Keywords Therapeutic interventions/ Mental health nursing/Holistic care

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In this article...

- Usage, benefits and risks of *pro re nata* psychotropic medication
- A survey exploring non-pharmacological interventions for distressed patient behaviour
- Mapping the interventions and assessing them against existing research and guidance

Non-pharmacological alternatives to pro re nata psychotropic medication

NT JOURNAL CLUB

Key points

Pro re nata (as-required) psychotropic medication is commonly used, but there are concerns over its safety and effectiveness

A mental health trust surveyed nurses about non-pharmacological interventions for distressed patients

The trust developed a map grouping the interventions under the themes of physical health, psychological health, environment, distraction and relaxation

These interventions align with existing research and clinical guidance that recommend a reduction in the use of _pro re nata_ psychotropic medication

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Abstract *Pro re nata* (as-required) psychotropic medicines are used frequently in mental health settings; however, concerns have been raised over the safety and lack of evidence of effectiveness of this practice. A mental health trust conducted a survey exploring the non-pharmacological interventions used by nurses to support agitated service users. It used their responses to create a clinical aid that maps out suggested interventions under the themes of physical health, relaxation, distraction, environment and psychological health.

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The term PRN is derived from the Latin *pro re nata*, meaning as required or as needed. PRN psychotropic medications are usually prescribed by doctors to be administered at the discretion of a registered nurse or at the service user's request. Mugoya and Kampfe (2010) stated that the underlying rationale for the use of PRN medication is to enable nursing staff to administer psychotropic medications in a timely manner to prevent or contain agitated or violent service users without having to first contact medical staff.

PRN psychotropic medication is frequently used to reduce emotional and behavioural disturbance in service users in mental health settings. This article describes a project that arose from concerns in a 14-bed facility in a mental health trust in the Northwest of England about a possible overreliance on this treatment at the expense of potentially safer therapeutic alternatives. We conducted a service evaluation, adopting action-research methodology to explore existing practices around PRN psychotropic medicines, with the longer-term aim of developing and implementing a strategy to reduce PRN use and its associated harms. This included an audit of medication prescription charts to determine current usage of PRN and surveys to identify staff views on the use of PRN and any non-pharmacological alternatives currently used in the ward environment. This article reports the findings of the survey only.

Literature review

Across relevant literature, PRN medication is viewed by mental health nurses as a useful and indispensable intervention for acute emotional and behavioural disturbance. There is evidence, however, that PRN medication may be less acceptable to service users, particularly where its use is perceived as coercive (Price et al, 2018). PRN use has also been linked with a number of adverse effects, ranging from increases in dose-related side-effects to service user deaths (Royal College of Psychiatrists, 2006).

PRN medication can often be termed as chemical restraint; in the UK this often

occurs alongside physical restraint, as patients are physically restrained to receive PRN medication. Negative physical consequences for patients include lacerations, asphyxiation, thrombosis and death (Wilson et al, 2017); so it is vital to try to reduce restrictive practices within services and offer more therapeutic alternatives.

Reliance on psychotropic medication for its sedative effect can restrict service users in developing the daily living and coping skills needed to function outside the inpatient user setting and cause dependency (Donat, 2005). Further negative consequences include interactions with other regular medications, polypharmacy (Baker et al, 2008) and doses of medication exceeding British National Formulary upper limits. Each of these iatrogenic effects could be reduced if alternatives to PRN medication were considered as first-line treatment.

Usher et al (2010) observed that PRN prescriptions continue to be administered on an ad-hoc basis and that safety is too dependent on the experience and judgement of individual nurses. Although inpatient users are commonly prescribed PRN psychotropic medication, the indications are often unclearly defined and other less harmful interventions for reducing agitation and distress may be more appropriate (Duxbury and Baker, 2004).

Conducting the study

The aims of the study were to:

- Obtain, via survey, the views of nursing staff working in mental health settings on effective non-pharmacological alternatives to PRN psychotropic medication;
- Develop a clinical aid to increase the range of options available to clinical staff in response to distressed or agitated service user behaviours.

We devised a questionnaire to ask staff members which non-pharmacological interventions they were aware of, or were already using, as alternatives to PRN medications. We also designed a consent form that explained the questionnaire and stated that completion assumed informed consent. The questionnaires were completed anonymously and then stored in a locked drawer to ensure confidentiality. They consisted of two open-ended questions and, to promote completion and ensure clarity of data, they used clear and simple language and avoided complicated sentences (Hicks, 1999). The questions were:

- Can you list interventions that could be used to manage anxiety, agitation or aggression in the inpatient user setting as an alternative to PRN psychotropic medication?
- How many of these interventions do you currently use?

In accordance with the overriding aim to provide guidance that reflected contributions from and expertise of all members of the team, we used a convenience sampling method, also known as haphazard sampling or accidental sampling (Etikan et al, 2016). The questionnaire was distributed to all nursing staff of all grades on two acute wards (n=35).

"Self-management skills include self-hypnosis, guided imagery and muscle-relaxation therapies based on tightening and relaxing muscle groups"

In terms of ethical considerations, the study did not include randomisation, did not intend to generalise to other settings or populations and did not intend to evaluate changes to existing practice; it consisted of a survey of NHS staff only. The National Research Ethics Service online decision-making tool was completed and confirmed that a review by an NHS Research Ethics Committee was not required.

Results

The results were analysed using thematic analysis, which is a method of analysing, identifying and reporting themes within the data collected (Braun and Clarke, 2006). The data was coded and grouped into themes and then synthesised, so that a thematic map could be developed to guide clinical practice.

We sent out 35 questionnaires and 12 were returned, representing a 34% return rate; this is just above the expected return rate for postal questionnaires (Kelley et al, 2003), although we recognise this rate was from a small sample. A total of 34 distinct non-pharmacological interventions were identified, which fell under five themes: physical health, relaxation, distraction, environment and psychological interventions. Our analysis of the free-text comments revealed how the interventions and themes interacted and overlapped, which enabled us to develop a thematic map of nurse-led interventions as an alternative to PRN psychotropic medication (Fig 1, p54). This is a visual schematic map for use by both staff and service users to allow them to identify non-pharmacological interventions that could be used in a moment of crisis, as well as to identify those interventions that the service user would not find helpful. We discuss the map's five themes below, with reference to both survey responses and supporting literature.

Physical health

The thematic map encourages staff to consider interventions under the umbrella of physical health. These are to establish whether the service user has any physical pain or ill health that could be causing distressed behaviour, and to provide education on unwanted side-effects that may be associated with the requested medicine.

Relaxation

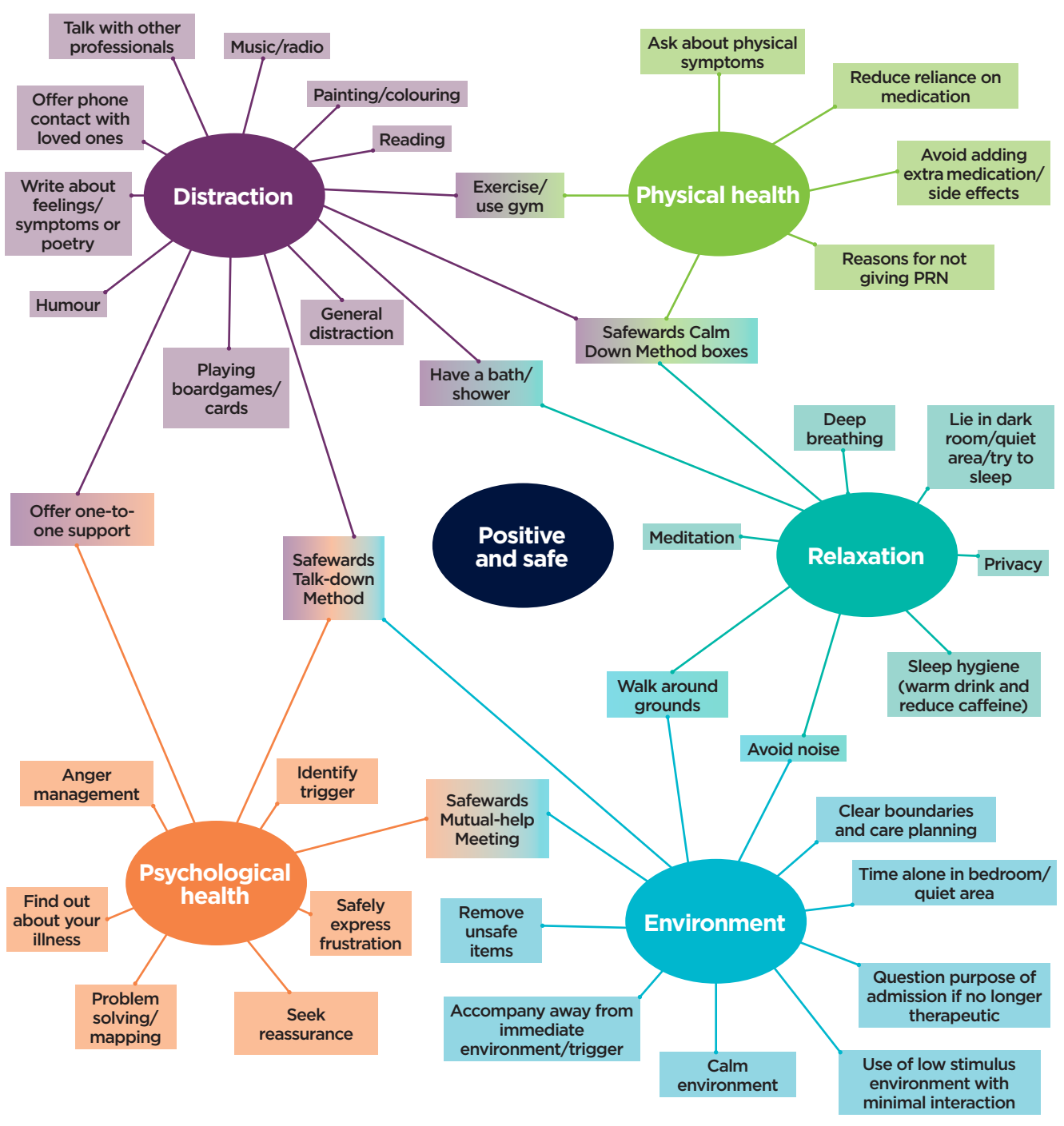
The relaxation theme underscores the importance of prompting staff and service users to access the Calm Down Methods boxes recommended by the Safewards model (Bowers et al, 2015). The boxes contain a variety of sensory items that each patient can choose to help soothe and calm them, such as mindfulness colouring books, Play-Doh, stress balls, music, pictures of loved ones and pampering items. Survey respondents also emphasised the importance of interventions, such as deep breathing, mindfulness and meditation; the thematic map directs nurses to practise using these interventions with service users.

Although stress is universal, few people are trained in managing it (Perkbox, 2018). In addition, people now face an array of novel stressors for which there are no evolutionary or historical precedents; many people, therefore, respond unskilfully or even self-destructively (Walsh, 2011). Self-management skills include mental approaches, such as self-hypnosis and guided imagery (Trakhtenberg, 2008), and somatic approaches, especially muscle-relaxation therapies that centre on systematically tightening and relaxing major muscle groups. By practising these skills, service users learn to identify and release muscle tension and, eventually, to self-regulate both muscle and psychological tensions. Muscle-relaxation skills are widely used for the treatment of anxiety disorders, including panic and generalised anxiety disorders, and meta-analyses reveal medium-to-large effects in reducing anxiety (Manzoni et al, 2008).

Distraction

In the survey responses, distraction was identified as a key alternative intervention;

Fig 1. **Map of nurse-led interventions as an alternative to PRN psychotropic medication**



'PRN = *pro re nata*'

this involved encouraging service users to undertake activities, such as watching television, exercising, reading or engaging in other pleasurable activities to distract themselves from a stressful event. Other respondents emphasised the importance of using service users' support time with recovery workers or occupational therapists – on or off the ward – to complete activities, read, listen to music or undertake art activities.

Distraction is a passive coping strategy, in that the service user copes without directly confronting the situation or trying to solve the problem. Distraction is sometimes conceptualised as an accommodative or secondary-control coping tactic (Allen and Leary, 2010) that people adopt to distract themselves from an unavoidable stressor. Whether or not distraction is adaptive or effective depends on the situation. To the extent that the situation cannot be changed, distraction may be helpful.

Environment

Survey respondents emphasised the importance of considering the impact of

the environment, for example, checking whether there are any risks or objects that need to be removed to minimise distress. Some respondents said that observing a service user's distressed behaviour triggers them to question whether they needed time in a quieter or outside area or access to extra care facilities to alleviate arousal, such as de-stimulation suites which provide a low-stimulus environment for service users who may be experiencing heightened feelings of agitation.

A therapeutic environment is one that allows individuals to enjoy safety, security, privacy, dignity, choice and independence, without compromising the clinical objectives of the service (National Institute for Health and Care Excellence, 2015). The moving of an agitated service user (with their agreement) to a less confrontational or quieter ward area can allow for de-escalation, whereby the service user is redirected to a calmer personal space without the assistance of medication. The environmental theme comprises reactive and proactive nursing interventions to regulate both the ward's physical environment and its psychological environment, with the aim of reducing service users' arousal levels.

Acute psychiatric wards provide limited-duration care to people in acute states of disturbance and distress. Once admitted, service users may exhibit various difficult and risky behaviours, including verbal aggression, attempts to abscond, self-harm, refusal to eat or drink, and aggression towards objects or people (Bowers et al, 2015). The use of force and coercion that can be involved in containment elicits staff ambivalence and can result in unintended injury to service users or spoil cooperative relationships between staff members and service users. Reducing the frequency and severity of these events is, therefore, very important for wards, service users and staff alike (Bowers, 2014).

Different and distinct features of a ward's physical environment have a bearing on the frequency of various service-user behaviours (Bowers et al, 2014): the physical environment can increase or reduce conflict and containment events. There is, therefore, a need to be aware of environmental factors that could increase stress and agitation so modifications can be made to alleviate these.

Psychological health

Under the theme of psychological health, survey respondents highlighted the importance of two of the Safewards interventions: the Talk Down Method and Mutual Help Meetings, which service users can access (Bowers et al, 2015). The Talk Down Method provides an organised catalogue of Talk Down Tips, showing how they fit together into a three-stage process of de-escalation. Mutual Help Meetings are voluntary meeting of all patients and the staff on duty, held preferably first thing in the morning and every day (certainly no less than three times a week). The meetings address how everyone can help everyone else during the rest of the day, and follows a structured agenda. Respondents also recommended staff members and service users work together to explore triggers for distress, then appropriately problem solve if possible. Additionally, some respondents reported that service users find the safe expression of frustration helpful, for example, through punching a pillow, exercising, crying or writing down angry thoughts.

> *"A ward's physical environment has a bearing on various service-user behaviours: it can increase or reduce conflict and containment events"*

Using problem solving to reduce or prevent distress and enhance positive wellbeing can help people cope more effectively with stressful problems in living. Depending on the nature of the problematic situation, effective coping may involve:

- Improving the situation, for example, by achieving a performance goal, removing an aversive condition or resolving a conflict;
- Reducing the emotional distress generated by the situation, for example, through acceptance, tolerance, creating something positive out of the problem or reducing physical tension (D'Zurilla and Nezu, 2010).

Limitations

Although the interventions nurses reported using may have intuitive appeal as alternatives to PRN psychotropic medicines in some circumstances, due to the qualitative design of the study we cannot confirm the safety or effectiveness of any of the techniques described. The questionnaire return rate of 34% poses an important limitation, although it generated sufficiently rich data for qualitative analysis. The sample was a single inpatient-user unit; owing to resource constraints, it was not possible to extend the survey to other units or to triangulate data methods to include observation or interviews. We were unable to derive from the survey the applicability of each intervention to different forms of distress, such as aggression, self-harm or agitation. This should be a priority for future research into alternatives to PRN psychotropic medication.

Discussion

The use of PRN medications has been common practice in psychiatric care for many years, but is associated with harms to service users. Significantly, PRN antipsychotic medication usage has been implicated in exposing service users to high doses and polypharmacy (Royal College of Psychiatrists, 2006). Whicher et al (2003) reported that the administration of PRN psychotropic medication is based on clinical judgement. They concluded that, due to the absence of high-quality randomised trials, no evidence has been found to demonstrate the effectiveness of the medications, bringing the legitimacy of this practice into question.

Agitation is an acute behavioural emergency that requires immediate intervention. Traditional methods of treating agitated patients – namely routine restraints and involuntary medication – have been replaced by interventions that are much less coercive. Experienced practitioners have found that, if such interventions are undertaken with genuine commitment, successful outcomes can occur far more often than previously thought possible (Richmond et al, 2012).

The aim of our project was to develop a clinical aid that might reduce the incidence of PRN psychotropic medication use – and its associated harms – and increase the types of alternative intervention offered or taught to service users. It was additionally anticipated that this would allow service users to naturally cope with their symptoms; Farhall et al (2007) define natural coping as actions taken to ameliorate symptoms or regulate emotions without assistance from professionals.

People who commit acts of violence often lack conflict-resolution skills and resort to more primitive and physical ways of acting and responding. Teaching service users new coping skills and effective behavioural alternatives to manage their anger is, therefore, helpful as a primary prevention intervention (Varcarolis, 2006).

The thematic map (Fig 1) provides a basis for nurses to work more

collaboratively with service users, teach new interventions that have potential efficacy, and provide information about alternatives to encourage self-discovery and natural coping. For care to be regarded as recovery-focused, the service user must be central in setting goals and identifying their own interventions that will be of benefit during times of distress; the thematic map is a tool that can help nurses and service users achieve this.

Survey participants identified a wealth of interventions for use as a substitute for PRN psychotropic medications; they align with the less-invasive interventions discussed by Usher and Luck (2004), although a greater number and variety of interventions were identified in the surveys. As Cleary (2004) commented, nurses take their knowledge, skills and expertise for granted. However, representing their experience of alternative interventions on a thematic map enables this knowledge and experience to be accessed and diffused throughout teams, thus helping to create a more therapeutic environment and atmosphere.

Many authors suggest that alternatives to PRN psychotropic medications should be given serious consideration (Donat, 2005; Duxbury and Baker, 2004; Usher and Luck, 2004) and this is also supported by the NICE (2015) guidance for the management of violence. Acute mental health settings should, therefore, all be striving to reduce the use of PRN psychotropic medications to give service users the best care and overall experience during their hospital stay, and the thematic map developed in this study is a tool that contributes to this aim. We have also developed a supporting educational package and disseminated it throughout our trust to enhance safe practice in mental health settings.

"The thematic map has been incorporated into the trust's nursing strategy"

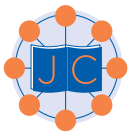
Next steps

Following consultation meetings with staff and managers to refine the map further, it has now been disseminated across all wards within the trust and has included some community settings.

Upon admission of a new service user, we will hold a pre-planned session to discuss their feelings about how behaviour escalation should best be managed on the ward without the assistance of medication. This conversation will inform the rest of their inpatient stay.

The thematic map has been incorporated into the trust's nursing strategy and the trust's Positive and Safe agenda to support the use of least-restrictive practice. We will also review the map regularly to allow for updates or amendments as well as auditing service areas, both on their use of map and on their use of therapeutic interventions as opposed to PRN psychotropic medications.

The PRN campaign work and the thematic map was entered into the Nursing Times Awards in 2018 and was a finalist. **NT**



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