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Abstract

Objective: To reflect upon the implementation of sensory-based approaches within the environment of a psychiatric inpatient unit.

Method: A literature review on sensory modulation within psychiatric inpatient care, including seclusion and restraint reduction initiatives, was conducted. A variety of sensory-based principles were planned, developed and implemented over a 3-year period. Preliminary data regarding sensory room use and acute arousal ratings within the high-dependency area were analysed.

Results: Preliminary sensory room data showed a significant reduction in patient distress levels, as per consumer and clinician ratings, and that the majority of sensory room sessions were conducted by nursing staff. A significant reduction was also found for acute arousal ratings, pre to post, for the HDU engagement program. Several issues were uncovered throughout implementation of the sensory-based strategies.

Conclusions: Findings indicate the importance of cultural change, compared with simply an environmental change, giving *all* staff and consumers the confidence to utilise a variety of sensory-based methods during times of need. Further Australian research is required to explore the positive contribution sensory modulation can potentially make across the spectrum of psychiatric settings.

Keywords: Acute psychiatry, multidisciplinary, sensory modulation, sensory room

A widely accepted definition of 'sensory modulation' refers to 'the capacity to regulate and organise the degree, intensity and nature of responses to sensory input in a graded and adaptive manner...to achieve and maintain an optimal range of performance and adapt to challenges in daily life'.¹ Sensory modulation approaches may involve providing sensory-based therapy tools or creating appropriate environments that engage the user's senses to reduce the build-up of agitation and prevent the escalation of aggression.²

Research shows individuals with a trauma history, mental illness, addictions, or those who have developed problematic behavioural patterns, are sometimes unaware of their particular sensory needs or stress responses.³ Given the intimacy and individuality of sensations

highlighted by Dunn,⁴ these approaches are geared towards exploring an individual's specific sensory needs. Sensory strategies aim to foster and maintain therapeutic relationships by 'creating a safe space, and supporting successful engagement in meaningful activities, roles, and routines'.⁵

Symptom management for consumers experiencing distress within psychiatric settings is often limited. Interventions generally include staff contact, medication, decreased stimulation or seclusion. Sensory inter-

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ventions, including sensory rooms, have become more visible in psychiatric settings as an additional tool for individuals to manage symptoms. However, there is only anecdotal evidence indicating their effectiveness in psychiatric populations.⁶

As the value of sensory approaches gathers momentum across mental health services around the world, we are still far from reaching the full potential of this emerging field in Australia. During the past decade, mental health practitioners have begun to understand the relevance of using sensory intervention principles with consumers receiving mental health services.⁵ As stated by Champagne et al.,⁵ 'within general mental health systems of care, the recognition of the value and need for a sensory processing focus has become increasingly evident', and here in Australia we are witnessing this focus at both State and Federal Government levels, with specific initiatives targeted at decreasing seclusion and restraint, and improving hospital environments for both consumers and staff.⁷

Inpatient units must become more environmentally 'sensory-friendly', both in a physical and cultural context. In order to achieve this, there may need to be a move away from the stringent medical model focus to one that incorporates a more holistic approach. This must be understood, accepted and adopted by *all* staff in order to achieve ultimate benefit for the consumer.

This paper reflects upon the implementation of sensory-based approaches introduced at the Mercy Mental Health Psychiatric Unit. This is a 29-bed acute adult psychiatric inpatient unit that cares for consumers in the Hobson's Bay, Maribyrnong and Wyndham Council areas in Victoria. The unit consists of a low-dependency area (LDU) and a locked high-dependency six-bed area (HDU), to treat consumers in acute phases of their mental illness. Two seclusion rooms operate within the HDU. The nurse-to-patient staffing ratios are 1:5 within the LDU and 1:3 within the HDU. There are also two group nurses, an Occupational Therapist, a Social Worker and medical staff.

Development and implementation

A multidisciplinary team consisting of the Unit Manager, two Registered Psychiatric nurses (group program nurses) and the Occupational Therapist was developed to carry out a needs analysis and explore the changes required.

A review of the literature was conducted in order to develop an appropriate strategy geared towards embedding sensory-based strategies into the culture of staff and consumers. The changes entailed: (i) modification of the physical environment; (ii) personal safety plan implementation; (iii) adapting current groups/implementing sensory groups; (iv) sensory room; (v) ongoing staff education/training; (vi) HDU engagement program. These changes began in 2007 and occurred one by one, with minimal overlap to maximise the acceptance and effectiveness of the strategies.

(i) Modification of the physical environment

Champagne⁸ highlighted the role that physical environments play in positively influencing performance skills and patterns. With limited resources, modifying the physical environment was always going to be a difficult undertaking. The major modification was opening up part of the staff office to have a central station manned at all times. This allowed for staff members to be readily available to offer support and suggestions, including sensory approaches, to help consumers manage their needs, particularly during times of increased distress. In the HDU, a glider chair, murals, chalk boards and sound boards were added to make for a more sensory-friendly environment. A recent development has been the adaptation of one of our seclusion rooms into a 'comfort room', equipped with soft furnishings, a bean bag, relaxing music and stress balls. This room is readily accessible for consumers and staff as a de-escalation and engagement tool.

(ii) Personal safety plan

We conducted a review of crisis prevention plans in use in other inpatient units around the world, including the Massachusetts Department of Mental Health Safety Tool⁹ and the Alfred Psychiatry Safety Tool.² From this, an individualised 'personal safety plan' was developed. This safety plan is completed by the consumer, with help from staff. Its aim is to help both the consumer and staff identify what the consumer is like when they are well, what situations cause them distress, and the signals of their distress. The plan then offers practical suggestions for sensory and calming strategies that are easily available on the unit. It also covers the individual's history of trauma and any experience of seclusion and restraint. Both staff and consumer may then be able to identify why seclusion occurred and be able to explore alternative interventions to prevent further seclusion, given the trauma that may be associated with this. The personal safety plan starts on admission and is adapted throughout the consumer's stay in hospital by the primary nurse and occupational therapist.

(iii) Sensory group

The therapeutic group program was modified to allow consumers to improve their awareness of the effects that different sensations can have on thoughts, behaviours and functioning. A specific weekly 'Sensory Awareness Group' was commenced based around the sessions developed by Karen Moore in her 'Sensory Connections Program'.¹⁰ This group provides a forum that allows consumers to discuss, explore and better understand their own sensory diets and preferences, and how these can be used to their benefit during times of need, to 'support empowerment and wellness'.¹¹ Further, existing movement, art and cooking groups were modified to engage a more sensory-friendly approach.

(iv) Sensory room

A 'sensory room' was developed to demonstrate the benefits that environmental sensations can play in decreasing consumers' distress levels. In the time spent in this safe and failure-free space, individuals can choose what to use or explore, thus 'diminishing the helplessness that often accompanies illness, disability and hospitalisation'.⁴

The sensory room opened in July 2010 and is located in the LDU of the psychiatric inpatient unit. Items within the sensory room include a massage chair, bean bags, music, a variety of lighting, lollies, self-help books, stress balls, water feature, and a 'Swiss ball' (large inflatable exercise ball).

Use of the sensory room is supervised by a staff member, who helps the consumer identify how the room is set up to meet their individual needs. The findings from these sessions are incorporated into the consumer's personal safety plan for both the consumer and staff to access as required. A log sheet was developed and is completed each time a consumer uses the room. It documents the date, time spent in the room, sensory items utilised and the consumer's reports of their distress or anxiety levels with their own pre (upon entry) and post (upon exit) rating (scores out of ten). Diagnosis and Mental Health Act status are not recorded. Using the Fremantle Acute Arousal Scale,¹² a six-point scale (0 = asleep or unconscious, 5 = highly aroused, violent towards self, others or property), the staff member rates the arousal level of the consumer upon entry to the sensory room, and upon exit. The initial 3-month data (July–October 2010) has been analysed using descriptive statistics, and tests of significance were employed as appropriate.

(v) Staff education and training

An information package on therapeutic group processes was developed to assist with the education of all staff regarding sensory-based strategies, and an orientation regarding how these can be utilised during consumer care. Expectations are that all nurses, including post-graduate nurses, will spend 2 weeks working in the therapeutic group program receiving guidance, support and education regarding therapeutic practises, including sensory-based interventions. In-services on sensory modulation, sensory assessments and sensory rooms have been conducted regularly by multidisciplinary teams, given that the successful implementation of sensory-based strategies depends heavily on acceptance by all staff. Weekly primary nursing team meetings are conducted, with staff given the opportunity to discuss and review all personal safety plans for individual consumers. The Fremantle Acute Arousal Scale¹² was introduced into routine visual observations, with nursing staff required to rate each consumer's arousal rather than simply ticking them off. These must also be completed before administering PRN medication, prior to

seclusion, before and after use of the sensory room, and also pre and post participation in the HDU engagement program. This scale offers a standardised rating tool and allows close monitoring of a consumer's arousal. Guidelines for intervention to help minimise escalating arousal in consumers were developed to help build a profile of sensory-based principles within acute psychiatric care.

(vi) HDU engagement program

The HDU engagement program is a part of the therapeutic group program, and began on 1 July 2009. This program has utilised components of the Sensory Connection Program developed by Moore.¹⁰ The program is designed to teach consumers skills for stress reduction, positive coping strategies and strategies to help with self-regulation by using success-orientated activities. The program is designed to be facilitated in the HDU. However, alternative options can be considered, i.e. using the sensory room, LDU group rooms or activities, thus enabling consumers to be treated in the least restrictive environment. The program is staffed by psychiatric nurses, 7 days a week, with all nurses having completed the therapeutic group program training and competencies. All consumers should be considered for the program, which needs to be implemented in a flexible manner, and it is essential that the clinician assess the suitability of the consumer throughout the day. This assessment includes: exploring the consumer's expressed needs, assessing the consumer's mental state and risks, utilising the personal safety plan, sensory checklist tool, and liaising with the therapeutic group program coordinator, primary nurses and treating teams. Data were collected from July 2009 to April 2010, and included the engagement nurse rating the arousal level of the consumer pre and post engagement, using the Fremantle Acute Arousal Scale.¹² Data were analysed using descriptive statistics, and tests of significance were employed as appropriate.

Preliminary findings

Sensory room

Data collected from July to October 2010 were analysed. The most common type of distress reported by consumers ($n=109$) upon entry to the sensory room were: anxiety 39% ($n=43$), restless 22% ($n=24$), agitation 17% ($n=19$) and distress 15% ($n=16$). The mean rating of distress upon entry to the sensory room reported by consumers was 5.98 (SD 2.19; $n=117$) and 3.09 (SD 1.93; $n=114$) upon exit. Rating of distress as noted by the clinician upon patient entry into the sensory room was 2.69 (SD 0.99; $n=127$), and exit rating was 1.42 (SD 0.72; $n=125$). Reduction in score from entry to exit was statistically significant ($p<0.0005$) for both consumer and clinician ratings. Staff supervising sensory room use were: nursing staff 91% ($n=120$), occupational therapist 7% ($n=9$), and nurse and occupational therapist 2% ($n=3$).

The items most commonly used by clients ($n=126$) during sensory room sessions were the massage chair 79% ($n=100$), music 73% ($n=92$), lamps 71% ($n=90$) and the water feature 55% ($n=70$). Mean time spent in the sensory room was approximately 29 minutes (SD 14.58; $n=118$).

HDU engagement program

Data collected from July 2009 to April 2010 were analysed. The mean 'pre' grade of arousal score was 2.17 (SD 1.01; $n=1029$), and 'post' was 1.6 (SD 0.98; $n=1019$). The reduction in the grade of arousal score pre to post was statistically significant ($p<0.0005$). A number of issues were uncovered throughout the implementation of the sensory-based strategies.

Discussion

New approaches in psychiatry can be challenging to implement, as many practices are inherited via the existing culture of an organisation. Indeed, within our unit, staff were initially hesitant, fearful and even resistant to the changes suggested. How did we approach this anxiety and initial resistance to a major cultural shift amongst staff when the term 'sensory modulation' was first introduced? We had to ask ourselves how we could support staff in this period of inevitable change and at the same time empower staff to make changes in their own therapeutic practices. The answer was, in essence, knowledge, evidence and time. Ongoing staff training and education throughout the implementation has given staff the opportunity to be involved in the change process, ask questions and take ownership of it. Creating awareness and giving all staff confidence in utilising a wide variety of sensory interventions was a major focus and crucial in instigating a cultural change, particularly given the high ratio of nursing staff. Results from the sensory room statistics demonstrate the importance of a multidisciplinary approach, with 93% of sessions in the sensory room involving nursing staff.

The preliminary findings from the sensory room and HDU engagement program in terms of reducing arousal levels have been encouraging. Staff members are reporting they have been able to see the positive effects in consumers. Discussing and implementing innovative practices utilising sensory modulation has empowered consumers to be partners in their care. Indeed, consumers are asking to use the sensory room as a means of helping them manage their distress.

Issues, recommendations and future planning

Space. The sensory room is a small room and not as close to HDU as would be preferred. Having it closer to the HDU would allow our most acutely unwell

consumers safer access. There is a larger room which is closer to the HDU, currently used as an interviewing room. As the sensory room data continues to show its value, relocating the sensory room may be more favourably considered.

Cost. The cost of supplying sensory items is ongoing as items get used, lost or broken. However, there has been a conscious decision made to purchase relatively inexpensive items not only to keep the costs low, but also to highlight to consumers that helpful sensory items may be bought cheaply for their own use when they return home.

Time and workload. When the personal safety plan is completed it is a useful tool because it helps consumers identify what helps them manage their distress. Although the completion rate has not been audited, consistent use is an issue, with staff identifying lack of time and increasing paperwork preventing them from doing so. Ongoing education and encouragement is required to help staff recognise the value of the personal safety plan. It may be that reviewing the 'non-nursing' procedures that staff are expected to carry out is necessary, in order to allow time for these sensory-based strategies.

Staff education and training. Ongoing education and training sessions will be offered to staff in order to embed these principles in the culture of the ward environment.

Ward review. Staff and consumer feedback will be obtained to continue exploring ways to further develop our sensory program. We are also looking into further environmental developments throughout the ward to make it a more sensory-friendly environment, including the construction of a sensory garden. Seclusion rates remain a concern, with no consistent decline in seclusion episodes since the development of our sensory-based practices. The adaptation of one of the seclusion rooms into a comfort room has only occurred recently. Data is also being collected regarding the use of the comfort room. It is hoped that the new comfort room will become a viable alternative to seclusion, which should see a significant reduction in the use of seclusion within the unit.

Integration into community. Personal safety plans will be introduced to the community case management teams, with the initial focus on consumers who are regularly secluded during admissions. It is hoped that eventually all case-managed consumers will have a personal safety plan completed during a period of their stability. This will then be given to ward staff on the consumer's admission to afford staff a variety of stress management

strategies that the consumer has identified as helpful. This may assist with engaging consumers and help to avoid seclusion. We are also working towards building partnerships with Psychiatric Disability Rehabilitation and Support Services (PDRSS) in the community to allow continuity of care.

Conclusion

Limited research is available exploring this exciting field in Australia. Further studies are required to promote the positive contribution that sensory modulation can make across the spectrum of psychiatric settings for it to become embedded within staff and consumer culture. To meet the needs of our ever-changing, ever-growing caseload, clinicians must be dynamic and have skills in a wide variety of effective intervention strategies that can be implemented during a consumer's time of need. Sensory modulation is steering acute psychiatric care in a new and innovative direction, and is geared towards fostering growth and development in a previously unrecognised field in adult mental health in Australia.

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Disclosure

The authors report no conflict of interest. The authors alone are responsible for the content and writing of the paper.

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