount and type of help received than consumers of services implementing fewer consumer preferred characteristics.

3. Consumers of ‘very high support’ services (those with 24-hour on-site staff support) will report a greater number of needs in different domains to consumers of ‘high support’ services (those without 24-hour on-site staff support).

4. Consumers of ‘very high support’ services will have a lower, staff-rated level of functioning than consumers of ‘high support’ services.

5. Staff rated assessments of functioning will be negatively correlated with consumer perceptions of need.

6. The functioning CAN sub-domain identified by Slade et al. (1998) will correlate more significantly with LSP-16 scores than the other four CAN sub-domains.
METHOD

PARTICIPANTS

Participants were residents and key workers of services meeting NSW Health’s definitions of high support, very high support and residential rehabilitation. Boarding houses were not included as they did not meet NSW Health’s criteria in terms of the support they provided and accommodation on the grounds of psychiatric hospitals were excluded because the focus of the study was on accommodation available in community settings.

During a seven month period between July 2002 and January 2003, consumers of 26 services surveyed as part of a quality improvement project were asked to participate in the study. Inclusion criteria were: (a) primary diagnosis of a mental illness (people whose primary need for care stemmed from a developmental disability, substance abuse problem or organic brain injury were not eligible as the assessment tools used were not validated for use with these groups); (b) recipient of a minimum of eight hours of accommodation support, five days per week; (c) over the age of 18; and (d) able to understand English (the assessment tools used had not been standardised for use with people who spoke a language other than English).

Service providers were asked if the research team could visit the facility to conduct face-to-face interviews with consumers. In addition, each consumers’ key worker would be asked to complete a functioning assessment on their behalf. In order to collect an unbiased sample, three methods were used to recruit consumers depending upon the size of the facility: 1) for small facilities (12 beds or less), all participants receiving a high level of support were invited to participate; 2) for medium sized facilities (12-25 consumers), an alphabetical list was made and every other consumer on the list was invited to participate; and 3) for large facilities, every fourth person on an alphabetised list was invited to participate. This process was undertaken by service providers to protect consumers’ anonymity and thus data regarding refusal rates is not available. However, service providers were asked to notify the research team if they believed the resultant sample of consumers was not representative and this did not occur.

PROCEDURE

Key workers were provided with ‘information for participants’ (see Appendix A) and asked to read this with eligible consumers prior to the research team visiting the site. Before commencing interviews, the researcher went through this information with individual consumers for a second time and asked them to sign a consent form if they wanted to proceed; no consumers declined. This two-layered approach to the consent process was considered important given the particular vulnerability of this client group. Most interviews took place in the consumers’ home with a few conducted in private rooms in ‘drop-in’ centres. Consumers’ names and other identifying details were not recorded and they were paid $20 after completing the interview.
Interviewers were a registered psychologist, a consumer consultant and a psychology student. All three interviewers underwent training according to the guidelines laid out in ‘CAN: Camberwell Assessment of Need’ (Slade et al., 1999). Inconsistencies in scoring which emerged during completion of the training kit vignettes prompted the development of guidelines agreed upon between the interviewers to enhance consistent scoring.

The first thirty interviews were conducted by pairs of interviewers to test inter-rater reliability. Each pair conducted ten interviews with the interviewer and observer switching roles half way through (each person in a pair interviewed five consumers and observed five interviews). Agreement between raters according to Landis and Koch’s (1977) kappa interpretation scale ranged from slight to almost perfect. The ratings of the primary interviewer were used in the subsequent analysis of needs. The remaining interviews were conducted by two of the three interviewers described above.

Subsequent to providing consent and prior to undertaking need assessments, consumers were asked how long they had been in their current accommodation. In addition, each consumer’s key worker was asked to complete a Life Skills Profile-16 and return it to the chief investigator. It was expected that most key workers had been trained in how to complete this measure under the auspice of the Mental Health Outcomes and Assessment Training (MH-OAT) initiative, one of the aims of which is to ensure that consumers are accurately assessed and provided with appropriate interventions.

Data collection was undertaken by the author in her role as Project Manager of a quality improvement project funded by the NSW Centre for Mental Health. The non-government organisation funded to undertake the project (Aftercare) gave permission for further analysis of the data as part of the author’s Masters program and the protocol for this was approved by the University of Wollongong Human Research Ethics Committee.

**MEASURES**

*Camberwell Assessment of Need - Research (CAN-R)*

Need was assessed using the Camberwell Assessment of Need, the reliability and validity of which has been tested (Phelan et al., 1995). The instrument assesses need in 22 domains, each of which is broken down into four sections. In section 1 the rater uses a three-point scale to assess need status where 0 = no problem, 1 = no / moderate problem because of continuing intervention (i.e. met need), 2 = current serious problem (i.e. unmet need) and 9 = not known. Ratings of ‘not known’ were re-coded to zero (meaning ‘no problem’) since subjectively not knowing one has a need is equivalent to not having one (Issakidis & Teesson, 1999). The number of needs (scores of 1 or 2) and unmet needs (scores of 2) were aggregated over the 22 items. Total met and unmet needs for each participant were also calculated as per the five sub-domains described by Slade, Phelan and Thornicroft (1998): health, basic, social, services and functioning.
For each need recorded as being present, further questions were asked from Sections 2 and 3 about who was providing help and how much help the interviewee thought they needed. Finally, Section 4 was used to determine whether the interviewee was satisfied with the kind and amount of help received using a 2-point scale (0 = no and 1 = yes). Once again, satisfaction ratings were aggregated across the 22 domains and divided by the total number of met needs recorded for each participant. This was necessary as satisfaction is only rated in domains where consumers have a met or unmet need. Simply using aggregated satisfaction scores could have resulted in consumers with low satisfaction scores relative to others scoring a high rating simply because they had more needs (and vice versa).

Although the CAN can be completed by both staff and consumers, logistical issues demanded that only one set of ratings be collected for this paper. Consumer ratings were given preference due to their more reliable assessment of unmet need and the association this has with quality of life (Slade et al., 1999).

**Life Skills Profile - 16 (LSP– 16)**

Key workers were asked to complete a shortened version of the LSP for each participant who completed the CAN (Rosen, Hadzi-Pavlovic & Parker, 1989; Rosen, Trauer, Hadzi-Pavlovic & Parker, 2001). This tool is part of a suite of measures included in the MH-OAT initiative and thus known to be familiar to most participants.

The 16 item LSP (LSP-16) focuses on observable behaviours and offers a robust measure of functioning in four domains. The domains and number of items include withdrawal (4 items), anti-social behaviour (4 items), self-care (5 items) and compliance (3 items). Each of the 16 items was rated on a four-point scale (0-3) where higher scores indicate poorer functioning. When scoring each item, key workers were asked to consider the consumers’ general functioning over the past three months.

**Consumer Preferred Characteristics**

Information about the key characteristics of services at which consumers resided was available as part of a state-wide survey of high support, very high support and residential rehabilitation services operating across NSW (Freeman et al., 2003). A copy of this survey can be viewed in Appendix B. Thirteen of these characteristics were chosen based on research on consumer preferences (see Introduction) and their presence or absence was scored on a two-point scale (0 = no and 1 = yes). Scores were aggregated for each service resulting in services implementing the most number of consumer preferred characteristics achieving the highest scores.
DATA ANALYSIS
Data were analysed using the Statistical Package for Social Sciences (SPSS) Version 11.5. Descriptive data are presented as response rates, percentages and means. The sample was divided into individuals who did and did not receive 24-hour support to look at differences in numbers of needs, types of needs, satisfaction and functioning.

Consumer preferred characteristic (CPC) data was unavailable for 16 consumers resulting in a sample size of 149 consumers for all analyses relating to associations between CPC’s and need and satisfaction. Stepwise linear regression was used as a way to select the significant predictor variables from the thirteen CPCs. With regard to need, nine separate regressions were performed. The first four used met need, unmet need, total need and the percentage of met needs relative to total need as the dependent (outcome) variable and the suite of thirteen CPC’s as the independent (predictor) variables. The predictor variables were dichotomous (1 = yes; 2 = no), and the outcome variables were continuous. The remaining five regressions used total need in the five CAN a priori sub-domains described by Slade, Phelan and Thornicroft (1998) as the dependent (outcome) variable with the same thirteen CPC’s as the independent (predictor) variables.

Finally, two additional regressions were undertaken to explore satisfaction (as measured by the CAN) with the kind of help received and satisfaction with the amount of help received. Total satisfaction (relative to the number of needs expressed) with the kind and amount of help received was the dependent variable and the thirteen CPCs were the independent variables.

The relationship between help received from friends or relatives and help received from services, help received from services and help needed from services, length of time spent living in the accommodation and satisfaction with the kind and amount of help received (as measured by the CAN), age and satisfaction with the kind and amount of help received (also measured by the CAN), and total need and satisfaction scores were explored using correlational analysis. In addition, correlations were also performed using the total CPC score and need and satisfaction, and need and functioning (as measured by the LSP-16).
RESULTS

NEED PROFILE, SATISFACTION AND LEVEL OF FUNCTIONING

A total of 43 high support, very high support and residential rehabilitation services were identified across New South Wales and the Australian Capital Territory. Thirty-three of these completed the survey included in Appendix B and a further 8 completed a shorter version over the telephone. There were a total 761 beds available at these 41 services and 1140 consumers had accessed them during the financial year ending June 2002. Fifty-six percent of services were located in urban areas and 46% provided very high support (24-hour staffing).

The 168 consumers nominated by their key workers as eligible for inclusion in the study resided in a sub-sample 26 services which were representative of the original sample in terms of management (government or non-government), location (urban or rural) and level of support provided. All these consumers consented to be interviewed but three CAN interviews were aborted before completion either at the request of the consumer or because of the interviewer’s concerns about the individual’s well-being. The sample size of 165 consumers represents 14% of the total number of consumers supported in high support, very high support and residential rehabilitation settings in the financial year ending June 2002 (Freeman et al., 2003).

Seventy-five percent of the sample was male and the mean age was 43 with a range of 19 to 79. The mean number of needs was 7.6 with a range of 1 to 16. The mean number of met needs was 5.5 (range 1 to 12) and the mean number of unmet needs was 2.1 (range 0 to 10). The mean LSP-16 score was 16.9 with a range of 0 to 44. The maximum score is 48 and a high score indicates a low level of functioning.

To ensure inter-rater reliability Kappa Coefficients were calculated for the first question of each CAN item. The following items had Kappa between 0 and 0.3: Items 3, 7, 8, 11, 13, 17, 18, 19. The remaining items had a Kappa of greater than 0.3. As stated on Page 28, the first author’s ratings were used for this study.

Predominant areas of need and those remaining unmet

The prevalence and severity of needs are show in Table 4 with percentages of the sample (n=165) ranged from highest to lowest frequency of ‘need being met due to help given’. The five most frequent areas of met need were ‘accommodation’, ‘psychotic symptoms’, ‘food’, ‘looking after the home’ and ‘money’. 
Table 4: Prevalence of needs (including met and unmet needs)

<table>
<thead>
<tr>
<th>CAN item</th>
<th>No need n (%)</th>
<th>Met need n (%)</th>
<th>Unmet need n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation</td>
<td>7 (4%)</td>
<td>148 (90%)</td>
<td>10 (6%)</td>
</tr>
<tr>
<td>Psychotic symptoms</td>
<td>22 (13%)</td>
<td>131 (79%)</td>
<td>9 (6%)</td>
</tr>
<tr>
<td>Food</td>
<td>65 (39%)</td>
<td>95 (58%)</td>
<td>5 (3%)</td>
</tr>
<tr>
<td>Looking after the home</td>
<td>86 (52%)</td>
<td>75 (46%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Money</td>
<td>72 (44%)</td>
<td>74 (45%)</td>
<td>17 (10%)</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>80 (49%)</td>
<td>56 (34%)</td>
<td><strong>24 (15%)</strong></td>
</tr>
<tr>
<td>Daytime activities</td>
<td>67 (41%)</td>
<td>55 (33%)</td>
<td><strong>43 (26%)</strong></td>
</tr>
<tr>
<td>Company</td>
<td>74 (45%)</td>
<td>42 (26%)</td>
<td><strong>47 (29%)</strong></td>
</tr>
<tr>
<td>Physical health</td>
<td>103 (62%)</td>
<td>38 (23%)</td>
<td><strong>24 (15%)</strong></td>
</tr>
<tr>
<td>Benefits</td>
<td>113 (69%)</td>
<td>37 (22%)</td>
<td>11 (7%)</td>
</tr>
<tr>
<td>Transport</td>
<td>112 (68%)</td>
<td>35 (21%)</td>
<td><strong>18 (11%)</strong></td>
</tr>
<tr>
<td>Self-care</td>
<td>133 (81%)</td>
<td>31 (19%)</td>
<td>1 (0.6%)</td>
</tr>
<tr>
<td>Basic education</td>
<td>131 (79%)</td>
<td>20 (12%)</td>
<td>14 (9%)</td>
</tr>
<tr>
<td>Safety to self</td>
<td>140 (85%)</td>
<td>16 (10%)</td>
<td>8 (5%)</td>
</tr>
<tr>
<td>Telephone</td>
<td>140 (85%)</td>
<td>15 (9%)</td>
<td>9 (6%)</td>
</tr>
<tr>
<td>Child care</td>
<td>151 (92%)</td>
<td>10 (6%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Info on condition and treatment</td>
<td>126 (76%)</td>
<td>9 (6%)</td>
<td><strong>25 (15%)</strong></td>
</tr>
<tr>
<td>Drugs</td>
<td>152 (92%)</td>
<td>5 (3%)</td>
<td>8 (5%)</td>
</tr>
<tr>
<td>Safety to others</td>
<td>154 (93%)</td>
<td>4 (2%)</td>
<td>7 (4%)</td>
</tr>
<tr>
<td>Intimate relationships</td>
<td>115 (70%)</td>
<td>1 (0.6%)</td>
<td><strong>35 (21%)</strong></td>
</tr>
<tr>
<td>Sexual expression</td>
<td>101 (61%)</td>
<td>1 (0.6%)</td>
<td><strong>28 (17%)</strong></td>
</tr>
<tr>
<td>Alcohol</td>
<td>158 (96%)</td>
<td>0</td>
<td>7 (4%)</td>
</tr>
</tbody>
</table>

**Note.** Bold text indicates levels of unmet need for more than 10% of consumers.
Figure 1 illustrates the number of consumers with met and unmet needs in each domain. Areas in which 80% or more participants reported having no need (‘alcohol’, ‘safety to others’, ‘drugs’, ‘child care’, ‘safety to self’, ‘telephone’ and ‘self-care’) are not included.

**Figure 1: Number of consumers with met and unmet needs in each CAN domain**

The prevalence of unmet needs can be assessed in several ways. A rating of 2 in the first section of an area of need indicates a ‘serious problem’ which, by definition of the instrument, is not being addressed by existing interventions. Using this definition, the most common areas of unmet need were ‘company’, ‘daytime activities’, ‘intimate relationships’, ‘sexual expression’, ‘physical health’, ‘information on condition and treatment’, ‘psychological distress’ and ‘transport’ (see Table 4).

Unmet need may also be defined to exist in an area where the consumer has expressed a need and has also reported receiving no help from either friends or relatives, or local services. Over 20% of consumers reported receiving no help from either friends or relatives or local services with ‘sexual expression’, ‘intimate relationships’, ‘telephone’ and ‘information on condition and treatment’. Areas in which less than 11 respondents expressed a need were not included (‘safety to others’, ‘alcohol’ and ‘drugs’).

Finally, unmet needs may be assessed by looking at ratings of whether or not consumers felt they received the right type of help with an area of need. Over 30% of consumers indicated that they were not receiving the right type of help with ‘information on condition and treatment’, ‘basic education’, ‘telephone’, ‘intimate relationships’, and ‘company’. Once again, the areas of ‘safety to others’, ‘alcohol’ and ‘drugs’ were not included as less than 11 respondents expressed a need in these areas.

In terms of unmet need as indicated by a rating of ‘2’, the need areas ‘intimate relationships’ and ‘sexual expression’ demonstrated the highest proportion of unmet to total needs. ‘Alcohol’ was excluded despite 100% of consumers expressing an unmet need because only seven consumers...
indicated they had difficulties in this area. More than 50% of consumers expressing a need indicated that it was unmet in the areas of ‘information on condition and treatment’, ‘safety to others’, ‘drugs’ and ‘company’.

**Needs and functioning of consumers according to age and gender**

The mean age of the male participants was 42 and that of the females was 47. There were no differences in the number or type of identified needs (including both met and unmet), between males and females but people in different age groups did demonstrate significant differences. The sample was broken into three groups with age ranges 19-34, 35-50 and >50 and met and unmet needs were examined. Domains in which the percentage of consumers with met and unmet needs varied significantly according to age are presented in Table 5.

**Table 5: Percentage of met and unmet need for different age groups**

<table>
<thead>
<tr>
<th>CAN item</th>
<th>Met need</th>
<th>Unmet need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19-34 n=56</td>
<td>35-50 n=56</td>
</tr>
<tr>
<td></td>
<td>19-34 n=56</td>
<td>35-50 n=56</td>
</tr>
<tr>
<td>5. Daytime activities</td>
<td>27</td>
<td>38</td>
</tr>
<tr>
<td>6. Physical health</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>11. Safety to others</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>12. Alcohol</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13. Drugs</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. Transport</td>
<td>7</td>
<td>23</td>
</tr>
</tbody>
</table>

Older consumers had more met needs in the areas of ‘physical health’ and ‘transport’ and fewer unmet needs in the areas of ‘daytime activities’, ‘safety to others’, ‘alcohol’ and ‘drugs’ than younger consumers.

The mean LSP-16 score for males was 17 and for females it was 16.6; the difference between these scores is not significant. There were no significant differences between age groups (19-34, 35-50 and >50 years), and LSP-16 scores.

**Support provided by friends or relatives**

In areas where consumers expressed a need, the extent and amount of help received from friends or relatives or local services was investigated. The only areas in which consumers reported they more often received help from friends and relatives than from local services were ‘intimate relationships’ and ‘child care’. Apart from these two areas, the domains in which friends or relatives most often offered help were ‘company’, ‘psychological distress’, ‘psychotic symptoms’ and ‘safety to self’.

To investigate whether help from friends or relatives was additive or substitutional, correlations of
help from friends or relatives and local services were performed (Table 6). There were three significant positive correlations indicating that help given by friends or relatives and local services were additive in the areas of ‘psychotic symptoms’, ‘psychological distress’ and ‘company’ (p<0.05). There were also two negative correlations in the areas of ‘looking after the home’ and ‘child care’ indicating a substitutional factor between help from friends and relatives and local services (p<0.05).

**Correlations between the help received and the help needed**

To investigate the association between help received from local services and help needed from local services, correlations between these ratings were performed (Table 6). There were high and significant correlations between the help received and needed in 18 of the 22 areas of need. Only in the domains of ‘safety to others’, ‘alcohol’, ‘basic education’ and ‘telephone’ does the amount of help received fail to correlate with the amount of help needed.

<table>
<thead>
<tr>
<th>CAN item</th>
<th>Help friends/relatives vs. services (r =)</th>
<th>Help received vs. help needed from local services (r =)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation</td>
<td>-</td>
<td>0.36**</td>
</tr>
<tr>
<td>Food</td>
<td>-</td>
<td>0.57**</td>
</tr>
<tr>
<td>Looking after the home</td>
<td>-0.24*</td>
<td>0.72**</td>
</tr>
<tr>
<td>Self-care</td>
<td>-</td>
<td>0.83**</td>
</tr>
<tr>
<td>Daytime activities</td>
<td>-</td>
<td>0.61**</td>
</tr>
<tr>
<td>Physical health</td>
<td>-</td>
<td>0.50**</td>
</tr>
<tr>
<td>Psychotic symptoms</td>
<td>0.24*</td>
<td>0.68**</td>
</tr>
<tr>
<td>Info. on condition and treatment</td>
<td>-</td>
<td>0.43*</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>0.23*</td>
<td>0.63*</td>
</tr>
<tr>
<td>Safety to self</td>
<td>-</td>
<td>0.50*</td>
</tr>
<tr>
<td>Safety to others</td>
<td>-</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>-</td>
<td>(-0.48)</td>
</tr>
<tr>
<td>Drugs</td>
<td>-</td>
<td>(0.68*)</td>
</tr>
<tr>
<td>Company</td>
<td>0.29*</td>
<td>0.52**</td>
</tr>
<tr>
<td>Intimate relationships</td>
<td>-</td>
<td>0.54**</td>
</tr>
<tr>
<td>Sexual expression</td>
<td>-</td>
<td>0.47*</td>
</tr>
<tr>
<td>Child care</td>
<td>-0.68*</td>
<td>0.76**</td>
</tr>
<tr>
<td>Basic education</td>
<td>-</td>
<td>0.30</td>
</tr>
<tr>
<td>Telephone</td>
<td>-</td>
<td>0.21</td>
</tr>
<tr>
<td>Transport</td>
<td>-</td>
<td>0.85**</td>
</tr>
<tr>
<td>Money</td>
<td>-</td>
<td>0.67**</td>
</tr>
</tbody>
</table>
Benefits  0.72**

Note. Items in brackets indicate low respondent numbers. Non-significant correlations are not shown for column two.

*P<0.05, **P<0.01 using Spearman’s rank correlation.

**Satisfaction with help received in different areas of need**

In all but one of the 22 CAN domains, more consumers indicated they were satisfied with the kind and amount of help received than those who said they were not (see Table 7).

<table>
<thead>
<tr>
<th>Table 7: Satisfaction with the kind and amount of help received</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAN item</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Accommodation (n=158)</td>
</tr>
<tr>
<td>Food (n=100)</td>
</tr>
<tr>
<td>Looking after the home (n=77)</td>
</tr>
<tr>
<td>Self-care (n=33)</td>
</tr>
<tr>
<td>Daytime activities (n=98)</td>
</tr>
<tr>
<td>Physical health (n=62)</td>
</tr>
<tr>
<td>Psychotic symptoms (n=140)</td>
</tr>
<tr>
<td>Information on condition and treatment (n=34)</td>
</tr>
<tr>
<td>Psychological distress (n=80)</td>
</tr>
<tr>
<td>Safety to self (n=24)</td>
</tr>
<tr>
<td>Company (n=89)</td>
</tr>
<tr>
<td>Intimate relationships (n=36)</td>
</tr>
<tr>
<td>Basic education (n=34)</td>
</tr>
<tr>
<td>Telephone (n=24)</td>
</tr>
<tr>
<td>Transport (n=53)</td>
</tr>
<tr>
<td>Money</td>
</tr>
</tbody>
</table>
With regard to ‘information on condition and treatment’, 62% of consumers said they were not satisfied with the kind and amount of help received compared to only 26% of consumers who said they were. Other areas in which more than a quarter of consumers said they were not satisfied with the kind of help received were basic education (41%), telephone (38%), intimate relationships (31%) and company (26%). There were three additional areas in which over 25% of consumers were also dissatisfied with the amount of help received: safety to self (33%), daytime activities (32%) and psychological distress (29%).

At least three quarters of consumers were satisfied with the kind of help they received with looking after the home (91%), self-care (91%), food (84%), psychotic symptoms (83%), benefits (81%), accommodation (81%), transport (77%), money (76%) and safety to self (75%). More than 75% of consumers were also satisfied with the amount of help received in these areas with the exception of money, transport and safety to self.

There was no correlation between the length of time spent living in the accommodation and satisfaction with the kind or amount of help received. Likewise, there was no correlation between the age of consumers and their satisfaction with the kind or amount of help received.

Correlational analysis was also performed between need and satisfaction with the help received as measured by the CAN (see Table 8).

**Table 8: Correlations between need and satisfaction with help received**

<table>
<thead>
<tr>
<th>Satisfaction with kind of help (r =)</th>
<th>Satisfaction with amount of help (r =)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number ‘no needs’</td>
<td>0.33**</td>
</tr>
<tr>
<td>Total number ‘met needs’</td>
<td>0.27**</td>
</tr>
<tr>
<td>Total number ‘unmet needs’</td>
<td>-0.64**</td>
</tr>
<tr>
<td>Total number of needs</td>
<td>-0.33**</td>
</tr>
</tbody>
</table>

*p<0.05; ** p<0.01

There were significant positive correlations between having no needs or having met needs and being satisfied with the kind and amount of help received. Conversely, there were significant negative correlations between having unmet needs and the total number of needs and not being satisfied with the type and amount of help received.
CONSUMER PREFERRED CHARACTERISTICS AND NEED

Information about the consumer preferred characteristics of services was available for 24 of the 26 services at which consumers in the original sample resided (resulting in an amended sample size of 149 consumers). The mean age of this sub-sample was the same as the original sample (43) and 74% were male.

Each service was scored according to the number of consumer preferred characteristics they possessed. The mean score was 5.6 with a range of 2 to 9 and a maximum score of 13. Twenty-nine percent of services scored between 2 and 4; 38% of services scored 5 or 6 and 33% of services scored between 7 and 9.

Stepwise linear regression (forward) was used to determine the association between each consumer preferred characteristic and the number of met and unmet needs expressed by consumers (n = 149; see Table 9). With regard to met needs, a model with three predictor variables emerged as the most parsimonious. Due to the scaling of the predictor variables, the negative B coefficient for the ‘Staff on site’ variable indicates that the ‘yes’ response option is associated with more met needs. The positive co-efficients for ‘Services owns property’ and ‘Consumers sign a lease’ indicate that the ‘yes’ response option is associated with fewer met needs. Therefore, consumers at services with on-site staffing where the service does not own the property and consumers do not sign a lease have more met needs. Only 24-hour staffing was predictive of unmet needs with consumers residing at 24-hour services having more unmet needs. The total number of needs expressed by consumers was also predicted by one accommodation characteristic, onsite staffing. Consumers living at services with onsite staff had more needs overall.

Stepwise linear regression was also performed in order to discover associations between consumer preferred accommodation characteristics and the number of met needs expressed by the consumer relative to their total needs. The only characteristic associated with met need as a percentage of total need was the proximity of the service to facilities, with consumers living in services closer than 1km to facilities having a smaller percentage of their needs met (Beta = 0.077, p = 0.046, r²=0.027, adjusted r²=0.020, variance explained=2%).

Table 9: Stepwise regression analyses of the effect of consumer preferred characteristics on need

<table>
<thead>
<tr>
<th>Consumer Preferred Characteristics</th>
<th>Met needs</th>
<th>Unmet needs</th>
<th>Total needs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r²=0.141, adjusted r²=0.124, variance explained=12.4%</td>
<td>r²=0.035, adjusted r²=0.028, variance explained=2.8%</td>
<td>r²=0.051, adjusted r²=0.045, variance explained=4.5%</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>t</strong></td>
<td><strong>Sig.</strong></td>
<td><strong>B</strong></td>
</tr>
<tr>
<td>Staff on site</td>
<td>-1.076</td>
<td>-2.717</td>
<td>.007</td>
</tr>
<tr>
<td>Service owns property</td>
<td>1.571</td>
<td>3.687</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Consumers sign a lease</td>
<td>1.244</td>
<td>2.945</td>
<td>.004</td>
</tr>
<tr>
<td>Service is 24hr</td>
<td>-0.879</td>
<td>-2.307</td>
<td>.022</td>
</tr>
</tbody>
</table>
Note. Independent variables which did not enter any model are omitted from the table.

In addition, Pearson Correlation was performed between the total consumer preferred characteristic score achieved by each service and the number of met and unmet needs reported by consumers. There was no correlation between the number of consumer preferred characteristics demonstrated by the service and consumers’ met or unmet needs.

Associations between the thirteen CPC’s and the types of needs expressed by consumers were also sought using Slade, Phelan and Thomicroft’s (1998) five CAN sub-domains. These are comprised of the following individual CAN domains:

**Health:** physical health, psychotic symptoms, drugs, alcohol, safety to self, safety to others, psychological distress.

**Basic:** accommodation, food, daytime activities.

**Social:** sexual expression, company, intimate relationships.

**Services:** information, telephone, transport, benefits.

**Functioning:** education, money, child care, self-care, looking after the home.

Table 10 presents the results of stepwise linear regression using the thirteen accommodation characteristics as predictor variables and the total number of needs expressed by consumers in these five sub-domains as outcome variables (n = 149). With regard to total need in the health sub-domain, a model with two predictor variables emerged as the most parsimonious. The negative B co-efficients for the ‘1 & 2 bedroom accom avail’ and ‘Service owns property’ variables indicates that the ‘yes’ response option is associated with more needs in the areas of ‘physical health’, ‘psychotic symptoms’, ‘drugs’, ‘alcohol’, ‘safety to self’, ‘safety to others’ and ‘psychological distress’. Therefore, consumers at services where one and two bedroom accommodation is available and the property is owned by the mental health service have more health-related needs.

A model with three predictor variables emerged as most significant in predicting total need in the basic sub-domain. The provision of outreach support and 1 and 2 bedroom accommodation options with no on-site staffing was predictive of fewer needs in the areas of ‘accommodation’, ‘food’ and ‘daytime activities’. Only one predictor variable emerged as significant in predicting the total number of needs for help with ‘sexual expression’, ‘company’ and ‘intimate relationships’ (the social sub-domain). Being provided with a choice of accommodation options was predictive of more social needs.

The total number of needs expressed by consumers in the services sub-domain was best predicted by a model with four predictor variables. There were fewer needs in the areas of ‘information’, ‘telephone’, ‘transport’ and ‘benefits’ amongst consumers living at services where the service managed the property as well as providing support, there was one and two bedroom accommodation available, consumers were required to move out of the accommodation when their
needs changed and there was no choice of accommodation available.

Finally, a model with three predictor variables emerged as the most parsimonious for predicting total need in the functioning sub-domain. The negative B co-efficient for ‘Staff on site’ indicates that consumers at services with on-site staffing have more needs in the domains of ‘education’, ‘money’, ‘child care’, ‘self-care’ and ‘looking after the home’ when the service does not own the property and there is no outreach support provided.
**Table 10:** Stepwise regression analyses of the effect of consumer preferred characteristics on total needs in the five a priori CAN sub-domains

<table>
<thead>
<tr>
<th>Consumer Preferred Characteristics</th>
<th>Health</th>
<th>Basic</th>
<th>Social</th>
<th>Service</th>
<th>Functioning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( r^2=0.072 ), adjusted ( r^2=0.059 ), variance explained=5.9%</td>
<td>( r^2=0.172 ), adjusted ( r^2=0.155 ), variance explained=15.5%</td>
<td>( r^2=0.027 ), adjusted ( r^2=0.021 ), variance explained=2.1%</td>
<td>( r^2=0.172 ), adjusted ( r^2=0.149 ), variance explained=14.9%</td>
<td>( r^2=0.216 ), adjusted ( r^2=0.2 ), variance explained=20%</td>
</tr>
<tr>
<td>B</td>
<td>( t )</td>
<td>Sig.</td>
<td>B</td>
<td>( t )</td>
<td>Sig.</td>
</tr>
<tr>
<td>1 &amp; 2 bedroom accom avail</td>
<td>-0.490</td>
<td>-2.733</td>
<td>.007</td>
<td>0.278</td>
<td>2.463</td>
</tr>
<tr>
<td>Service owns property</td>
<td>-0.436</td>
<td>-2.384</td>
<td>.018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outreach support avail</td>
<td></td>
<td></td>
<td>1.052</td>
<td>4.309</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Staff on-site</td>
<td>-0.355</td>
<td>-2.955</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choice of accom avail</td>
<td></td>
<td></td>
<td>0.029</td>
<td>-2.028</td>
<td>.044</td>
</tr>
<tr>
<td>Service mngs property</td>
<td></td>
<td></td>
<td>0.444</td>
<td>1.777</td>
<td>.078</td>
</tr>
<tr>
<td>Move when needs change</td>
<td></td>
<td></td>
<td>0.782</td>
<td>2.737</td>
<td>.007</td>
</tr>
</tbody>
</table>

**Note:** Independent variables which did not enter any model are omitted from the table.
Pearson correlations were also performed between the total consumer preferred characteristic score of the service and the total number of met needs in each of the five sub-domains. The only significant result was in the basic sub-domain where the total number of met needs was negatively correlated with the total consumer preferred characteristic score ($r = -0.310; p < 0.001$) i.e. the more the service conforms to a consumer preferred model of care, the fewer met needs consumers had in the areas of ‘accommodation’, ‘food’ and ‘daytime activities’.

CONSUMER PREFERRED CHARACTERISTICS AND SATISFACTION

Satisfaction ratings with the kind and amount of help received (as measured by the CAN) were aggregated and then divided by the number of needs identified by each consumer. This was necessary to ensure that consumers with a high number of needs were not mistakenly rated as being highly satisfied relative to consumers with few needs. These scores were used as outcome variables in two separate stepwise linear regressions to identify which of the thirteen consumer preferred characteristics predicted satisfaction with the kind of help received and the amount of help received ($n = 149$).

Satisfaction with both the kind and amount of help received was best predicted by two-factor models and the same two predictor variables featured in each: ‘consumer signs lease’ and ‘service owns property’ (see Table 11). Consumers who signed a lease and resided in properties owned by the mental health service were less satisfied with the kind and amount of help they received.

<table>
<thead>
<tr>
<th>Consumer Preferred Characteristics</th>
<th>B</th>
<th>t</th>
<th>Sig.</th>
<th>B</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer signs lease</td>
<td>0.172</td>
<td>3.601</td>
<td>&lt;.001</td>
<td>0.154</td>
<td>3.114</td>
<td>.002</td>
</tr>
<tr>
<td>Service owns property</td>
<td>0.108</td>
<td>2.201</td>
<td>.029</td>
<td>0.112</td>
<td>2.209</td>
<td>.029</td>
</tr>
</tbody>
</table>

In addition, there were no significant correlations between the total consumer preferred characteristic score and satisfaction with the kind and amount of help received. However, there was a significant positive correlation between the total consumer preferred characteristic score and satisfaction with the amount of help received in the ‘accommodation’ CAN domain ($r = 0.196; P = 0.026$; significant at the 0.05 level).
CONSUMERS LIVING IN HIGH SUPPORT AND VERY HIGH SUPPORT ACCOMMODATION

Comparisons were made between consumers receiving very high support (defined by NSW health as 24-hour care) and those receiving high support (a minimum of eight hours per day, five days per week). The following analyses were conducted on the entire sample; n=165. Results are displayed in Table 12.

Table 12: Age, gender, length of stay, need and satisfaction amongst consumers with and without 24-hour support

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>24hr (n=76)</th>
<th>Not 24hr (n=89)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>76% male</td>
<td>74% male</td>
</tr>
<tr>
<td>Age</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>Average length of stay</td>
<td>17.1 months</td>
<td>36 months**</td>
</tr>
<tr>
<td>Mean number of needs</td>
<td>8.0</td>
<td>7.3</td>
</tr>
<tr>
<td>Mean number of met needs</td>
<td>5.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Mean number of unmet needs</td>
<td>2.6</td>
<td>1.7*</td>
</tr>
<tr>
<td>Satisfaction with kind of help</td>
<td>0.70</td>
<td>0.78*</td>
</tr>
<tr>
<td>Satisfaction with amount of help</td>
<td>0.66</td>
<td>0.75*</td>
</tr>
</tbody>
</table>

*P<0.05, ** P<0.01 one-way ANOVA

Consumers at 24-hour services had been in their accommodation for a significantly shorter time than consumers at services providing less intensive support. Consumers in these two settings were not significantly different in terms of the number of met needs and the total number of needs they identified. However, consumers without 24-hour support reported significantly fewer unmet needs than those at services with 24-hour staffing (P<0.05).

Comparisons were also made between the total number of needs in each CAN sub-domain for consumers in very high support settings and consumers in high support settings (see Table 13). Consumers at services without 24-hour staffing had fewer needs in the basic and services sub-domains than consumers of 24-hour services.

Table 13: Total needs in each CAN sub-domain amongst consumers with and without 24-hour support

<table>
<thead>
<tr>
<th>CAN Sub-domains</th>
<th>24hr (n=76)</th>
<th>Not 24hr (n=89)</th>
<th>Total (n=165)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total needs in health sub-domain</td>
<td>1.87</td>
<td>2.19</td>
<td>2.04</td>
</tr>
<tr>
<td>Total needs in basic sub-domain</td>
<td>2.28</td>
<td>2.06*</td>
<td>2.16</td>
</tr>
<tr>
<td>Total needs in social sub-domain</td>
<td>1.01</td>
<td>0.87</td>
<td>0.93</td>
</tr>
<tr>
<td>Total needs in services sub-domain</td>
<td>1.16</td>
<td>0.80*</td>
<td>0.96</td>
</tr>
<tr>
<td>Total needs in functioning sub-domain</td>
<td>1.67</td>
<td>1.35</td>
<td>1.50</td>
</tr>
</tbody>
</table>

*P<0.05, ** P<0.01 one-way ANOVA
Consumers at 24-hour services were significantly less satisfied with the amount of help they received than consumers at services without this level of support. In particular, fewer consumers residing in 24-hour services were satisfied with the amount of help received with ‘accommodation’, ‘looking after the home’ and ‘basic education’ (see Table 14).

Table 14: Satisfaction with the amount of help received by consumers with and without 24 hour support

<table>
<thead>
<tr>
<th>CAN item</th>
<th>24hr (n=76)</th>
<th>Not 24hr (n=89)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not satisfied</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Accommodation (n=145)</td>
<td>12* (18%)</td>
<td>56 (82%)</td>
</tr>
<tr>
<td>Food (n=98)</td>
<td>8 (16%)</td>
<td>42 (84%)</td>
</tr>
<tr>
<td>Looking after the home (n=77)</td>
<td>9* (24%)</td>
<td>28 (76%)</td>
</tr>
<tr>
<td>Self-care (n=33)</td>
<td>3 (19%)</td>
<td>13 (81%)</td>
</tr>
<tr>
<td>Daytime activities (n=76)</td>
<td>18 (51%)</td>
<td>17 (49%)</td>
</tr>
<tr>
<td>Physical health (n=59)</td>
<td>8 (30%)</td>
<td>19 (70%)</td>
</tr>
<tr>
<td>Psychotic symptoms (n=132)</td>
<td>12 (21%)</td>
<td>46 (79%)</td>
</tr>
<tr>
<td>Information on condition and treatment (n=30)</td>
<td>10 (67%)</td>
<td>5 (33%)</td>
</tr>
<tr>
<td>Psychological distress (n=77)</td>
<td>13 (41%)</td>
<td>19 (59%)</td>
</tr>
<tr>
<td>Safety to self (n=24)</td>
<td>6 (55%)</td>
<td>5 (45%)</td>
</tr>
<tr>
<td>Company (n=65)</td>
<td>11 (35%)</td>
<td>20 (65%)</td>
</tr>
<tr>
<td>Intimate relationships (n=28)</td>
<td>7 (44%)</td>
<td>9 (56%)</td>
</tr>
<tr>
<td>Basic education (n=32)</td>
<td>10* (62%)</td>
<td>6 (38%)</td>
</tr>
<tr>
<td>Telephone (n=22)</td>
<td>6 (37%)</td>
<td>10 (63%)</td>
</tr>
<tr>
<td>Transport (n=50)</td>
<td>8 (27%)</td>
<td>22 (73%)</td>
</tr>
<tr>
<td>Money (n=86)</td>
<td>12 (26%)</td>
<td>34 (74%)</td>
</tr>
<tr>
<td>Benefits (n=44)</td>
<td>5 (29%)</td>
<td>12 (71%)</td>
</tr>
</tbody>
</table>

Note. * Indicates significantly different (P<0.05) between groups (Pearson chi-square). Percentages do not total 100 as unknown values were excluded from this analysis. CAN items 11-13, 16, and 17 are not shown due to very low subject numbers and those with a ~ (tilde) should be interpreted with caution due to low expected subject number in more than one cell.
Table 15 displays the subscale and total LSP-16 scores of consumers residing in services with and without 24-hour staffing. Overall, consumers in facilities providing 24-hour support had significantly higher levels of functioning as indicated by lower LSP-16 scores on two of the four subscales (anti-social and compliance).

Table 15: Mean LSP-16 subscale and total scores for consumers of services with and without 24-hour support

<table>
<thead>
<tr>
<th>LSP-16 Subscale</th>
<th>24hr (n = 76)</th>
<th>Not 24hr (n = 89)</th>
<th>Total (n=165)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawal</td>
<td>3.91</td>
<td>4.73</td>
<td>4.34</td>
</tr>
<tr>
<td>Self-care</td>
<td>6.13</td>
<td>6.77</td>
<td>6.47</td>
</tr>
<tr>
<td>Anti-social</td>
<td>3.18</td>
<td>4.25*</td>
<td>3.74</td>
</tr>
<tr>
<td>Compliance</td>
<td>1.83</td>
<td>2.67**</td>
<td>2.27</td>
</tr>
<tr>
<td>Total</td>
<td>15.05</td>
<td>18.43**</td>
<td>16.82</td>
</tr>
</tbody>
</table>

*p<0.05, ** p<0.01 one-way ANOVA

LEVEL OF FUNCTIONING AND PERCEPTIONS OF NEED

There was no correlation between consumers’ ratings of met and unmet need on the CAN, and clinicians’ ratings of functioning on the LSP-16. Further investigation also revealed no correlation between the total number of needs in the CAN functioning sub-domain and LSP-16 scores.
DISCUSSION

DESCRIPTIVE DATA
This study described needs and satisfaction with the kind and amount of help received from the perspective of consumers living in high support, very high support and residential rehabilitation services in NSW and the ACT, Australia. Furthermore, a staff rating of functioning for the same group of consumers is also included.

The literature review returned no citations which assessed needs amongst consumers of this service type but it was possible to compare results with other studies using the CAN. Two Australian studies returned a mean of 6.0 needs and 7.0 needs amongst consumers receiving standard case management and assertive case management respectively (Gallagher & Teesson, 2000; Issakidis & Teesson, 1999). Other overseas studies have reported a mean number of consumer-assessed needs of between 4.8 and 6.6 amongst consumers of general psychiatric community services (Arvidsson, 2003; Bengtsson-Tops & Hansson, 1999; Hansson et al., 2001; McCrone et al., 2001; Middelboe et al., 2001; Ochoa et al., 2003; Slade et al., 1998; Slade et al., 1999). Consumers in the present study reported an average 7.6 needs whilst consumers receiving a mixture of outreach support in their own apartment, support from staff in a ‘core and cluster’ arrangement and temporary accommodation in a hostel, reported a mean of 8.3 needs (Middelboe et al., 1998). This indicates that consumers receiving housing support have a greater number of needs than those who receive standard psychiatric services and more detailed investigation commenced to determine whether the types of needs identified also differ.

The distribution of needs amongst consumers in this study demonstrated the highest prevalence in the areas of ‘accommodation’, ‘psychotic symptoms’, ‘food’, ‘daytime activities’, ‘money’, ‘company’, ‘psychological distress’ and ‘looking after the home’. These need areas were all among the more prevalent ones in the Danish study of users of a housing support program with the exception of ‘money’ (Middelboe et al., 1998). The other key difference was that 55% of the Danish sample expressed a need for ‘information on condition and treatment’ compared with only 21% of consumers in the present study.

Of Australian consumers receiving standard case management, most had needs in the same areas as the present study, although physical health was a higher priority for case managed consumers and only 13% expressed a need for help with ‘company’ (however, 40% of consumers scored ‘not known’ in this domain) (Issakidis & Teesson, 1999). The most prevalent areas of met needs were identical for both studies i.e. ‘accommodation’, ‘psychotic symptoms’, ‘food’, ‘looking after the home’ and ‘money’.

In 17 of the 22 domains, an average of 12% more high support consumers expressed a need for help than case managed consumers. The greatest percentage difference was in accommodation
with 42% of case managed consumers and 96% of high support consumers having a met or unmet need in this area. This may provide confirmation that consumers in need of accommodation support are getting the help they require, but high support, very high support and residential rehabilitation services aim to provide a much more comprehensive service than simply accommodation and one might have expected greater differences in need across more life domains. The high percentage of met needs in this domain may be because this is the most tangible aspect of support consumers receive and they realise that the associated rehabilitative and disability support provided by staff is contingent upon them living in supported accommodation. In this sense, the ‘accommodation’ domain of the CAN may be acting as a marker for other needs which are also being met whilst the consumer remains at the property. Further studies comparing matched groups of consumers in adequate housing who do not receive rehabilitative and disability support with consumers in supported accommodation are necessary. Such a design would be better able to distinguish between consumers’ needs for practical assistance (e.g. housing), and the benefits of assistance provided as part of programmatic interventions.

An alternative explanation for variations in need across sites was put forward by McCrone et al. (2001) who proposed that the provision of services such as supported accommodation could ‘create’ met needs as it might be assumed by the consumer that because they are receiving a particular service, they have a corresponding need. Conversely, if specific services are not supplied then a consumer might assume that they do not have a need in that area. The absence of a comparison group in the present study does not allow for a similar conclusion to be drawn but this ‘service supply effect’ is certainly worthy of future investigation. By comparing a group of consumers in supported accommodation with a matched control group living in independent accommodation, it would be possible to clarify the role service provision plays in consumers’ perceptions of their needs for care. However, such a study could not determine whether the service is ‘creating’ needs or simply making consumers aware of an area of deficit they had become accustomed to due to a lack of support. It is important to distinguish between these two hypotheses as the former suggests that support services create dependency, whilst the latter implies that services may help to raise awareness of support entitlements.

Variations in ratings of need between different settings could also be due to people with similar diagnoses being grouped together. Simons and Petch (2002) found that consumers with a diagnosis of non-psychotic illness reported higher levels of need (both met and unmet) than consumers with a diagnosis of a psychotic illness. However, Barr (2000) reported consumers’ needs were similar regardless of whether they were in contact with mental health services or not suggesting that those who are sometimes assumed to have less severe difficulties still have a justified need for support. Considerably more research using the CAN with different population groups is necessary before it will be possible to determine whether differences between ratings of need are attributable to characteristics of the individual or their environment, or the existence of
genuine differences. There is certainly no evidence to suggest that consumers consistently over- or underrate needs (Slade et al., 1996) so whatever the reason for the higher number of needs expressed by consumers in high support accommodation compared to those receiving case management, their views must be integrated into service planning.

There were ten domains in which more than 80% of case-managed participants reported having no need, with this being the case in only seven domains in the current study (Issakidis & Teesson’s sample also reported having no problems with ‘transport’, ‘basic education’ and ‘intimate relationships’, 1999). It does not seem feasible that needs in these three diverse areas make it necessary for the consumers in the present study to live in high support accommodation. A more likely explanation is that it is a need for help across a broad spectrum of areas rather than need in a specific area which characterises consumers living in supported accommodation (Brunt & Hansson, 2002). As is the case with many other CAN studies, drugs and alcohol were seldom reported as areas of need despite the fact that dual diagnosis is a major challenge facing mental health services (Wright, Gournay, Glorney & Thornicroft, 2000). It is likely that under-reporting may occur in these sensitive areas or that many consumers feel they have no need for assistance with their drug or alcohol use and therefore respond that they have ‘no problem’ in the area.

With regard to unmet need, in the domains of ‘intimate relationships’ and ‘information on condition and treatment’, a significant number of consumers either indicated they had a serious problem; their needs were not being met by friends or relatives or local services; or the help they were receiving was not of the right type. Areas of unmet need identified using at least one of these definitions were as follows:

<table>
<thead>
<tr>
<th>Company</th>
<th>Daytime activities</th>
<th>Physical health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimate relationships</td>
<td>Telephone</td>
<td>Sexual expression</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>Transport</td>
<td>Information on condition and treatment</td>
</tr>
<tr>
<td>Basic education</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These unmet needs were mainly in the social, health and services sub-domains and were very similar to those reported in other CAN studies (Hansson et al., 1995; Lasalvia, Ruggeri, Mazzi, & Dall’Agnola, 2000; Middelboe et al., 1998; Middelboe et al., 2001). Clearly, living in a congregate setting does not address consumers’ needs for company and meaningful relationships (64% of high support accommodation places are in properties with three or more bedrooms, Freeman et al., 2004). In response to concerns about loneliness and social isolation amongst people living alone under a supported housing model, Carling (1993) suggests that the same concerns are felt by consumers living in traditional residential facilities. Consumer advocates point to the centrality of self-help and mutual support groups as a partial solution to this problem (Carling, 1993).

Anecdotally, many consumers mentioned during the interview that formal services would not be able to help them to meet their need for ‘intimate relationships’ or ‘sexual expression’ and Wiersma
et al. (1998) concurred that unmet needs from the consumers’ point of view are partly considered by the professional as non-meetables needs. Chan and Yu (2004) suggest that poor self-esteem and self-image, poverty, stigma and side-effects of medication may all contribute to consumers’ difficulties in developing intimate relationships. However, further research exploring the ways in which needs interact could reveal that addressing needs for ‘company’, ‘daytime activities’, ‘money’ and ‘physical health’ leads to an associated reduction in unmet needs for intimate relationships and sexual expression.

Although Slade et al. (1998) put ‘daytime activities’ in the ‘basic’ sub-domain, being involved in meaningful activity whether via work, education or attendance at day-centres and community groups, has a strong social component. Being employed is linked to lower levels of loneliness due to greater contact with others and the increased opportunities for socialisation afforded by financial remuneration (Lauder, Sharkey & Mummery, 2004). ‘Daytime activities’ was the only CAN item from the basic sub-domain for which a significant percentage of consumers reported having an unmet need (the percentage of unmet needs in the ‘accommodation’ and ‘food’ domains were only 6% and 3% respectively) which suggests that it may be more appropriately placed elsewhere. Grouping needs together provides researchers, consumers and service-providers with a much more vivid picture of where services are succeeding at meeting needs and where more work is required, but such sub-domains must accurately reflect consumers’ perceptions of the way different areas of their lives impact upon each other. Slade et al’s paper does not detail how the a priori sub-domains were created but this author suggests that it may be valuable to conduct cluster analyses on the needs identified by consumers to develop empirical sub-domains for use in future research.

Physical health needs were unmet for 15% of consumers and 22% felt that they were not receiving the right type of help for physical problems. Having a physical illness has been shown to be significantly associated with difficulties undertaking tasks of daily living (Thomas & McCormack, 1999) indicating that more detailed research into barriers to receiving help with physical problems is worthwhile. Getty, Perese and Knab (1998) proposed that one such barrier was staff being a central health resource for consumers but lacking knowledge about health problems, medications, and approaches to modifying unhealthy lifestyle practices. This result suggests a role for increased staff training on these issues and the development of resources which could be made directly available to consumers to enable them to meet their own needs in this area.

There are many consumers who continue to feel uninformed about their illness and the treatment they are receiving. This is not the sole responsibility of accommodation services, and health professionals at every point of contact need to increase consumers’ access to information and review the ways information is presented to ensure that it is accessible and easily understood. For example, Lovell (1995) found treatment information provided to inpatients was perceived as inadequate and even responses to direct questions were considered unclear or incomplete.
Despite the additional help being provided by family and friends with psychological distress, 15% of consumers continue to have unmet needs in this domain. Traumatic life events are common among persons with severe mental illnesses with some research also suggesting correspondingly high rates of post-traumatic stress disorder (PTSD) (Switzer et al., 1999). Trauma has been found to be associated with a wide range of negative outcomes in people with a severe mental illness, including an increased number of psychiatric hospitalisations, time in residential treatment and cost of care (Newmann, Greenley, Sweeney, & Van Dien, 1998). The results of this study lend support to the suggestion that consumers are routinely assessed for PTSD and that interventions that target PTSD in consumers with severe mental illness are developed (Resnick, Bond & Mueser, 2003). Even for those consumers without PTSD, symptoms of depression and anxiety are common and high support, very high support and residential rehabilitation services will need access to specialist services in order to meet consumers’ needs in these areas.

Finally, unmet needs in the areas of ‘telephone’, ‘basic education’ and ‘transport’ are perhaps more easily explained by resourcing issues but qualitative research might shed light on the kinds of help consumers want with these concerns. Unmet need in the area of ‘telephone’ could be because consumers in group settings are sometimes required to use the telephone in communal areas which may compromise their privacy. With regard to ‘basic education’, consumers who did not have the opportunity to finish their education are dependent on accommodation staff to help them read and complete forms. Even if the amount of help they receive is adequate, they may prefer the opportunity to improve their literacy rather than rely on support workers. ‘Transport’ may be an unmet need for consumers because unmet physical health needs make it difficult to use public transport, the symptoms of mental illness and associated anxieties make the prospect too daunting, or the consequent reliance on busy support staff or expensive taxis restrict individual freedom.

If the goal of high support, very high support and residential rehabilitation services is to improve consumers’ overall quality of life, greater attention must be paid to these areas of unmet need (Hansson et al., 2003; Slade et al., 2004). Unmet needs can highlight areas requiring more resources or measure the adequacy of existing services, and changes in unmet needs can indicate whether or not interventions are effective. Currently services appear to be succeeding at providing a clean and tidy place to live, adequate food and regular medication but opportunities to socialise, access psychological support and engage in meaningful daily activities must be increased. Due to the paucity of published Australian research using the CAN it is hard to confirm whether or not these services really are serving those most in need, but it seems that regardless of context, the types of met and unmet needs reported by consumers are extremely similar.

There were some differences between the numbers and types of needs expressed by consumers as a function of age. The number of met needs in the areas of ‘physical health’ and ‘transport’ increased with age, possibly because of an overall increase in need in these areas, or because
services are more effective at meeting the needs of older consumers. Conversely, the number of unmet needs in the domains of ‘safety to others’, ‘alcohol’, and ‘drugs’ decreased with age, which is perhaps unsurprising. The level of unmet need in ‘daytime activities’ also diminished with age, which may be due once again to an overall reduction in need that occurs in this area as individuals approach retirement age and society’s expectations of them begin to change. An alternative explanation would be that as a person ages, they gain greater acceptance of their illness and feel more comfortable meeting their needs for daytime activities by accessing day programs.

Needs were being met by friends and relatives in addition to local services in the domains of ‘psychotic symptoms’, ‘psychological distress’ and ‘company’ but needs in the latter two areas remained unmet for many. The fact that friends and family were more likely to provide help with ‘intimate relationships’ and ‘child care’ than local services suggests that there are some issues for which staff involvement is not desired. The unique role played by friends and relatives was highlighted by Humberstone (2002) who found family was not only important for consumers’ social contact but also provided a sense of identity and were sources of love and connection. Functions such as these cannot be replaced by formal services but these results do highlight the challenges faced by relatives of people with severe mental illness and the need for support to be provided to carers, even when their relative is a recipient of 24-hour services.

In general, the help needed and received from local services was highly correlated and this was in spite of the fact that correlations were diminished due to differences in the level of help a consumer felt he or she needed e.g. a consumer might explain that they receive a high level of help but that they only need a moderate amount. Areas with adequate respondent numbers and no correlation between help received and needed were ‘basic education’ and ‘telephone’ where consumers were not receiving as much help as they felt they needed. It should be noted however that the number of consumers with unmet needs in these domains was fairly small.

Overall, the majority of consumers were satisfied with the kind and amount of help they were receiving. However, the satisfaction section of the CAN uses closed-ended questions and Thomas and Bond (1996) warn that consumers respond more positively to such questions than to questions phrased in an open-ended style. With regard to ‘information on condition and treatment’, more consumers indicated they were dissatisfied with the kind and amount of help they received than those indicating they were satisfied. This finding is corroborated by consistent findings in consumer satisfaction studies of poor satisfaction in the area of information concerning condition and treatment (Hansson et al., 1995).

Areas of need in which more than 25% of consumers were dissatisfied with either the kind or amount of help received crossed all five CAN sub-domains. Consumers were particularly dissatisfied with the kind of help provided in the social sub-domain and problems in the health sub-domain also emerged when the amount of help was considered. These areas of dissatisfaction
closely mirror those areas in which needs were unmet for a significant number of consumers suggesting that addressing unmet needs may also lead to improvements in satisfaction ratings. However, satisfaction can be mediated by a number of factors including continuity of program contacts and the strength of the helping alliance as perceived by the consumer (Calsyn, Morse, Klinkenberg, Yonker & Trusty, 2002). Previous research has suggested that getting consumers involved in activities of their own choosing would result in increases in satisfaction (Champney & Dzurec, 1992) and this may or may not be mediated by a reduction in unmet need.

More than 75% of consumers were satisfied with the kind of help received in over half the CAN domains examined; there were fewer CAN domains in which such a high percentage of consumers were satisfied with the amount of help received. In contrast to the discussion of dissatisfaction above, areas of need where at least three-quarters of consumers were satisfied with either the kind or amount of help did not cross all CAN sub-domains. There were no needs in the social sub-domain in which a high percentage of consumers were satisfied, further evidence for the need to review service provision in this area.

The high satisfaction rates regarding ‘self-care’, ‘looking after the home’, ‘food’, ‘accommodation’, and ‘psychotic symptoms’ point to some success with regard to the core elements of supported accommodation, namely the focus on housing and activities of daily living. As per previous studies, consumers were more satisfied with the type of intervention than with the amount of help given overall (Middelboe et al., 1998). This does not necessarily suggest that consumers wanted more help than they were receiving as anecdotally, some consumers indicated they were dissatisfied with the amount of help being provided because they felt it was excessive. This resonates with findings reported by Hansen, Hatling, Lidal and Ruud (2004) regarding the tendency to ‘push’ consumers into more treatment or assistance than they want despite this contravening philosophies of empowerment and self-determination.

Although there were significant correlations between having no needs or having met needs and being satisfied with the kind and amount of help received (and between the number of unmet needs and total needs and not being satisfied with the kind and amount of help received), further research is necessary to determine the direction of causality between satisfaction and need. Research indicates that satisfaction is a multidimensional concept and that personality also has an important role to play in explaining its more general aspects (Schutt et al., 1997).

Finally, LSP-16 scores were also compared with those obtained in other studies in an effort to determine whether consumers in high support accommodation have a lower level of functioning than consumers receiving general community care. The lack of detailed information on the context from which consumers in these studies were sampled precludes conclusive answers. The results in the present study bear closest resemblance to those obtained by the ‘Adult Community’ group (16.2) sampled by Buckingham, Burgess, Solomon, Pirkis and Eagar (1998) although 10% of
consumers scored 25 or over (the mean for in-patients in Buckingham et al.’s study was 25.4). Another Australian study found a mean LSP-16 score of 13.2 for men with a significantly lower 10.8 for women. There was no such difference according to gender (or age) in the present study. Consumers in the ‘transfer’ cohort (15.6) achieved a score most similar to that found in the current study (16.9) (Trauer, 2003 – unpublished manuscript).

Overall, consumers in high support accommodation recorded LSP-16 scores ranging from those one might expect of people receiving inpatient care to those which might be obtained by people without a psychiatric disability. This range of scores is surprising and remarkable, especially considering nearly a quarter (21%) of consumers had an LSP-16 score of ten or below, raising questions about whether they require the high level of support being provided. Likewise, the extremely high scores obtained by some consumers are rarely encountered in ordinary practice suggesting that either the assessment was completed incorrectly by the key worker or that these individuals were acutely unwell. All staff of government services would have received training in the use of the LSP-16 as part of MH-OAT but 65% of the services visited were non-government and these services were not included in this initiative. Thus, the possibility of lack of training contributing to these results would have to be ruled out before the utility of the LSP-16 as a tool for determining consumers' support needs should come into question.

CONSUMER PREFERRED CHARACTERISTICS AND ASSOCIATIONS WITH NEED AND SATISFACTION

Overall, results do not support the hypotheses that consumers in services implementing more consumer preferred characteristics have fewer unmet needs and greater levels of satisfaction. Only on-site staffing, property ownership, the use of leases and the intensity of staff support appeared to have any association with the number of needs identified by consumers. In line with the hypothesis, consumers living in properties not owned by the mental health service had more met needs but only when there were was on-site staffing and consumers did not sign a lease (two characteristics known to be less preferred by consumers). Another characteristic disliked by consumers (24-hour staffing) was predictive of more unmet needs which is aligned with the hypothesis. Having staff based on-site also influenced need in the expected direction with consumers at these services having more needs overall. Finally, living close to community facilities was predictive of consumers having a smaller percentage of their total needs met which is contrary to what was hypothesised.

Using met need as a percentage of total need was designed to reveal how successful services were at meeting needs regardless of the number of needs consumers identified. It was expected that living close to shops and facilities might increase the extent to which needs are met as convenient location is known to be valued highly by consumers (Massey & Wu, 1993). It is possible that the result obtained in the current study was due to a confounding factor linked to housing location which was not taken into account. Alternatively, consumers with greater access to
community facilities may have higher expectations of services in terms of the ways their needs are met.

The lack of a consistent trend between consumer preferred characteristics and need is further illustrated by the absence of a correlation between the total 'consumer preferred characteristic' score achieved by the service and the number of needs of consumers residing there. Aggregating scores can lead to the loss of information but a much larger sample size would be necessary to explore the impact of specific consumer preferred characteristics on specific needs. For example, being close to transport may be associated with fewer needs in the CAN domain 'transport' but subdividing the data to this degree resulted in insufficient respondents in each group.

The use of Slade et al.'s (1998) a priori sub-domains went some way towards exploring the impact of consumer preferred characteristics on types of need rather than just the number of needs. Just over half of the thirteen consumer preferred characteristics had some association with the types of need reported with only proximity to transport and facilities, signing a lease, the use of 'house rules', having separate bedrooms and the provision of 24-hour staffing failing to predict need in any of the five sub-domains. The availability of 1 and 2 bedroom accommodation and property ownership on the part of the mental health service predicted more needs in the health sub-domain. The impact of the number of living companions must be interpreted with caution however because although the services offered 1 or 2 bedroom accommodation, the consumer interviewed was not necessarily accessing it.

There were three consumer preferred characteristics associated with having fewer needs in the basic sub-domain covering both property characteristics and the provision of support (1 and 2 bedroom accommodation available with off-site staffing provided on an outreach basis). Due to the cross-sectional nature of the study, it is not possible to determine whether consumers are at services with these characteristics because they have fewer needs, or whether the consumer preferred model of support leads to better outcomes. Furthermore, Pearson Correlation revealed a negative correlation between the aggregated 'consumer preferred characteristic' score and the total number of met needs in this sub-domain ($r = -0.34$; significant at the 0.01 level). In attempting to create services aligned with consumer preferences, it is important that help with basic needs for accommodation, food and daytime activities are not overlooked.

The provision of a choice of housing options predicted more needs in the social sub-domain, possibly because being given a choice increases expectations about having a fulfilling social life. Alternatively, consumers who have the opportunity to live in a preferred setting may therefore move their focus from securing more appropriate housing to meeting needs in other areas of their lives. Fewer needs in the services sub-domain was predicted by living in a property managed by the support service which provided one and two bedroom settings but did not offer a choice of housing and required consumers to move on when their needs changed. This combination of characteristics
(with the exception of one and two bedroom options) is indicative of a traditional, 'linear continuum' model of care suggesting that consumers in these services have less need for help with the telephone, transport, benefits and accessing information. Without information on the ratio of met needs to total needs, no definitive conclusions can be reached but it is possible that consumers receiving more recently developed models of care where the provision of housing and support is separate still require help with basic services.

Finally, having more needs in the functioning sub-domain was related to the service not owning the property, the absence of outreach support and the provision of on-site staffing. Once again, the cross-sectional nature of this study makes it impossible to determine whether consumers with more needs in the domains of ‘education’, ‘money’, ‘child care’, ‘self-care’ and ‘looking after the home’ are more likely to live at services with these characteristics or whether living in such services creates needs in these areas.

To summarise, ten of the thirteen consumer preferred characteristics predicted either the number or types of needs expressed by consumers with only on-site staffing and property ownership predicting both. The models predicting fewer needs did not consistently conform to consumer preferred models of care suggesting either consumer preference does not have a strong link with need, or there are other individual or service characteristics not controlled for during this study which confounded results. In addition, the influence of the housing and support program on need may reduce in settings where support and supervision are less intrusive as community influences take on more significance.

Satisfaction with the kind and amount of help received by services (as measured by the CAN) was only predicted by two consumer preferred characteristics. Living in a property owned by the mental health service was considered to be less preferred by consumers and indeed, consumers in these situations were less satisfied with both the kind and amount of help received (they were also shown to have fewer met needs, see Table 9). However, this was only the case when consumers signed a lease which was hypothesised as resulting in higher levels of satisfaction. Signing a lease was also predictive of fewer met needs and met need and satisfaction correlate but it is unclear whether the lower number of met needs results in less satisfaction or vice versa. Aggregation of consumer preferred characteristic scores for each service showed no correlation with overall satisfaction across the 22 CAN domains i.e. consumers of services implementing high numbers of consumer preferred characteristics were not more satisfied with the kind or amount of help they received.

That notwithstanding, the positive correlation between the total consumer preferred characteristic score and satisfaction with the amount of help received in the ‘accommodation’ CAN domain suggests that information may have been lost as a result of aggregating satisfaction scores. Quality of life research has shown that the relationship between objective life conditions and the subjective appraisal of quality of life is limited to targeted domains (Hansson et al., 2002). A specificity of
effects in this respect is also supported by some earlier intervention studies where quality of life changes have been noted in life domains targeted by the intervention and closely related domains, but not in other domains or in overall quality of life. Further support for the fact that the same might have occurred with satisfaction in the present study comes from research on satisfaction using the Lancashire Quality of Life Profile (Hansson et al., 2002) where having an independent housing was consistently related to better satisfaction with different aspects of the housing situation. This study had insufficient respondent numbers to examine the impact of specific consumer preferred characteristics (e.g. proximity to transport) on satisfaction in a specific domain (e.g. transport) but this seems to be an area worthy of further investigation.

**NEED, SATISFACTION AND FUNCTIONING AMONGST CONSUMERS OF VERY HIGH (24-HOUR) AND HIGH SUPPORT SERVICES**

Consumers at 24-hour services had been there for a significantly shorter period of time than consumers of services providing less support. This may be indicative of services conforming to a continuum model with 24-hour support being viewed as a transitional option only. The need profile and functioning results for consumers receiving 24-hour care make it unlikely that housing instability amongst this group is due to personal characteristics. Lipton, Siegel, Hannigan, Samuels and Baker (2000) examined residential stability among homeless persons with severe mental illness and found they could remain in stable housing for periods of up to five years with the appropriate support.

Where analysis was conducted on the entire sample (n=165), consumers rated themselves as having almost the same number of needs whether or not 24-hour support was provided. Although this author hypothesised that consumers in more intensive settings would express a greater number of needs, Brunt and Hansson (2002) found that residents in supported community settings had more needs for care than in-patients and this was attributed to differences in the duration of illness. Furthermore, diagnosis may influence the number of needs expressed with those deemed less mentally ill recording higher self-assessed levels of need (Simons & Petch, 2002). Diagnosis was not recorded in the study described in this thesis but it is possible that less intensively staffed services were supporting people with less severe illnesses. It would be valuable to record information on both the duration of illness and diagnosis should this study be replicated elsewhere.

Consumers without 24-hour support had significantly fewer unmet needs than those in 24-hour services. It could be hypothesised that the opposite would be true as 24-hour services would be better resourced to meet consumers’ needs, however, consumers in 24-hour services did have a greater number of needs overall (although this difference was not significant). An alternative explanation could be that consumers in 24-hour services had higher expectations; high unmet need is not necessarily solely attributable to service inefficiencies (McCrone et al., 2001). As per Simons and Petch’s (2002) findings, consumers accessing 24-hour services may have different diagnostic profiles to those receiving less intensive support, resulting in consumers receiving 24-hour care
having more needs which services find difficult to meet.

Hansson et al. (2001) found that a poorer social network was somewhat related to more unmet needs and there is also evidence that in 24-hour staffed sites, staff and co-residents partially replace rather than add to social networks (Pyke & Lowe, 1996). Investigation into the composition of consumers’ social network would be necessary in order to determine whether this is a contributing factor to the greater number of unmet needs reported by consumers in 24-hour settings. The fact that consumers at 24-hour services had more needs in the basic and services sub-domains may suggest that it is needs in these areas which differentiate consumers requiring very high support from those requiring high support. However, as discussed above, consumers may have included the disability support provided by the service in the CAN item ‘accommodation’ resulting in an over-inflation of the need score in the basic sub-domain and needs from other sub-domains being overlooked. Alternatively, Brunt and Hansson (2002) suggest that consumers of supported accommodation are more focused on housing and other fundamental needs and this may be particularly pronounced amongst consumers receiving 24-hour care. It is also possible that being given the opportunity to take more responsibility for basic needs, telephone and transport etc. in a less intensive setting leads to a reduction in need.

Unfortunately, placement in a supported accommodation service may have less to do with need and more to do with other, less objective factors. For example, Hampton and Chafetz (2002) found that of the multiple variables assessed, chronic respiratory illness was strongly associated with placement in supervised group homes and consumers assigned to one team in particular were significantly more likely to live more independently. Higher functioning alone was not significantly associated with placement suggesting a role for clinical judgement. Another study by Goldstein, Dziobek, Clark and Bassuk (1990) found that the primary determinants of placement were clinical severity, early family history and adequacy of family support. Although the less severely ill and better functioning the person, the more likely they were to be placed in an apartment than a more restricted setting, this was mitigated by the availability and adequacy of family support. Mulholland, Wilson, McCrum and MacFlynn (1999) found that poor community skills, socially unacceptable behaviour and attitudinal and relationship problems were more predictive of the level of support provided to individuals than psychiatric symptomatology. Clearly problems with physical health and personal relationships can still be considered needs but individuals with these issues are not necessarily those considered to have the most severe mental illnesses.

Despite the weak relationship between residence characteristics and need, satisfaction with the amount of help received did differ according to the level of staffing in several domains. There were more consumers in 24-hour services who indicated they were dissatisfied with the help they received with ‘accommodation’, ‘looking after the home’ and ‘basic education’ than in services which did not provide 24-hour support. In regard to satisfaction with accommodation, few consumers want
to live with staff (Tanzman, 1993) so it could be that having staff on-site 24 hours a day is particularly onerous and that consumers in these settings express a correspondingly greater degree of dissatisfaction than those people residing in settings where staff are absent at least overnight.

The higher levels of dissatisfaction with the amount of help received with looking after the home may also be a function of an increased staff presence if what staff perceive as encouragement is perceived as ‘nagging’ by service residents. It could also be that 24-hour services tend to provide a different type of support (e.g. they may be more likely to ‘do’ rather than ‘teach’) which is less preferred than that provided in services without 24-hour support, although it is not possible to confirm or refute this with the data available. Differences in the types of support provided may also explain why there are more consumers in 24-hour services who are not satisfied with the amount of help they receive with basic education, but the greater number of consumers with an intellectual disability in these settings is another likely explanation (Freeman et al., 2003).

With regard to overall satisfaction, consumers at 24-hour services were also less satisfied with the amount of help they received than consumers at less intensively staffed services. Consumers at the 24-hour services had been there for a significantly shorter period of time than consumers who did not receive this level of support and Hansson et al. (2002) found that individuals with longer residence in a sheltered housing situation showed greater satisfaction with their living situation. Length of residence could point to problems adapting to housing (especially if it entails living with other people not of your own choice) which in turn could influence satisfaction (Hansson et al., 2002). Another explanation may be the tendency for staff and co-residents to partially replace rather than add to consumers’ social network at 24-hour services which is of concern due to friends being uniquely important determinants of satisfaction (Goering et al., 1992). However, factors outside the control of service providers such as consumers’ age and general quality of life have been found to influence satisfaction with the care provided (Blenkiron & Hammill, 2003) so these results are in no way definitive.

The lower level of functioning amongst consumers without 24-hour support compared with consumers in 24-hour services is puzzling. One explanation may be that round-the-clock staff availability and increased staff to consumer ratio in the 24-hour environments provide more opportunity for living skills training and therefore a reduction in functioning deficits. Alternatively, Evert et al. (2003) found that having strong social networks is associated with improvements in functioning and the role staff and co-residents play as part of consumers’ social network in 24-hour staffed sites (Pyke & Lowe, 1996), may have resulted in this group achieving lower scores.

In a study comparing in-patients and out-patients’ scores on the Independent Living Skills Survey, few differences were found between patient groups concerning their functioning. The authors proposed that this may have been due to the support or structure in sheltered residences which permitted the performance of the task but did not necessarily imply that the patient was competent
to perform it independently (van Haaster, Lesage, Cyr & Toupin, 1994). Thus, in the present study, staff at 24-hour services may have rated consumers as having a higher level of functioning because the intensity of the support resulted in consumers demonstrating fewer functioning deficits. Standard instructions and training for the LSP-16 make clear that it is what the consumer can do for him or herself independently of the support provided that must be rated, raising the possibility that some staff had not been adequately trained in using the measure. In addition to the possible impact of training on LSP-16 scores, Trauer (2003) found that the effects of diagnosis, context and clinician discipline were also related. It is likely that the wide range of scores generated in the current study are a result, not only of differences in functioning between individual consumers, but also the level of support they receive, their diagnosis and possibly staff members’ proficiency in using the measure.

FUNCTIONING AND NEED

It was hypothesised that consumers with high levels of need (particularly high levels of unmet need) would have a low level of functioning as measured by the LSP-16. Middelboe et al. (2001) found impaired functioning as measured by the Global Assessment of Functioning (GAF) to be a significant predictor of need status, explaining 30% of the variance in total needs and 20% of the variance in unmet needs.

The LSP-16 is part of the Mental Health Outcomes and Assessment Training initiative (MH-OAT), a NSW project to strengthen the mental health assessment skills of clinical mental health staff by providing training and implementing uniform assessment protocols. Although the LSP-16 has been described as a measure of functional status (Rosen et al., 1989) a more recent study found that the full version of the tool appeared to measure disability only (Parker et al., 2002). Issakidis and Teesson (1999) found poor to moderate agreement between ratings of need made by consumers and ratings of disability made by clinicians on another MH-OAT tool, the Health of the Nation Outcome Scale (HoNOS). Unlike the present study, Issakidis and Teesson also collected clinician ratings of need and found them to be highly correlated with disability, particularly for unmet needs.

The present study found no relationship between level of functioning and need i.e. a high level of functioning does not necessarily mean a person will have a low level of need. The lack of a correlation between consumer ratings of need and clinician ratings of functioning is perhaps unsurprising when one considers that there is significant disagreement between the groups even when they are both using the same assessment tool (Hansson et al. 2001; Lasalvia et al., 2000; Slade et al., 1999). Consumers and staff will bring different expectations to the assessment process as a result of their sociocultural, educational and professional backgrounds. In addition, there may be genuine differences in perception, intrusive symptomatology for some consumers, or a temptation for clinicians to put a positive or negative bias on their ratings of functioning in order to create a certain impression.
The assessment of functioning is complex in the context of ongoing care for the same reasons put forward by Issakidis and Teesson (1999) to explain differences in clinician and consumer ratings of disability. For example, an individual’s functioning with regard to self-care may be poor but if he or she is reminded daily to shower and brush their teeth, they may maintain an adequate level of care for themselves (i.e. a met need). A tool such as the LSP-16 is not able to discriminate between an inherent ability to perform a task and the appearance of being able to perform it due to the support being provided. Thus an area rated as a high level of functioning by staff might still be rated as a need by consumers if they perceive they would have problems in that area were they not receiving support.

Anderson and Lewis (1999) found that ‘high service users’ had the least severe psychiatric illnesses and higher levels of motivation. It is feasible that some high functioning consumers are expressing a high number of needs because they are aware of the services available to them and motivated enough to want to access them. This explanation is supported by research examining the impact of consumers’ executive functioning (using the Wisconsin Card Sorting Test) on self-assessment of needs (Buhler, Oades, Leicester, Bensley, & Fox, 2001). Higher executive functioning was associated with more self-reported needs (both met and unmet) suggesting that better executive functioning may assist consumers to get their needs met in a variety of ways as a consequence of increased volition, planning, organisation, and goal-directed behaviour. Higher functioning individuals may also be more aware of their needs and therefore express needs in more areas, or require more from services before feeling that their need is being met. Evidently need is a complex variable and not simply an index of functioning (Buhler et al., 2001).

Another factor influencing this result is likely to be the reliance of the LSP-16 on the accurate ratings of behaviours observed by the clinician. Although the tool was completed by the participant’s key worker in most instances, the rater may not always have known the consumer well enough to complete the tool accurately. In addition, despite functioning being considered a somewhat more objective construct than need, some of the questions included in the LSP-16 are open to interpretation. For example, what is viewed as being ‘well-groomed’ by one respondent will not necessarily be viewed in the same way by another. Trauer, Duckmanton, and Chiu (1995) found that inter-rater reliabilities of the LSP were only marginally acceptable and that familiarity with the consumer had a significant influence on a number of the scale scores. These issues may also have contributed to the absence of a relationship between need and functioning.

This complex set of potential influences on functioning and need may explain the lack of agreement between CAN scores (even in the functioning sub-domain) and LSP-16 scores. This has important implications for the types of tools chosen at initial assessment, and to measure progress over time. Both tools undoubtedly have considerable value but their conflicting results in the present study point to the need for further research before a tool to determine the level of support required by
consumers in the community is decided upon. In particular, research comparing clinician ratings of need with their LSP-16 ratings would be worthwhile to ensure that an association between need and functioning was not masked by the differences in rating style between staff and consumers.

**SUPPORTED ACCOMMODATION: CONCEPTUAL IMPLICATIONS**

This study provides further evidence of the lack of clarity surrounding models of supported accommodation with no clear patterns emerging as to the combination of housing characteristics associated with higher or lower numbers of needs. The importance of isolating key characteristics of housing to permit an exploration of its effectiveness is well documented (Chilvers et al., 2002; Newman, 2001) and the thirteen housing and support factors explored in this study acknowledge that both dimensions are important to successful community living. However, despite the advantages of using consumer preferences as a basis for developing these factors, Goldman et al. (1995) question the validity and reliability of the methods used in consumer preference studies. They argue that in ‘real-world’ situations, consumers make preferences subject to the same constraints faced by the general population including income levels and the local housing market. For example, consumers may express a preference for living with a room-mate because they are aware that this is the only type of accommodation they will be able to afford in their area of choice. Consequently Goldman et al. (1995) argue, the consumer preferences outlined in research to date may not be reflective of real choices and therefore their usefulness to service planning is limited.

If policy makers and service providers are truly committed to providing a mental health service which is more inclusive of consumers, it makes sense to base evaluation of these services on factors valued by the individuals using them. However, this study highlights the complexity involved in doing this and the inherent difficulties of conducting research in vivo where it is impossible to control for the myriad of factors which influence consumers’ preferred place to live. It is unlikely that consumer preferences are static and whilst we might all agree that sharing a room with several other people and having no security of tenure are undesirable, other preferred factors might ebb and flow depending upon the circumstances of the individual. Preferences for housing amongst the general population may change depending upon age, marital status and income, and likewise, it would be naïve to assume that all the characteristics identified as being preferred by consumers would be the same were they asked about their preferences ten years hence.

As discussed by Goldman et al. (1995) the preferences expressed by consumers will be influenced by their current life circumstances which may mean that as housing options improve, so will expectations as to the kinds of accommodation deemed acceptable. Thirty years ago, the range of options available to consumers might have resulted in them expressing a preference for living in a boarding house (or even on the streets) rather than remaining in hospital. It is heartening that consumers now rate private rental, public housing and home ownership above both boarding houses and group homes (Owen et al., 1996) and in some respects, the success of
deinstitutionalisation could be measured by the degree to which consumer preferences for housing match those of the general population.

The current study identified the following housing and support factors as having an influence on consumers’ needs and satisfaction with the help they receive:

1. On-site staffing.
2. Property ownership.
3. The use of leases.
4. Intensity of staffing (e.g. 24hr or less than 24hr).
5. The availability of 1 and 2 bedroom options.
6. The provision of outreach support.
7. Opportunities for consumers to choose their accommodation.
8. The separation of management from support.
9. Housing permanency.
10. Proximity of accommodation to community facilities.

The other three consumer preferred characteristics identified in the literature (proximity to transport, the use of ‘house-rules’ and the availability of separate bedrooms) did not emerge as predictive of need or satisfaction but may have influenced outcomes not measured in this study.

In recognition of the fact that consumer preference is subject to the life-stage and context in which the consumer finds themselves, it is recommended that research on consumer preferences continue. In particular, it is considered important that the preferences of different groups of consumers be explored (e.g. rural vs. urban, under 25’s vs. older consumers) in recognition of the inherently individual nature of preference.

NEED: CONCEPTUAL IMPLICATIONS

The consumer preferred characteristics explored in this study form the basis of the supported housing model. Previous research on this model has largely consisted of descriptive studies of current programs with very few focussing on outcomes. Seybolt (2001), compared different residential settings (including supported housing) to determine whether individuals showed differences in community integration and quality of life whilst another cross-sectional study by Fredrich et al. (1999), compared housing preferences and perceptions of problems with settings, amongst persons living in three types of community residence, one of which was a supported housing program. A literature review revealed only two papers which examined need profile and satisfaction rates according to residence in a housing support program and due to their cross-sectional design, no conclusions could be drawn as to the effectiveness of supported accommodation in alleviating needs (Brunt & Hansson, 2002; Middelboe et al., 1998).
Ochoa et al. (2003) assert that although examining the total number of needs is useful in determining service requirements, analysis should focus on individual needs due to the heterogeneity of the needs assessed by the CAN. The complex and subjective nature of need means it will be influenced by numerous factors including the expectations of the individual and their understanding of the services they are entitled to. Indeed, if consumers understand and accept the limitations to health care (e.g. service availability), they may be more accepting of the support provided and less demanding of services (Coyle, 1999; Pirkis, Burgess, Meadows & Dunt, 2001). Furthermore, the suggestion that the provision of services may ‘create’ needs (McCrone et al., 2001) and that more needs may be experienced as a consequence of better functioning (Buhler et al., 2001) makes it difficult to determine whether an increase or decrease in needs is the more desirable outcome. At first sight, a reduction in needs would be viewed as a success as it is indicative of a reduced demand upon services. However, if this reduction occurs due to a reduction in the expectations, motivation and functioning of the consumer, it is certainly not a marker of effective service provision. Conversely, an increase in need places greater demands upon services but this could be due either to a growth in consumers’ expectations or less positively, the creation of dependency due to the provision of services. Ryan and Deci (2000) suggest that where conditions are supportive of autonomy and competence, individuals’ motivation is enhanced suggesting that consumers in less restrictive settings might express more needs due to their desire for self-improvement. Maybe the goal is not to change the number of needs identified by consumers but rather to provide them with the support they need to meet their own needs, either individually or via their social and familial networks.

The interaction between needs may also impact upon the number of needs expressed by consumers. Returning to Maslow’s (1954) hierarchy of needs, is it possible that lower-order needs such as accommodation remain fairly constant whilst higher-order needs (which would include CAN items in the social sub-domain) emerge only when consumers feel their basic needs are satisfied. More recently, self-determination theory asserts that people have three innate psychological needs: competence, autonomy and relatedness. When these needs are satisfied, mental health is enhanced, but the social environment in which individuals function can thwart attempts to achieve this (Ryan & Deci, 2000). Consumers interviewed during the course of this study were living in adequate accommodation and received regular meals; an exploration of the number and type of needs identified by homeless consumers might reveal whether or not the provision of support opens the way for consumers to identify additional needs once they receive the basic services they’re entitled to.

Figure 2 below is a diagrammatic representation of the influences on need discussed in previous research and explored in the current paper, plus the impact need itself has on other key factors.
Figure 2: Influences of and upon need

Individual characteristics including:
- Age
- Diagnosis
- Duration of illness

Service characteristics including:
- Housing
- Clinical care
- Rehabilitation and disability support

Characteristics subject to both individual and service influences:
- Social network
- Functioning
- Satisfaction
- Quality of life

Clearly, there are many factors which could have impacted on consumers’ need profiles and satisfaction, in addition to the characteristics of their accommodation. The opportunity to experience freedom and personal growth can lead to an increase in expectations (Nelson, Hall & Walsh-Bowers, 1999) whilst adaptation over time to poor living conditions can lower expectations resulting in consumers being satisfied with less (Coyle, 1999; Khatri, Romney & Pelletier, 2001). Some of the influences upon need are bi-directional whereby a need for help with psychotic symptoms for example might impact upon a consumers’ social network whilst the size of their social network may in turn impact upon their need for help with psychological distress. The focus of mental health services should be on meeting these needs or assisting the consumer to meet them themselves.

Viewing need as a fluid concept subject to influence from a variety of areas opens the way for needs previously considered ‘unmettable’ (e.g. intimate relationships) to be met by providing support in an area more readily addressed by service providers (e.g. company).

Before embracing the concept of need as an outcome measure for assessing the effectiveness of supported accommodation, the extent to which the observed outcome (e.g. a reduction in need) can be attributable to the intervention (i.e. consumer preferred accommodation) must be established (Evans, Greenhalgh & Connelly, 2000). Figure 2 above demonstrates that need is subject to many influences and it could be that although a consumer preferred model of care (Seybolt, 2001) and need (Slade et al., 1999) both impact on quality of life, consumer preferred characteristics have no direct influence on need.

Finally, simply focusing on the number of needs identified by consumers is problematic given that consumers in community settings (Brunt & Hansson, 2002) who are less mentally ill (Simons & Petch, 2002) and have higher levels of functioning (Buhler et al., 2001) have been found to have more needs. Only by distinguishing between met and unmet need can the effectiveness of the intervention be explored (although higher functioning consumers may also expect a higher quality of service before identifying a need as being met). Tools such as the CAN can distinguish between
met and unmet need, but if need is to be used as an outcome measure, the proportion of needs which are met should be the focus of attention. Although unmet needs may be recorded because consumers choose not to accept support, it is up to services to review the help they provide to ensure that it is tailored to consumers’ preferences (Ochoa et al., 2003). Walters, Iliffe and Orrell (2001) found that resignation, withdrawal and inadequate service delivery were the barriers identified by consumers who declined the help offered. Furthermore, some consumers did not seek help for meeting their needs due to withdrawal, resignation and low expectations (Walters et al., 2001).

Finally, although the full version of the CAN allows the rater to distinguish between help received from friends and family and help received from services, it might also be valuable to measure the needs consumers meet themselves. This is not currently encapsulated by the ‘no problem’ option as this implies that there is no personal demand placed on the individual in this area. Undoubtedly, many consumers living in high support accommodation have a need for help with managing psychotic symptoms but augment their clinical care with self-directed practices such as cognitive behavioural therapy and meditation. The provision of a ‘self-met need’ category would open the way for services to use a shift from ‘needs met by services’ to ‘needs met by self’ as a measure of service effectiveness.

LIMITATIONS OF THE CURRENT STUDY

Strengths of the study described above include the state-wide approach and representative sampling, the use of standardised assessment tools, and the focus on a challenging area of research with important implications for mental health-service planning and our understanding of need. However, the study was not without its limitations:

1. Research of this type demands that a balance be struck between providing a broad picture which can be generalised to other settings and ensuring that valuable information is not overlooked due to the aggregation of results. The author suspects that individual consumer preferred characteristics may have impacted upon individual needs but it was not possible to explore this with the sample size available.

2. The cross-sectional design makes it difficult to determine whether the presence of a consumer preferred characteristic led to an increase or decrease in needs and satisfaction or whether the consumer was placed there because of their need profile.

3. Despite a reasonable sample size, the number of domains in which consumers rated ‘no problem’ resulted in small subject numbers once needs were divided into sub-domains making it unfeasible to look at met need relative to total need. Therefore, where consumers reported more needs, it is not possible to determine whether the service is doing a good job at meeting those needs, or whether a high percentage of them are unmet. Further research with a much larger
sample size would be necessary to fully explore the impact of consumer preferred characteristics on met need relative to the total number of needs reported.

4. The fact that satisfaction ratings are only collected for domains in which consumers report a need results in small respondent numbers in some areas. This made it difficult to explore individual areas of satisfaction and due to the specificity of effects, using aggregated data is not ideal. In addition, some consumers had conceptual difficulties differentiating between their satisfaction with the kind and amount of help being provided.

5. Despite raters being trained in the use of the CAN and instructed to record answers from the consumers’ perspective, there is a risk they will draw upon other information when making an assessment and/or use different concepts of need. Some consumers had difficulty differentiating between the concepts of ‘met’ and ‘unmet’ need and help received versus help needed. In these cases, the rater had to ask the consumer about the support they received and whether or not it was meeting their needs fully or only in part. This ‘filtering’ of information subject to the rater’s interpretation of the consumer’s response may have resulted in some inaccuracies in the assessment of need. Buhler et al. (2001) also cautioned that consumers’ views must be fully represented and not subsumed by those of the staff who are rating their views.

6. Although every effort was made to obtain a random sample of consumers, in order to protect the anonymity of consumers, the responsibility of sampling participants fell to service staff. The instructions provided on how to do this appropriately may have been disregarded if staff felt the consumer was too unwell to participate in the study or would express opinions which would reflect negatively on the service. Furthermore, research suggests that those who decline to participate in surveys are likely to have a higher level of psychiatric morbidity so the level of need recorded in this paper may be artificially low (Andrews & Henderson, 2000).

7. Issues of confidentiality also meant that it was not possible to access consumers’ files and therefore information about duration of illness and diagnosis could not be considered. Given the impact of these factors on LSP-16 scores (Trauer, 2003) and need (Brunt & Hansson, 2002) it is unfortunate that these characteristics could not be examined.

FUTURE RESEARCH
The following areas are considered to be worthy of future research:

1. Longitudinal research would help to clarify whether the provision of services creates needs or whether consumers with more needs are placed in more intensively staffed accommodation because of their need for care. Such research could also explore whether needs increase or decrease and whether the types of needs identified change over time e.g. do basic needs remain the same (housing, food etc.) whilst higher order needs such as company and intimate relationships fluctuate?
2. Further studies comparing matched groups of consumers in adequate housing who do not receive rehabilitative and disability support, with consumers in supported accommodation are necessary. Such a design would be better able to distinguish between consumers’ needs for practical assistance (e.g. housing), and the benefits of assistance provided as part of programmatic interventions. In addition, it would serve to determine whether the provision of support creates needs or whether the introduction of support simply results in more needs being met.

3. Cluster analyses on needs identified by consumers would allow for the testing of Slade et al.’s (1998) a priori sub-domains and provide an empirical framework for the exploration of the types of needs expressed.

4. In recognition of the inherently individual nature of preference, it is important that research on consumer preferences continues, particularly the preferences of different consumer groups including those living in rural and urban areas and under 25’s compared with older consumers.

5. Despite focusing on consumers receiving a high level of support, many still reported a significant number of unmet needs. Research into the needs of consumers described in Table 3 as ‘Group B’ (i.e. people with a psychiatric disability living on the street or in temporary crisis accommodation) could reveal whether they identify the same number of needs, whether a greater percentage of these are rated as unmet and whether they have needs in the social sub-domain even though basic needs remain unmet.

6. In recognition of the role duration of illness and diagnosis have played in previous investigations of need, these factors should be controlled for in future research.

7. Unmet needs for help with physical health persist and research to identify the barriers to receiving adequate health care is necessary.

8. Investigation into the composition of consumers’ social network could help to determine whether this is a contributing factor to the greater number of unmet needs reported by consumers in 24-hour settings.

9. Further research is needed to identify appropriate interventions to address the higher number of unmet social needs amongst consumers. If current social and leisure programs are inappropriate for some consumers, alternative options are necessary. Unmet need in the domain of social relationships is significantly associated with overall quality of life (Hansson et al., 2003) and quality of life might be improved by social and leisure interventions (Trauer, Duckmant, & Chiu, 1998).

10. Research comparing clinician ratings of need with their LSP-16 ratings would be worthwhile to ensure that an association between need and functioning was not masked by the differences in rating style between staff and consumers.
CONCLUSIONS

Consumers of supported accommodation services appear to have more needs than those receiving general psychiatric services but the types of needs reported are very similar. A need for help across a broad spectrum of areas rather than need in a specific area characterises consumers living in supported accommodation and overall, high support, very high support and residential rehabilitation services are succeeding in meeting consumers’ needs in most of the 22 domains assessed by the CAN. However, despite the high level of support (and help from friends and family), needs for social and psychological support persist, indicating that existing methods of addressing persistent psychosocial deficits may require review. Evidently, shared accommodation does not meet many consumers’ social needs and further research is needed to establish whether existing social and leisure services are helpful but in short supply, or whether there are group of consumers for whom the current social and leisure programs are inappropriate (and if so, what kinds of opportunities for socialisation are preferable). Likewise, in order to address needs for which there are no specific interventions (e.g. intimate relationships), services may need to focus on supporting consumers to meet their own needs rather than overlook problems due to no direct intervention being available.

The quality of life of mental health consumers requiring a high level of support cannot be improved until enduring unmet needs in these key areas receive greater attention. Increasing the involvement of family members and friends with these issues has merit but this will only be achieved if adequate support can be provided to them to ensure that this does not increase their burden of care. It is hoped that the identification of unmet needs amongst this client group will open the way for better targeted service provision and consequently, improvements in the quality of life of mental health consumers in high support accommodation.

The CAN provides useful information on specific areas of dissatisfaction which could provide a starting point from which to open-up dialogue with consumers about areas of service provision which could be improved. Satisfaction and need are related but there is a need for longitudinal research in order to better understand the direction of causality. It is certainly noteworthy that there were particularly low levels of satisfaction with the help received with needs in the social sub-domain (‘sexual expression’, ‘company’ and ‘intimate relationships’), further evidence for the need to review service provision in this area. Despite the fairly high levels of satisfaction with the help received overall, we must be mindful of acquiescence-bias and the fact that many consumers are only too aware of the very limited accommodation options available. It is unlikely that satisfaction ratings will truly reflect the quality of consumers’ living environment until they are provided with a meaningful choice when seeking housing and support.

Overall, the hypothesis that consumers at services implementing more consumer preferred characteristics would have fewer needs and greater satisfaction ratings was not supported. However, the need to aggregate results due to small subject numbers in some CAN domains may
have masked significant results and further investigation into the impact of consumer preferred characteristics, especially in a longitudinal study, would be worthwhile. In particular, the presence of on-site staff was associated with a greater number of needs but this is indicative of the level of support provided, not just a characteristic known to be disliked by consumers. In addition, it is possible to conclude that service and support characteristics have a greater association with basic, practical needs than with more complex concepts like health and relationships, perhaps illustrating some limitations in current approaches to assisting people with complex needs.

Housing stability and the impact this may be having on consumers deserves greater attention, especially as the foremost model of care in NSW is characterised by a need to move house as support needs change. The absence of a significantly greater level of need amongst consumers in 24-hour settings is also of interest from both a resource perspective and because of what is known about consumer preferences in this regard. The provision of 24-hour care is a complex area and its availability is crucial to an effective mental health system but existing methods of deciding who might benefit from such care require review. At the very least, poorer satisfaction ratings given by consumers in these settings indicate the need to evaluate services’ commitment to consumer participation and opportunities for autonomy.

Information on functioning has been routinely collected by many community-based services for some time now but the LSP-16 results in the current study raise more questions than they provide answers. Do consumers in 24-hour services have a higher level of functioning because of the support provided or have they been inappropriately placed? Would those consumers scoring 10 or below be successful living in a more normalised environment or is it impossible to gauge this using LSP-16 scores? And when assessing consumers’ support requirements, would CAN or LSP-16 scores result in the most appropriate placement? Information on diagnosis and illness duration may have helped to answer some of these questions, as would access to a greater body of research on the validity and reliability of this recently developed version of the LSP.

This study has attempted to isolate some of the key characteristics of the supported housing model and explore their association with positive outcomes for consumers. Although the results do not allow clear conclusions to be drawn, it is hoped that service providers may look to consumer preferred characteristics as a basis for implementing or upgrading supported accommodation options. These characteristics could also be used as a platform for developing standards for the supported accommodation sector with consumer choice becoming central to the process of helping consumers access housing. Providing a choice of housing to consumers will become more meaningful as alternative supported accommodation options become available but in the meantime, pre-existing group homes, hostels, core and cluster accommodation and board and care facilities could integrate some consumer preferred characteristics into their programs. These developments are worthwhile from a humanitarian perspective at the very least and the results described above
provide a foundation for continued research into which areas of consumers' lives are influenced most by service and support characteristics and the development of an empirically tested process for providing the least restrictive care (Mental Health Act, 1990).
REFERENCES


California Alliance for the Mentally Ill, Housing Committee; Castaneda, D. & Sommer, R. (1986) Patient housing options as viewed by parents of the mentally ill. *Hospital and Community Psychiatry, 37*, 1238-1242.


APPENDICES

APPENDIX A

ARE CONSUMERS’ NEEDS BEING MET BY HIGH SUPPORT HOUSING?

Consumer information statement

This form is to give you some information about a project being funded by the Centre for Mental Health (part of NSW Health) that you are invited to participate in. Aftercare is a service that provides accommodation and support to people diagnosed with a mental illness and the Centre for Mental Health have given Aftercare a grant to do a study on the kinds of housing available to people who are thought to need daily support.

The first part of the project is focused on learning more about the characteristics of ‘high support’ housing currently available in NSW. The second part involves asking consumers at these services about what areas of their lives they feel they need support with and whether the service they are in is meeting their needs. You were selected as a possible participant in this study because you reside in an accommodation service that provides more than eight hours of staff support per day for five or more days per week.

Following is some information you need to be aware of regarding your rights as a participant in this study:

• The researcher will ask you questions about your living situation and the support you receive in different areas of your life – she will write down your answers.
• The whole process should take about half an hour and you are welcome to take breaks at any time.
• You do not have to answer all the questions you are asked if you prefer not to.
• You will be paid $20 for your time but we cannot guarantee that you will receive any other benefits from this study.
• Your name will not appear anywhere on the forms and if the results of the study are published or disclosed to other people, this will be done in a way that will not identify you.
• The data from this study will not include your name and will be stored in a locked file and in an electronic database.
• Whether you take part in this study or not, it will not make any difference to the accommodation and support you are currently receiving.
• If you decide to take part in the study, you can still withdraw at any time and this will not make any difference to your accommodation and/or support either.

If you have any questions at any time, Adele Freeman will be happy to answer them – you can telephone her on 02 9713 4194 or 0412 938 790. You will be given a copy of this form to keep.
### Consent form

You are making a decision to voluntarily participate in this study. Your signature indicates that you have read and understood the information statement provided, have been verbally informed about the study, have had a chance to ask questions, and consent to participating in the interview described above. A copy of this informed consent will be given to you.

Signature of participant     Signature of witness

_________________________________________     _______________________________________
Please PRINT name     Please PRINT name

_________________________________________     _______________________________________
Date     Date

_________________________________________     _______________________________________
Signature(s) of researcher(s)     Date

Please PRINT Name

_________________________________________

**Revocation of consent**

I hereby wish to **WITHDRAW** my consent to participate in the study described above and understand that such withdrawal **WILL NOT** make any difference to my accommodation and/or support or my relationship with the accommodation service or my support workers.

Signature

_________________________________________

Please PRINT Name     Date

The section for Revocation of consent should be forwarded to:

Adele Freeman
Aftercare
PO Box 261, Five Dock NSW 2046
APPENDIX B

The aim of this project is to gain a better understanding of high support accommodation services for people with a psychiatric disability. This survey will provide valuable information on the types of services currently available and will lead to some services being invited to engage in more detailed consultations.

This is an important research study that will further inform current knowledge of accommodation options for people with high needs. It is envisaged that the results of the study will help to guide the continuing reforms to housing and disability support services by providing direct input from key stakeholders.

We would be most grateful if you would take the time to complete the following survey. If you are unsure of how to answer a question, please do not hesitate to contact the researcher, Adele Freeman and you will be provided with every assistance possible.

Name and position of person completing the survey

Name of organisation (including which branch/service)

Address

Postcode

Telephone

Fax

Email

All services returning a completed survey will receive aggregated and de-identified feedback on the information gathered so far, however, many services have expressed a desire to be better informed about other high support services across the state. Please sign below if you consent to the details collected on this page only being included in the feedback provided to high support services participating in this study.

I consent to my contact details being made available in feedback to other high support accommodation services

(please sign here)
**HOUSING**

1. How long has your accommodation service been in operation?

<table>
<thead>
<tr>
<th>Years</th>
<th>Months</th>
</tr>
</thead>
</table>

2. I would describe the location of my service as...
   - Rural [ ] Remote [ ] Urban [ ]

3. Approximately how far away from your accommodation are the bus and/or train services utilised by consumers?

   | kms |

4. Approximately how far away are community facilities such as libraries, leisure centres, shops etc. from your residential service?

   | kms |

5. Please choose one of the following options:
   - i. Your service owns the property in which consumers reside [ ]
   - ii. Your service leases the property from the Dept of Housing [ ]
   - iii. Your service leases the property privately [ ]

6. Please choose one of the following options:
   - i. Your service manages the property (e.g. collects rent, organises maintenance, resolves tenancy issues) as well as providing support [ ]
   - ii. A housing agency/community housing manages the property and your service provides support services [ ]

7. Does your funding for residential disability support services come from:
   - DADHC [ ] Dept of Health [ ] Don't know [ ]

8. Is the housing part of a core & cluster/satellite model?*
   - Yes [ ] No [ ]

---

* Core & Cluster/ Satellite housing means there is a central, staffed property with other properties located near-by in a cluster
9. Please indicate the total number of beds available for each particular type of accommodation listed below.

<table>
<thead>
<tr>
<th>Type of Accommodation</th>
<th>Total Number of Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>One bedroom facilities</td>
<td></td>
</tr>
<tr>
<td>Two bedroom facilities</td>
<td></td>
</tr>
<tr>
<td>3 bedrooms or more</td>
<td></td>
</tr>
<tr>
<td>Hostel style facilities</td>
<td></td>
</tr>
<tr>
<td>Home based outreach</td>
<td></td>
</tr>
</tbody>
</table>

10. Please describe your criteria for acceptance into your service (e.g. within a particular age range, must agree to participate in a rehabilitation program; must have a case manager, must reside in a particular area etc.)

________________________________________________________________________

________________________________________________________________________

11. Please describe the circumstances under which you would exclude someone from entry to your service (e.g. drug & alcohol issues, intellectual disability, diagnosis of dementia etc.)

________________________________________________________________________

________________________________________________________________________

12. Does your service offer consumers a choice of housing options on application?
   Yes □ No □

13. Are consumers in shared accommodation screened for compatibility?
   Yes □ No □

14. Are consumers residing at your service included in the decision making process regarding the suitability of prospective tenants?
   Yes □ No □

15. Does each consumer have his/her own bedroom?
   Yes □ No □

16. Does each consumer sign a separate lease?
   Yes □ No □

17. Are consumers required to adhere to service-specific ‘House Rules’?
   Yes □ No □

18. Approximately how long can consumers reside at your service?
   <1 year □ >2-5 years □
   >1-2 years □ Permanently □
19 Generally, when the support needs of a consumer change, is he or she encouraged to move to alternative accommodation?
   Yes ☐ No ☐

20 Please indicate how many people (if any) are currently on your waiting list:

21 Approximately how long must consumers currently wait before a vacancy becomes available?

22 Please indicate how many vacancies you currently have:

23 In the event of you being unable to accommodate a consumer, please name any other 'high support' services you would suggest as an alternative.

24 Please describe what (if any) follow up services are made available to consumers after they leave your accommodation (e.g. outreach)

25 What procedures does your service have in place to remedy breaches, disputes and grievances (e.g. Grievance Committees, access to an independent advocate, mediation etc.)

26 Does a consumer representative sit on the management board/committee of your organisation?
   Yes ☐ No ☐

27 How much rent is paid per consumer per week? $

28 Do consumers pay the same amount of rent regardless of income?
   Yes ☐ No ☐

28a If no, please describe how the rental amount is calculated (e.g. 25% of income)
SERVICES

29 In addition to the cost of housing, please indicate what other services (if any) are included in the rental amount.

- Meals
- Telephone
- Laundry
- Utilities (e.g. gas)
- Maintenance
- Other (please specify)

30 Are basic needs (meals, laundry, cleaning, shopping) met by...

- Staff
- Consumers
- Staff & Consumers

31 Please briefly outline what other kinds of support are provided by your service (e.g. living skills training, supervision of medication, social and leisure programs, supported employment etc.)

32 Following is a list of other agencies you may have links with. Please indicate the nature of the partnership (if there is no formal partnership, write ‘no formal partnership’) and rate your satisfaction with it (0= not satisfied; 1= satisfied). If you have no links with any of the services listed, please write ‘N/A’ in the second column. There is a blank row at the end for you to add any services not listed below.

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Type of Partnership (e.g. documented 'Partnership Agreement'; regular interagency meetings etc.)</th>
<th>Satisfaction with the partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Crisis Teams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Area Health Clinical Rehabilitation Teams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Case Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Assertive/Mobile Community Treatment Teams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v. Social &amp; Leisure Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi. Employment Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii. Drug &amp; Alcohol Services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

87
33 Please describe what (if any) processes your service has in place to facilitate community participation and integration for your consumers (e.g. making use of community facilities, accessing mainstream leisure services, supported employment provided by local businesses etc.)

34 Please indicate how frequently consumers’ goals and support needs are formally reviewed.

- Weekly  
- Fortnightly  
- Monthly  
- Quarterly  
- Six monthly  
- Annually

35 Please describe the role of your local GP in the ongoing healthcare of consumers accessing your service.

36 Please specify what (if any) arrangements your service has in place to keep family members informed and involved.

37 Please describe which methods you are currently using to evaluate your service (e.g. Life Skills Profiles, Individual Program Plans, Satisfaction surveys etc.)
38 Please indicate which of the following organisations your service is accredited with or in the process of gaining accreditation with.

- None
- Quality Management Services
- Disability Services Standards
- Australian Council of Health Care Standards
- Australian Quality Council
- Other (please specify)

**CONSUMER INFORMATION**

39 Total number of consumers who resided in your accommodation in the Financial Year ending June 2002

40 Number of consumers from a non-English speaking background who resided in your accommodation in the Financial Year ending June 2002

41 Number of Aboriginal or Torres Strait Islander consumers who resided in your Accommodation in the Financial Year ending June 2002

42 Please indicate how many of the consumers currently accessing your service receive case management from another agency.

43 In the Financial Year ending June 2002, how many consumers in your service had a diagnosis of intellectual disability in addition to a psychiatric disability?

44 In the Financial Year ending June 2002, how many consumers in your service had a drug and/or alcohol difficulty in addition to a psychiatric disability?

45 In the Financial Year ending June 2002, how many consumers in your service attended TAFE or other educational institutions?

46 In the Financial Year ending June 2002, how many consumers in your service did volunteer work?
47. In the Financial Year ending June 2002, how many consumers in your service accessed employment services (including pre-vocational assistance or sheltered employment)?

48. In the Financial Year ending June 2002, how many consumers in your service accessed day programs or drop-in centres?

**STAFF**

49. How many paid full-time staff do you have?

50. How many paid part-time staff do you have?

51. What is the total number of hours per week worked by part-time staff?

52. Please indicate which professional backgrounds are represented amongst your staff members (including part-time staff)

   - Psychology
   - Social Work
   - Nursing
   - Occupational Therapy
   - Other (please specify) ________________________________

53. On average, how long do staff stay with your service?

54. Does your service offer student placements? Yes ☐ No ☐

55. Does your service take volunteers? Yes ☐ No ☐

56. Is independent, professional supervision available to staff (either group or individual supervision)? Yes ☐ No ☐

57. Are staff based on the same site as the accommodation? Yes ☐ No ☐

57a. If yes are staff on-site 24 hours a day? Yes ☐ No ☐
Are there any additional comments you would like to make?

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

59 The next stage of the project is likely to involve a site visit by research staff to get more detailed feedback from management, staff and consumers. This will provide invaluable information on the key components of well-run services and the impact they have on outcomes for consumers. Please tick one of the following boxes:

- I am interested in participating in the next stage
- I would like more information before committing myself
- Unsure at this stage
- I do not want any further involvement with this project

Thank you again for your time. Please return the completed survey by Friday July 26th in the envelope provided to:

Adele Freeman
Aftercare

If you have any questions, please do not hesitate to call on