



SENSORY MODULATION IN INPATIENT MENTAL HEALTH: A SUMMARY OF THE EVIDENCE



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INTRODUCTION

Sensory modulation uses a range of tools to help individuals get the right amount sensory input. In mental health settings, sensory modulation can be used to assist distressed service users to regain a sense of calm. In acute inpatient wards, dedicated sensory modulation rooms with sensory equipment (called sensory rooms), can be used by service users as a regular experience or when distressed.

The Te Pou (2011) report *Sensory modulation in mental health clinical settings: A review of the literature* is an extensive summation of the theoretical, clinical, and research literature about the use of sensory modulation in mental health settings.

This summary, *Sensory modulation in inpatient mental health: A summary of the evidence*, focuses on the research evidence about the efficacy of sensory modulation in acute mental health wards. It is designed to assist clinicians and clinical leaders/managers to have an overview of key clinical and implementation issues in acute wards.

| This summary shows that:

1. Sensory modulation is a promising intervention in acute settings.
2. There is some evidence that sensory modulation may reduce the use of seclusion and restraint when part of a range of positive practices
3. The literature supports sensory interventions in sensory rooms and shows that they are at least as effective as traditional methods, and better than no treatment
4. The evidence for particular tools is limited, but weighted blankets and questionnaires appear to be useful and popular with service users
5. It is important that sensory rooms are locked, but remain accessible at all times
6. Clinicians need to have practice using sensory modulation techniques and tools with service users who are less distressed, before feeling comfortable with using sensory modulation with service users who are more agitated.

THE EFFECTIVENESS OF SENSORY ROOMS

Sensory rooms are designated areas with mental health units where trained clinicians guide service users to use dedicated specialist (such as massage chairs or weighted blankets) or more general (such as aromas and music) sensory equipment to moderate their sensory input, often to regain a sense of calmness.

Published literature on the evidence of the use of sensory rooms is small but growing. Champagne and Sayer (2003) asked 47 service users in a locked acute psychiatric unit to self-rate their distress before and after using the sensory room. Overall, the use of the sensory room and sensory-based treatment approaches by skilled staff induced a positive change in levels of distress for 89 per cent of the participants. Sensory rooms may be useful as a crisis intervention tool for service users in acute distress.

Teitelbaum et al. (2007) reported similar results. Their study examined the effect of 'Snoezelen' sessions on agitated service users in a closed psychiatric ward. Snoezelen® is a 'multi-sensory environmental intervention' that combines sensory integration theory with client-centred care. A Snoezelen® room is a high-tech multi-sensory environment that provides different stimuli such as music, light projections and pleasant smells designed to relax and engage the senses. They are comparable to sensory rooms but have often more specialised equipment such as lightened fibre optic strands and vibrating bubbles tubes. The findings showed that after 30 to 40 minutes of Snoezelen®, distressed service users reported substantially lower levels of distress and the number of seclusion or restraint incidents occurring in the closed male section decreased.

In a similar study, Reddon et al. (2004) examined the effectiveness of Snoezelen® multi-sensory stimulation treatment with 50 service users and 50 hospital employees. Participating in a single 20 minute session had significant positive psychological effects on both groups. After the treatment participants felt sleepy, passive, relaxed, calm and comfortable and reported feeling more cheerful, focused and optimistic than before.

Knight et al. (2010) highlighted the positive notion of individual choice that is inherent in multi-sensory-based therapies. The authors noted that:

most individuals in the traditional intervention group chose one-on-one staff contact as an intervention (n = 14), and seven chose quiet time or a decrease in stimulation. Other interventions used less frequently included self-release lap belts and increased supervision. Those in the sensory intervention group most often chose music (n = 6), items that could be squeezed or manipulated (n = 6), rocking chairs (n = 4), visual activities (e.g. fish tanks, calming videos) (p.22).

For the comparison, a [Brief Psychiatric Rating Scale](#) (BPRS) with 18 symptoms of psychiatric disturbance was used to compare pre- and post-intervention scores of service users in an inpatient psychiatric unit. Interestingly, sensory-based and traditional interventions turned out to be equally effective in managing psychiatric symptoms. All individuals showed reduced symptoms within 30 minutes of initiating any nursing intervention.

However, Cummings et al. (2010) cautions that sensory modulation *may* not be an effective intervention with service users who require the highest level of security and complex psychiatric services. This may be because these service users are often disproportionately subjected to restrictive measure use, or because they are too distressed to find sensory modulation effective. Further research is needed in this area.

Overall the literature supports sensory interventions in sensory rooms and recognises that they are at least as effective as traditional methods and better than no treatment (Sabarre, 2007). It is necessary to consider when to use these techniques. Baillon et al. (2010) suggest that not all individuals like or benefit from multi-sensory therapy and that individual responses can vary on different occasions. Some service users might become more agitated or confused and reactions to different stimuli are not always straightforward. Like other therapeutic interventions, sensory modulation needs a skilled introduction but does not guarantee a positive response in every case.

THE EFFECTIVENESS OF PARTICULAR EQUIPMENT OR TOOLS

There are many types of sensory equipment that can be used. These range from the specific (such as weighted blankets) to more readily available equipment (such as music or aromas). There are also screening tools that help clinicians and service users to determine which tools are best suited to individuals.

Clinicians may complete a brief questionnaire (a safety tool) with service users to determine their stress triggers and warning signs of stress increasing. Clinicians can use this knowledge to offer people tools that may be most useful if someone requires extra support.

Lee et al. (2010) examined the effectiveness of sensory tools when used outside of sensory rooms. The results indicated that service users who had been in seclusion many times were placed in seclusion less when they used sensory tools. Similarly, clinicians found that sensory tools assisted in managing service users at risk of behaving aggressively. Most clinicians (76 per cent) felt the tools should be incorporated into routine unit practice.

Two recent collaborative studies researched the efficacy of weighted blankets (Champagne et al, 2007; Mullen et al, 2008). In both studies guidelines were followed to ensure that service users controlled the use of the blankets and were not forced to use them.

The first study Mullen et al. (2008) explored the safety and effectiveness of the use of a 30lb weighted blanket on 32 adults in a heterogeneous, non-hospitalised volunteer sample. These blankets are designed for use when service users are sitting up, and were proven safe when used this way. Thirty three per cent of participants experienced a lowering in electro-dermal activity; 63 per cent reported lower anxiety after use and 78 per cent considered the weighted blanket useful as a calming modality.

A second study (Champagne et al, 2007) was completed at an acute inpatient behavioural unit with 30 volunteer adult participants. This study measured vital signs in adults using weighted blankets and found that blankets are safe to use. Skin conductance was significantly reduced in 43 per cent of participants who used the 30lb blanket compared to those who didn't. Fifty one per cent of people experienced less anxiety after using the blanket and 77 per cent reported a preference for the weighted blanket when using a self-determined amount of weight. Several participants had a history of restraint during previous admissions, but none of the participants in this second study required the use of restraint or seclusion throughout admission in the study period. Weighted blankets were found to be warm, comforting, relaxing and calming to many of the participants in both studies.

SENSORY ROOM IMPLEMENTATION ISSUES

Te Pou (2010) conducted a pilot study focusing on sensory rooms' implementation in three open adult units and one family/child and adolescent unit in New Zealand. The pilot study identified several barriers to implementation and made the following recommendations:

- Clinicians are most confident using the room when service users show early signs of distress. We recommend that clinicians new to sensory modulation be able to use the intervention with less distressed service users before using it in more complex situations.
- The sensory room needs 24-hour supervised access, with designated people to unlock it. This ensures the proper use of the room and prevents the misuse of the equipment for purposes other than sensory modulation.

CONCLUSION

Emerging research suggests that sensory modulation is a useful intervention in a variety of therapeutic settings. It can be successfully used with a range of mental health service users. Service users with varying diagnoses showed improved self-soothing behaviours, improved interpersonal skills and increased ability to manage distress.

Implementing positive, person-centred practice in mental health services is vital to successfully reduce seclusion and restraint and improve service users' outcomes. The literature suggests that sensory modulation may be a useful intervention in efforts to reduce the use of seclusion and restraint. It is likely that sensory modulation needs to be part of a range of strategies which will underpin positive changes.

There is no evidence of a correlation between correct use of sensory modulation and negative outcomes. Sensory modulation may be implemented successfully where organisational, structural and individual level needs are addressed in a thoughtful manner.

Strong leadership, comprehensive staff training, prudent planning, and clear guiding frameworks are key components of successfully implementing sensory modulation rooms and sensory interventions generally.

Sensory modulation is very promising as a clinical option based on recovery principles and service users' strengths. There is some promising evidence indicating sensory modulation reduces incidences of seclusion and restraint.

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