Title: A study of the use of a Sensory Room on an Intensive Care Unit (ICU).

ABSTRACT:

In recent years there has been an increasing use of sensory rooms in psychiatric settings internationally, with suggestions that sensory rooms can reduce seclusion rates. In this study, we explore the use of a sensory room on an Intensive Care Unit (ICU) (known as a Psychiatric Intensive Care Unit (PICU) in the UK), with a particular focus on the impact on seclusion rates and staff and patients' experiences of using the sensory room.

A mixed method research design was used, with the collection of seclusion data before and after a sensory room was introduced followed by qualitative interviews with staff and patients.

There was no significant reduction of seclusion rates with the introduction of the seclusion room. However, the interviews revealed a perception among staff that there had been a reduction in seclusion rates. Other findings from the interviews were that staff and patients viewed the sensory room as a positive therapeutic intervention and that using the sensory room had improved staff-patient communication and patients' overall experience of the ICU.

In conclusion, the use of a sensory room improved both staff and patients' experience of the ICU and should be an intervention considered by other ICUs and inpatient psychiatric settings.

Key words: Intensive care unit (ICU), sensory room, seclusion, staff and patients' experiences

INTRODUCTION

The use of sensory rooms in psychiatric settings is becoming more widespread, with the introduction of sensory rooms reported in different countries including: the USA (Champagne & Sayer 2003; Costa et al. 2006); New Zealand (Sutton & Nicholson, 2011; Te Pou o te Whakarro, 2011); and Australia (Chalmers *et al*. 2012; Novak *et al.* 2012). The purpose of this article is to discuss the findings of a research study conducted in the UK that explored the use of a sensory room on an Intensive Care Unit (ICU) (known as a Psychiatric Intensive Care Unit (PICU) in the UK), with a particular focus on the impact on seclusion rates and staff and patients' experiences of using the sensory room.

A sensory room, also known as a comfort room (Cummings et al. 2010; Sivak 2012), is a room where sensory stimulus such as lights, sounds, textures and staff support can be used with patients during de-escalation, self-regulation and calming. Such a room can have, for example: bubble tubes, optical mats/ lights, image projectors, a variety of comfortable seating to enable both lying and sitting positions, a digital music player and a variety of diversional resources such as magazines, pictures and stress balls/ objects. Staff support can be either 1:1 or in a group based intervention, teaching relaxation or coping techniques to encourage patients to decrease stress, anger and anxiety. A useful definition of a sensory room in a psychiatric setting is provided by Costa *et al.* (2006) as "a failure free environment in which the mind can wander and the body can relax while experiencing graded stimulation of focused activities. These environments also provide an opportunity to learn how to use a 'time out' to reduce aggression or anger, receive crisis intervention in a safe environment and learn stress management techniques" (p20).

LITERATURE REVIEW

Sensory rooms were not originally developed for individuals with mental health problems. Historically, sensory rooms were first developed for patients with moderate to profound

cognitive impairments (Fisher, Murray and Bundy 1991), learning disabilities (Long and Haig 1992), dementia (Hope, Easby and Waterman 2004) and for young children with complex disabilities (Watling *et al.* 2006). In the USA, New Zealand and Australia, sensory rooms have been implemented to reduce containment interventions, specifically seclusion and restraint, in psychiatric settings (Champagne & Sayer 2003; National Association for State Mental Health Program Directors 2003; O'Hagan, Davis and Long 2008).

However, there remains a paucity of research studies that have evaluated the usefulness of sensory rooms in psychiatric settings; a literature review identified twelve published studies in the international literature. The majority of the twelve research studies are qualitative in nature, asking staff and patients about their experiences of using sensory rooms. Overall these studies report positive experiences from both staff and patients regarding the introduction of sensory rooms, including: positive responses to the use of sensory interventions (Sutton & Nicholson 2011); psychological and physiological improvements among patients (Reddon *et al.* 2004), an increased state of relaxation following sensory room sessions (Costa *et al.* 2006) and lower levels of distress (Champagne 2003; Cummings *et al.* 2010; Sivak 2012). However, the use of a sensory room is not without its challenges, particularly for staff; a study by Te Pou o te Whakarro Nui (2010) conducted in New Zealand found that staff lacked confidence using sensory rooms even after receiving training. However, more positively, the staff also reported that when sensory rooms were used in a distressful situation for a patient as a pro-active measure they had a positive effect and did not lead to more restricted measures being required.

Regarding the effect of the introduction of sensory rooms on seclusion rates, Champagne and Sayer (2003) reported a 40% reduction in seclusion rates on one psychiatric ward where a sensory room had been introduced. In a survey of 39 psychiatric wards in the state of Massachusetts that were using sensory interventions and sensory rooms (LeBel and Champagne 2010), all wards reported a reduction in seclusion rates. The outcome of these

studies appears positive, however the sampling and data collection methods are not clearly explained in the articles and therefore the results need to be interpreted with caution.

In comparison, other studies have found no reduction or change in seclusion rates following the introduction of a sensory room. For example, Cummings, Granfield & Goldwell (2010), in a hospital in the USA, compared the seclusion rates on a psychiatric ward with a new sensory room with a ward without the sensory room and found there was no significant change in the rates of seclusion on the ward with the sensory room. The authors state that this finding may have been influenced by a few 'high utilizer patients' and that a sensory room may not be an effective intervention for acutely unwell and difficult to manage patients. Similarly in a pilot study conducted by Novak *et al.* (2012) in Australia, the researchers found that implementing a sensory room on a psychiatric ward led to no changes in seclusion rates. However, patients who rated their use of the sensory room reported significant reductions in distress and disturbed behaviours.

No published studies have been found that investigate the introduction of a sensory room on an Intensive Care Unit (ICU), although two closely related studies are now discussed. A study by Lee *et al.* (2010) explored the impact of using sensory resources (rather than a dedicated sensory room) on a psychiatric inpatient ward in Australia that incorporated an ICU. The sensory resources used included those similar to what would be used in a sensory room, such as optic lamps, stress balls and digital music players. This six month pilot study found that the 43 patients who were assessed by staff and accessed sensory resources such as calming strategies were secluded less often than during previous admissions or the current admission prior to accessing the sensory resources. Staff also reported that this intervention was helpful in improving positive engagement with patients and improved the management of potential aggressive situations. In another Australian study, sensory based approaches, including a sensory room, were implemented by Chalmers *et al.* (2012) on two psychiatric wards, one of which is similar to an ICU. A sample of 109 patients rated their

distress levels before and after using the sensory room and a statistically significant reduction in patient distress and arousal levels following the use of the sensory room was found.

In summary, there is a paucity of research on the use of sensory rooms in mental health inpatient settings. Most of the twelve studies reviewed are small-scale in nature and for some of the studies the methodologies are poorly detailed thus it is difficult to judge the validity of the studies. Finally, to our knowledge there are no published studies that focus on the use of a sensory room in a psychiatric unit in the UK and specifically in an ICU (known as a Psychiatric Intensive Care Unit (PICU) in the UK).

METHODS

Aims

A small-scale, mixed methods study was undertaken to explore the impact of the introduction of a sensory room on a PICU in the UK. The aims of this study were twofold: 1) To identify whether the introduction of a sensory room reduced seclusion rates; and 2) To explore staff and patients' experiences of using the sensory room.

Setting

The study was conducted in a male only PICU with 15 beds, based within an inner city mental health service in the UK. This PICU has locked doors and the average length of stay is three to four weeks. In the UK, a PICU is a specialist psychiatric unit defined by Pereira & Clinton (2002) as being specifically used for: "patients compulsory detained, usually in secure conditions, who are in an acutely disturbed phase of a serious mental disorder with a

corresponding increase in risk, which does not enable their safe, therapeutic management and treatment in a general open acute ward' (p9).

The sensory room

The sensory room discussed in this study is approximately 5 meters by 2.5 meters and was introduced on the PICU in September 2010, following consultation with both staff and patients. It has light blue painted walls, laminate flooring and one window which has a black out roller blind. The following equipment is in situ; a large floor mounted bubble tube, an optic mat, a light/ image emitting projector, two lying bean bags, two sitting bean bags, a variety of cushions, an iPod dock/ iPod and drawers containing; magazines, stress relief toys, chewing gum and educational materials promoting relaxation and healthy living. Figure 1 shows a picture of the seclusion room with a relaxing image projected on the wall.

Place Figure 1 here

Study design

An explanatory sequential mixed method research design (Creswell and Plano Clark 2011) was used to address the research aims. The study was conducted between September 2010 and December 2012. Firstly, seclusion rates were collected three months prior to the introduction of the sensory room and then three months post the introduction. This was followed by semi-structured interviews with staff and patients. The interviews were conducted 13 months following the introduction of the sensory room. The purpose of this sequential design was to "use the qualitative strand to explain the quantitative results" (Creswell and Plano Clark, 2011, p63).

Recruitment

For the interviews, purposeful sampling was used to recruit patients and staff who had experienced both seclusion and the sensory room and had spent time on the PICU before and after the introduction of the sensory room. Regarding the recruitment of the patients, those who met the inclusion criteria described were firstly approached by the ward manager, as a person known to them, who discussed the study and gave them an information sheet. If they expressed an interest in participating and agreed to speak to the researcher, then a meeting was arranged for the researcher to explain more about the study and what participation would entail. The staff members were also purposefully recruited as meeting the inclusion criteria and then approached directly by the researcher on the ward who discussed the study and gave them an information sheet.

Participants

Ten staff members and seven patients participated in the study. Six other patients were approached; five declined to participate and one started to participate but withdrew due to paranoia around being audio taped. The seven patients were male (this was a male only ward) and all had been secluded and had also used the sensory room on the PICU. The ten staff included nine male and one female; eight were registered psychiatric nurses and two were non-registered nursing assistants. No other demographic information was recorded.

Data collection

Non-identifiable seclusion data were collected from the three months pre- and three months post introduction of the sensory room. However, it is important to note that there is no way of knowing whether the seven patients interviewed were incorporated in the seclusion data collected during this time period; this is because the seclusion data collected were non-

identifiable, with all names removed as required by the local research ethics committee who gave permission for the study to be conducted.

The interviews with staff and patients were conducted over a two week period and all interviews took place in a quiet room on the PICU. A semi-structured schedule was used to guide the interviews; separate interview schedules were developed for the staff and patient interviews, but with some questions in common, such as: What are your views on the availability of the sensory room and has it changed the ward environment? As part of the development process of the schedules, a patient and carer research group based at the local University called 'SUGAR' (Service User Group: Advisors on Research) was consulted regarding the nature of the questions and language used; following this consultation a number of changes were made. The interview schedule for patients was also piloted with a former PICU patient who was the ward patient representative and the interview schedule for staff was piloted with the ward manager prior to being used in the main study.

The interviews were audio recorded with the consent of the participants. The average length of the staff interviews was 20 minutes and the average length of the patient interviews was 12 minutes.

Ethical considerations

Ethical approval for the study was sought and granted by a local research ethics committee. All participants were provided with a detailed information sheet regarding participation and all signed a consent form. The participants were also all informed that their participation was voluntary and that they could withdraw from the study at any time without giving a reason and without penalty.

Analysis

The quantitative data obtained from the seclusion records pre and post the sensory room introduction were analysed using SPSS Version 19 (IBM Corp 2010). Descriptive statistics were used to summarise data gathered from the seclusion records by counting the frequencies and identify themes and patterns. Pre and post sensory room introduction seclusion rates were compared to see if seclusion rates had increased or decreased since the introduction of the sensory room.

The audio recorded interviews were transcribed verbatim and then entered into the QSR N6 software (QSR International 2002). The interview data were analysed using a thematic approach, starting with open coding that involved line-by-line analysis of each interview. During this process, new themes were identified, with similar phenomena being given the same general name in a 'constant comparative method of analysis' (Glaser & Strauss, 1967). This process was conducted first with the staff interview transcripts, to identify the codes and emerging themes from the staff interviews, and then the process of constant comparison was extended across the analysis of the patient interviews. This process began to identify the similarities and differences across the two groups of interviews as well as within the two groups. At this point the two authors met to discuss the codes and emerging themes, to clarify and agree on the themes within and across the two sets of interviews. During this process, more prominent or 'higher order' themes began to emerge. This process led to the development of an 'axis' or 'hierarchy' of themes around the core theme of staff and patients' experiences of the sensory room.

When presenting the qualitative findings, the participants have a code and number to protect their identity, with 'SU' representing 'service user' and 'S' representing 'staff'.

RESULTS

Impact of the introduction of the sensory room on seclusion rates

The number of seclusion incidents was higher after the sensory room was introduced, with 27 incidents of seclusion in the three months prior to the sensory room introduction and 37 incidents in the following three months. Therefore it appears that the sensory room did not have any effect in reducing the overall rates of seclusion. However, there were a number of repeated incidents of seclusion by a minority of patients; of the 27 incidents in the pre-introduction time period, 12 were repeated seclusions by four different patients. Whereas in the post-introduction period, 25 of the 37 seclusions were repeated incidents of seclusion by six patients (see Figure 2).

Place Figure 2 here

Thus the results demonstrate that in post-introduction, repeater seclusions by a minority of patients were responsible for the majority of incidents (67.5%) compared to 44.4% in pre-introduction. Furthermore at post-introduction, one patient was secluded 12 times which was 32.4% of the total seclusion incidents recorded. If the repeater seclusion were extracted as anomalies, the rates of seclusion would be seen to have been reduced.

Interestingly, the interviews revealed that staff perceived the rates of seclusion had decreased since the introduction of the sensory room. As the following quotes demonstrate:

> "Nowadays where we are all trying to use the recovery process in terms of working with people, the use of it (seclusion) is becoming less and less now – 'coz things like the sensory room are part of trying to incorporate recovery so that also contributes to the use of seclusion and the rates going down.'' (S10)

> "On a few occasions I have actually persuaded people who were just about to be secluded to use the sensory room to very positive effect." (S7)

Seclusion length of time and time of day

The length of time of seclusion was recorded and also the time of day, according to the three staff work shifts: early shift (7am- 3pm); late shift (3pm-9pm) and night shift (9pm-7am).

The length of time in seclusion ranged from 40 minutes to 3 days in Time one (three months before sensory room was introduced) and from 45 minutes to 16 hours 30 minutes in Time two (three months after). The mean duration in Time one (n=27) was 7 hours 30 minutes (SD=17 hours 25 minutes) and in Time two (n=37) it was 3 hours 59 minutes (SD=3 hours 40 minutes).

This may look as if the mean duration of time in seclusion decreased considerably after the sensory room had been introduced. However these results are skewed by some extreme values of very long seclusion time periods, with two long seclusion episodes in Time one of 2 days, 6 hours and 3 days, and in Time two, there was one seclusion episode of 16 hours, 30 minutes. With these three outliers removed from the data set, the mean duration in Time one (n=25) was 2 hours 46 minutes (SD=2 hours 50 minutes) and in Time two (n=36) it was 3 hours 37 minutes (SD=3 hours 7 minutes). Therefore the average length of time in seclusion had actually increased, not decreased following the introduction of the sensory room.

Regarding the time of day, in Time one; 7 seclusion episodes occurred in the early shift (7am- 3pm), 8 occurred in the late shift (3pm-9pm) and 12 at night (9pm-7am). In comparison in Time two; 4 seclusion episodes were in the early shift, 10 during the late shift and 23 during the night shift. Interestingly time two showed a majority of seclusion episodes during the night shift which consisted of a number of repeat seclusion incidents. Figure three compares these times of days according to Time one and Time two.

Place figure 3 here.

The sensory room as a positive intervention

Overall the staff and patients spoke positively about the introduction of the sensory room. Positive experiences reported by the patients included; relaxation, relieving stress, a space to listen to their own music, inducing sleep, space to reflect, meditation, for individual use and being a part of a group, as the following quotes illustrates:

> "Sometimes when you are stressed it's like – you just go in there. You got the cushions, bit of music and it's like, it almost makes you feel you are back at home, relaxed and chilled." (SU1)

> "It takes my mind off things – listening to music – able to relax, unwind." (SU6)

The staff also talked positively about the benefits of using the sensory room with patients, as described by the following staff member:

> "They [patients] go to the sensory room just to relax and re-wind, interact with staff and listen to some music and it has a positive therapeutic effect." (S4)

As indicated by the quotations already discussed, an interesting theme to emerge from the interviews was the importance of having music in the sensory room, which patients brought into the room from their own personal music collections. The patients also praised the sensory room equipment such as the lights, seating, bubble tube and projector as being beneficial:

> "I watch bubbles and relax. You clear like (signalled hand gestures away from head and body). It's good. I like." (SU4)

> "Sometimes you just need that – alone space. Even if you are not alone, you can be in there with 8 people but if 8 people want to listen to the same music – we're all chilling." (SU7)

A positive influence on the PICU experience

All of the patients interviewed felt that the sensory room had had a positive impact on their admission to the PICU, as the following quotation highlights:

> "It's a really nice place to be! It's the best room in the hospital – without a shadow of a doubt. It's something I would like to have in my own house to tell the honest truth – I love it!." (SU7)

Two staff members discussed recent examples where the use of the sensory room had been incorporated into the patients care plans, as something both the staff and patients felt worked to reduce symptoms. The majority of staff felt the sensory room had a positive impact on de-escalating patients, as illustrated by the following quotation:

> "So when we notice the aggressiveness in the earlier stage, so we offer then – do you want an environment where you can calm down? And chill out? So that is when we use the sensory room and it does work." (S3)

However, the majority of staff reported that the sensory room was not appropriate for highly aggressive patients and therefore felt seclusion should be always available as a 'last resort' intervention.

Improved communication on the PICU

The majority of patients and staff perceived that the sensory room had improved communication between patients and staff and patient peers on the PICU. Although one patient felt the sensory room was 'like a clique' (SU3) and another stated 'there are a few people you have to avoid – in order to enjoy the room' (SU7), the majority felt that the room evoked a sense of community and provided a space for socialising, as the following quote demonstrates:

> "If it wasn't for the fact we were in hospital – it would have been a really nice community of friends to be around." (SU7)

In addition to experiencing better engagement with peers, some felt the sensory room improved communication with staff:

> "The staff are much more pleasant – usually. The staff – like this today – this morning, instead of having art we had music therapy. And the staff were chatting, chilling, having a laugh and a joke." (SU7)

The majority of staff reported they felt that the sensory room has had a positive impact on their communication and engagement with patients. Staff reported they felt that patients were more relaxed and therefore more accessible to discuss their mental state:

> "I find that patients when they go in there, when they leave the sensory room they become more relaxed, more approachable." (S2)

The majority of staff also felt the sensory room improved communication between patients as peers and felt the sensory room was a supportive environment as well as a social one:

> "When one person goes in – there are other people start going in and it becomes like a community…. It's a supportive environment as well we have seen that it has very, very positive effect, to help individuals in different ways." (S9)

DISCUSSION

Contrary to our expectations, the seclusion rates did not decrease in the first three months following the introduction of the sensory room on the PICU. This finding is in keeping with some of the previous studies on this topic (Cummings, Granfield & Goldwell 2010; Novak *et al.* 2012) but contrary to other studies (Champagne, 2003; Champagne & Sayer, 2003; LeBel & Champagne 2010; Sivak, 2012). Clearly it is problematic to compare the results of studies using different study designs which may be one reason for these contradictory findings. Furthermore, it is acknowledged that there are many factors that influence the rates of seclusion at any one time on a psychiatric ward (Huckshorn 2004). One such factor that was significant in our study was the 'repeater' seclusions by a minority of patients that influenced the overall seclusion rates and this was also found to be a factor in the study by Cummings, Grandfield & Coldwell (2010). Previous studies (Chalmers *et al.* 2012; Huckshorn, 2004) have also highlighted that the multi-disciplinary team are often required to implement several interventions at one time in order to reduce seclusion rates. Therefore, just looking at seclusion rates may not be the best way of evaluating the impact of a sensory room.

By utilising a mixed method approach and sequential exploratory design, a mismatch was revealed between the actual incidents of seclusion from the seclusion records and the perceived seclusion rates by staff. This finding that staff perceived a reduction in seclusion rates is supported by previous studies (Sutton and Nicholson 2011, Te Pou o te Whakarro Nui 2010). Although it is also possible that the difference in actual and perceived incidents of seclusion may be due to the interviews with the staff being carried out 13 months after the room had been in use. During the interviews staff reported feeling confident in using the sensory room but may have not at time of initial introduction, therefore the room may not have had an impact until many months following its introduction.

Importantly, staff and patients reported that the sensory room had impacted positively on the PICU environment. They felt that the sensory room provided a space to help aid calming and de-escalation, somewhere to relax, socialise/ increase communication and enjoy music and the sensory equipment. This finding has been reported in many of the previous studies on this topic (Chalmers *et al.* 2012; Champagne, 2003; Champagne & Sayer, 2003; Costa *et al.* 2006; Cummings, Grandfield & Coldwell 2010; LeBel & Champagne 2010; Novak *et al.* 2012; Sivak 2012; Sutton & Nicholson 2011).

A prominent theme to emerge from the patient interviews was that they benefitted from both the availability of music and the sensory room equipment. Previous research suggests that music can have a positive effect on patients' mental state (McGaffrey, Edwards & Fannon 2011). When considering the importance of improving the PICU experience, the concept of 'permeability' (Quirk *et al.* 2006) can be related to the existence (and importance) of music, on the PICU and specifically, in the sensory room. The PICU is a locked environment, where patients are contained because of their behaviour; outside negative influences are generally kept out and not allowed to permeate (for example, no mobile phones, banning of negatively influential friends/ family and no illicit drugs or alcohol). However, the fact that patients can bring in their own favourite music and have a space to listen to it in the sensory room can be considered a positive consequence of permeability. In addition, this aspect of normalisation can help in reducing the risk of 'institutionalisation' and patients maintaining their own identity (Goffman 1961) which can underpin the experience of the PICU in a more positive way. Although, as the findings demonstrated, this is often dependent on which other patients are present in the room, what stimuli such as music is being played and what effect this may be having on a group of patients.

The majority of patients expressed the view that the sensory room evoked a sense of community on the PICU between peers, as patients met and communicated more in the sensory room. This finding is supported by previous studies that highlight the benefits of peer support on psychiatric wards (Jones *et al.* 2010, Wood & Pistrang, 2004). However, it

is important to mention that one patient felt the sensory room was sometimes like ‘a clique’ (SU2) and some patients did not go to the sensory room if a patient they did not get on with was already in the room. Therefore it is important that staff utilise the sensory room sensitively with patients and tailor its use to meet their individual needs.

All the staff who participated in the study thought that having the sensory room available on the PICU had a positive impact on their clinical work, providing an alternative clinical intervention to use. This is in keeping with the findings of previous studies (Champagne 2003; LeBel & Champagne 2010; Lee *et al*. 2010). The staff reported examples of using the sensory room with patients that reduced arousal in agitated patients, provided a relaxing environment for 1:1’s and sensory room use being put in care plans for patients. Thus this study has found that the overall experience of the PICU was improved by the introduction of the sensory room as it was perceived as a positive therapeutic and recovery based intervention; it created a space for 1:1 or group interventions, a space to relax, self-regulate, to listen to personal music, it increased communication on the PICU between both staff and patients and peer support between patients.

LIMITATIONS OF THE STUDY

It is acknowledged that this study is limited in that it is a small scale study involving participants on a single psychiatric ward. The collection of seclusion data for only three months after the introduction of the sensory room is also quite a short time period. It is also recognised that the fact that the interviews were conducted 13 months after the seclusion data were collected and this may have influenced participants’ perceptions of the effect of the sensory room on seclusion rates. However, conducting the interviews approximately a year after the sensory room was introduced enabled the participants to all have enough time to use the sensory room and form an opinion about it.

CONCLUSION

This paper has explored the impact of a sensory room on an ICU and on seclusion rates. To our knowledge, this is the first study to have been conducted on this topic in a PICU/ICU setting and also in the UK. In the UK, PICU services strive to make the inpatient admission and overall experience as positive as possible. From this study, it has been highlighted that both staff and patients found the use of a sensory room a positive experience. The effects of the availability of the sensory room on seclusion rates remain inconclusive as the quantitative data found no decrease in the use of seclusion, even though the staff interviewed perceived that seclusion had reduced since the availability of the sensory room. However, a number of new insights have emerged from the study, in particular the fact that although the ICU is a restricted environment, the sensory room appears to provide a 'refuge' for the patients. The sensory room was found to improve both the patient and staff experience of the ICU as it provides an extra intervention that is perceived as being enjoyable and improves important aspects of the ICU environment, such as enhancing communication between staff and patients and also between patients in terms of providing peer support.

There are a number of recommendations for practice that can be drawn from this research; firstly it is suggested that all ICUs should consider sensory rooms as a therapeutic intervention. In addition, the use of a 'safety tool', used to positive effect by Chalmers *et al.* (2012) and Lee *et al.* (2010), could also be utilised on ICUs, to document patients' sensory needs when agitated or angry and to help promote de-escalation in a patient centred way. Further education and on-going staff training for all multi-disciplinary team members is also recommended so that the use of the sensory room is consistently used with patients. Regarding the design of psychiatric wards, consideration for dedicated spaces, such as sensory rooms, that promote recovery should be viewed as much a priority as spaces for containment such as seclusion rooms.

Further research, including larger-scale intervention studies, is also required to explore more rigorously the contribution that sensory rooms can potentially make across the spectrum of psychiatric settings.

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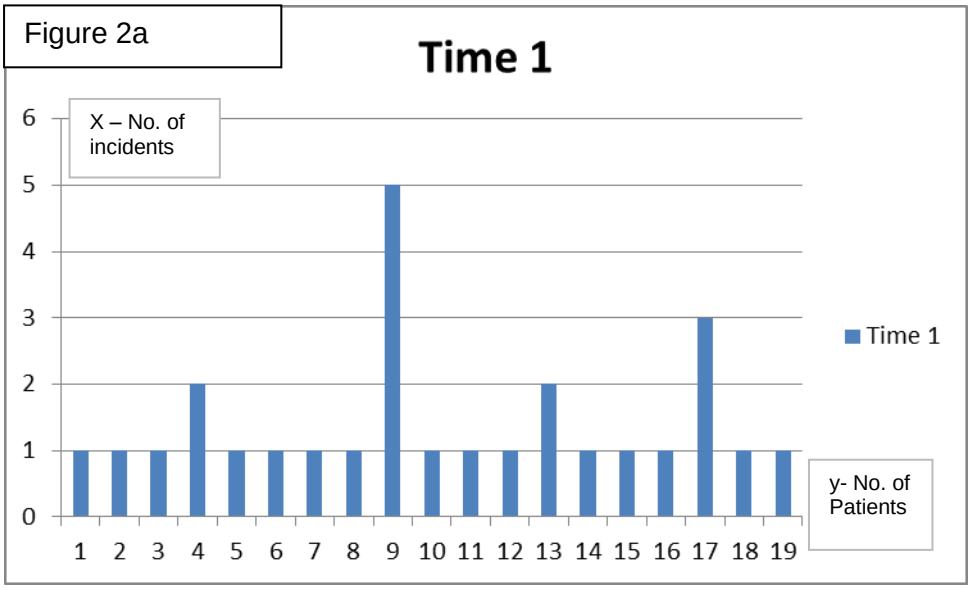
Appendix

Figure 2 -incident rates in Pre Sensory room (T1) and Post Sensory room (T2):

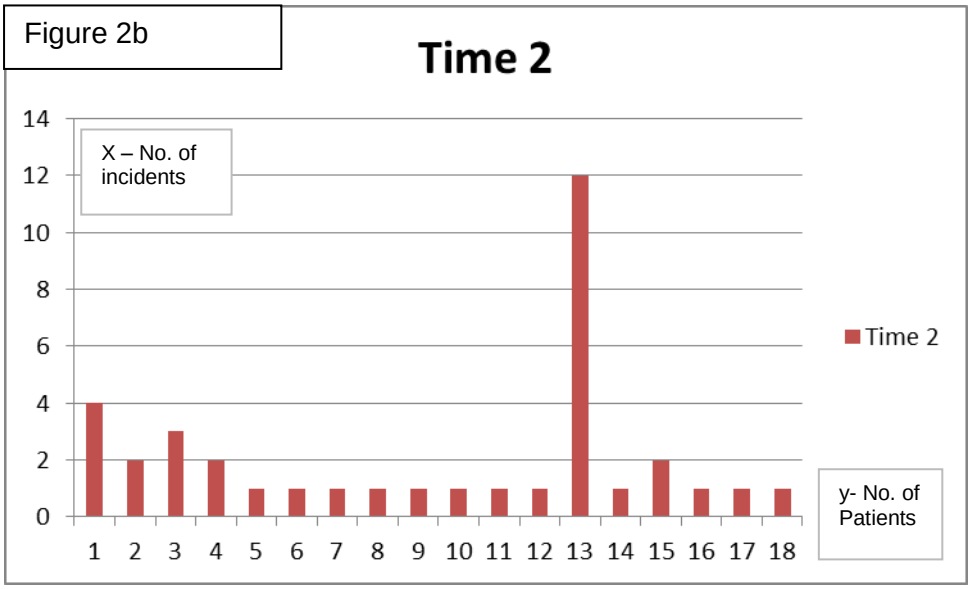
Figure 2a



T1
- Incidents n=27
- Patients 19

Repeated incident total = 12 (n= 4 patients)

Figure 2b



T2
- Incidents n=37
- Patients 18

Repeated incident total = 25 (n=6 patients)

Figure 3 – Seclusion episodes by time of day, comparing Pre Sensory room (Time 1) and Post Sensory room (Time 2):