European Journal of Mental Health
https://doi.org/10.5708/EJMH.18.2023.0006

RESEARCH ARTICLE

Experimental Staffing Models in Inpatient Acute Mental Health Services. A Longitudinal Comparative Study of Occupational Therapy Services

Nina PHOENIX [1] ✉, Julie TAYLOR [2]

Affiliations
[1] Allied Health Professional Practice Education and Development Lead
Kent and Medway NHS and Social Care Partnership Trust
[2] Canterbury Christ Church University

✉ Correspondence
Nina Phoenix
Eastern and Coastal Area Offices,
St Martins Hospital, Littlebourne Road,
Canterbury, CT1 1AZ.
Email: nina.phoenix@nhs.net

History
Received: 1 October 2022
Accepted: 13 February 2023
Published: 28 April 2023

Citation
Phoenix, N., Taylor, J. (2023). Experimental Staffing Models in Inpatient Acute Mental Health Services. A Longitudinal Comparative Study of Occupational Therapy Services.
European Journal of Mental Health, 18, e0006, 1–13.
https://doi.org/10.5708/EJMH.18.2023.0006

Introduction: An NHS Mental Health Trust in England recently used an experimental staffing model by including Occupational Therapists (OT) in the staff numbers on ten working age adult acute inpatient wards.
Aims: This study aims to compare different staffing models involving occupational therapists and make recommendations for preferred staffing models.
Methods: This is a longitudinal comparative study of archived patient and multi-disciplinary electronic records and data collected from Kent and Medway NHS and Social Care Partnership Trust. Areas of analysis included quantitative data and qualitative coding and theming, covering the period February 2016-June 2019 during the experimental staffing model, and July 2019-March 2021, when the model ended and teams were Occupational Therapy-led. Full ethical approval and consent was gained in 2020 from the Trust and University to request and access data to complete this research.
Results: This experimental staffing model resulted in less delivery of Occupational Therapy specific interventions, resulting in poorer retention rates and impacting on patient and student experiences. Since working in Occupational Therapy led teams, the quality of Occupational Therapy interventions, job retention, student experiences, patient care and safety have improved.
Conclusions: The recommended staffing model for working age acute mental health wards has Occupational Therapists embedded in OT-led teams. Staffing tools need to be developed that involve Allied Health Professional leaders and this field needs more research.

Keywords: Occupational Therapy/Therapist, Staffing models, Experimental staffing, Inpatient wards, Mental Health.

The 1st author of this study is an Occupational Therapist, with ten years of experience working in mental health services. There are no declared conflicts of interest, although the author declares researcher bias. Having worked within both staffing models, the researcher has formed exclusive opinions of their success; all endeavors will be made to ensure that results are analyzed and presented in a fair unbiased manner.

The term "patients" will be used throughout this paper to refer to "service users" and "clients" as this is the language used within National Health Service (NHS) inpatient mental health services.

ISSN 1788-7119 (online)

Introduction

Globally, the World Health Organisation (WHO) recognizes that countries do not prioritize mental health care services, with governments on average using 2% of health budgets for mental health care (WHO, 2022). However, the UK Government has made a commitment to increase funding for Mental Health services as part of the NHS Long Term Plan (NHS England, 2019a).

Anyone experiencing a mental health crisis may be unable to look after themselves, or they may be putting themselves or others at risk of harm. In England, in these cases, some individuals are admitted to an acute mental health inpatient hospital, as either a voluntary or detained patient (Mind, 2022). Financial cuts and bed closures have increased bed pressures and staff turnover, resulting in many United Kingdom (UK) Mental Health Trusts experiencing a staffing crisis (Gilburt, 2020; Mahase, 2020; Mind, 2020). Additionally, an expectation exists for Occupational Therapy (hereafter OT) services to be available seven days a week in acute services to ensure a smooth transition from hospital to community (NHS England, 2013; 2016). In response to these staffing demands, NHS Trusts have made changes to staffing models on inpatient mental health wards, adapting OT job descriptions accordingly (Department of Health, 2007). Health and Social Care in England is regulated by the Care Quality Commission (CQC), who inspect across the following criteria: Safe, Well-led, Effective, Responsive and Caring. The CQC celebrates innovative approaches to delivery of services, but safe staffing levels remain a priority across all services (CQC, 2022).

Due to the difference in local needs, no staffing ratio standards exist for inpatient mental health wards; for example, numbers of staff per admitted patient (NHS England, n.d.). Health Education West Midlands (2021) created a new staffing framework, using staffing tools to aid hospital managers in making staffing decisions; an example, the ratio of registered and unregistered staff per shift. The Trust in this comparative study chose to use the Hurst tool prior to implementing the experimental staffing model; however, no record exists of why this tool was chosen (Eldridge et al, 2015). The tool includes Allied Health Professionals in its structure, although it does not break this down into the 12 professional groups that make up the non-homogenous AHP group (Hurst, 2016). At this time a typical shift pattern, for approximately 20 patients, is comprised of six staff members on early and late shifts (two nurses and four Healthcare Assistants "HCAs") and four on the night shifts (two nurses and two HCAs) (Eldridge et al, 2015). Additional multi-disciplinary team (MDT) and unqualified support staff members worked a Monday to Friday 8-4pm/9-5pm shift pattern or duty shifts and were not counted in the ward numbers. Lloyd and Williams (2010) conducted a critical review of OT job descriptions in acute mental health settings, spanning 20 years, and found four key themes in the duties of OTs: individual assessment, therapeutic groups, individual treatment and discharge planning. This description constitutes a good summary of the OT role in this service prior to the experimental staffing model and demonstrates what value the profession brings. It is recognised by the Royal College of Occupational Therapists (2022) that OTs working in Mental Health play a vital role in the recovery outcomes for inpatients, such as reducing hospital admission, supporting people to remain in employment, facilitating early discharge, improving physical health, and providing interventions in the areas of self care, leisure and productivity.

Following the staffing review in 2015, Nursing Directors decided to implement an experimental staffing model which included Occupational Therapists (OTs) in the ward shift numbers. This appears to be implemented as a result of shortage of a Nursing workforce at the time and the belief that it would embed therapeutic ways of working on the wards. No evidence exists that Allied Health Professional (AHP) or OT managers were involved at this stage. New roles were also created, including Assistant Psychologists, Associate Practitioners and Releasing Time to Care workers. OTs were included in the ward numbers, with new shift patterns, operational line management (by majority nursing managers), shared generic responsibilities and supervision outside of professional disciplines. There was an emphasis on being flexible to the needs of the service, and OTs had reduced contact with other OT colleagues. In these new roles, OTs were expected to conduct handover, ward round, order medications, represent the ward at tribunals, conduct multi-disciplinary meetings and support the ward's safe running. In addition to this, if the ward was short staffed then HCA duties such as environmental checks, therapeutic observations, cleaning, and the serving of meals would need to be completed by OT staff. This was in addition to running therapeutic groups and completing functional OT assessments. The experimental model was in place from February 2016 until it ceased in June 2019, when OTs came out of the numbers and returned to being OT led.

Increasing evidence of mental health Trusts experimenting with staffing models exists. A scoping analysis of 52 inspection reports conducted by the Care Quality Commission (CQC, 2019), showed evidence of over ten UK mental health Trusts using experimental staffing models involving OTs. In addition to this, a recent UK Trust experimented with an OT-led forensic rehabilitation ward (Bate et al, 2019). Changing staffing models in entire Trusts is both time consuming and costly. Furthermore, there is a paucity of research into skill mix and OT roles

in acute inpatient mental health wards (Munro & Baker, 2007; Lloyd & Williams, 2010); highlighting the lack of evidence base for these staffing interventions.

The aims of this study are to firstly analyze and compare evidence during the experimental staffing model covering the period February 2016 to June 2019, and July 2019 to March 2021 (when OTs were OT led); secondly, to make recommendations for future staffing models in acute mental health inpatient units in the UK and discuss where OTs are best placed for the benefit of patients and the profession. Lastly, this study contributes to the research regarding OTs involved in experimental staffing interventions on acute mental health wards, as none currently exists.

The complex hypothesis for this study is that OT led teams lead to improved retention rates of OTs; improved patient feedback; increased quantity of groups; improved quality of assessments; improved OT student experiences; reduced complaints and reduced recorded incidents involving OTs. The alternative hypothesis is that including OTs in the standardized ward safe staffing numbers remains the model of choice, for the benefit of staff and patients. The null hypothesis states that no significant difference exists between the two models. This is specific to the UK NHS system, although we are aware of other inpatient mental health units across Europe which also have difficulty with levels of staffing and inconsistencies in the provision of Occupational Therapy in these systems (Samele et al, 2013).

Literature Review

A literature search was conducted within the British Journal of Occupational Therapy, Medline, Assia and CINAHL using the keywords: "Occupational Therapy/Therapist, Staffing models, Teams, Generic working, Inpatient wards, Mental Health, organizational change, and acute mental health". Articles focusing on community mental health teams were excluded from this study. The original search only identified two articles and so the scope of the search was broadened to include international studies. The date range was also extended to 1984–2021 as there was a paucity of articles within the most recent ten-year date range, therefore seminal works were included in this study. Secondary searches were conducted within the bibliographies of found articles. Nine articles discussed the role of OTs in acute inpatient mental health wards; however, no articles which specifically discussed OTs involved in staffing interventions in acute mental health inpatient wards were found, thus adding further value to this study as a new area of research.

The photovoice study by Birken and Bryant (2019) aimed to explore the experiences of patients visiting a specific Occupational Therapy department in an acute mental health unit and utilized service users in this participatory research. Participants described the OT department as a safe place to engage in their personal recovery, to practice skills and learn to manage themselves. This study is supported by Robertson (1984, pp. 107), who defines the psychotherapeutic approach and purpose of group interventions as providing "a physical medium through which problems and unconscious conflicts can be addressed in a nonverbal manner"; an OT will put conscious thought and effort into this emotionally safe environment. A limitation of this study involves the small sample size as only five participants completed the research programme: this was due to the changing nature and high patient turnover in acute wards.

The study by Simpson et al (2005) aimed to explore the relationship between OTs and the MDT on acute psychiatric wards using structured interviews. The study found that the role of OTs was often misunderstood by the MDT and that OTs working in separate therapy teams were often excluded from important meetings, ward management, and decision making. This often led to OTs feeling undervalued by the team; as their professional opinion and assessments were not considered in discharge planning discussions. Although the study was small in scale, due to high turnover in the acute setting the findings indicated that there were overarching issues with members of the MDT holding strong beliefs that the most important aspect of an OTs role on an acute ward was to provide activity groups and to relieve boredom (Simpson et al, 2005). The large-scale workforce study by Crawford et al (1992) analyzed the staffing levels of Mental Health Occupational Therapists in the Trent Regional Health Authority and found that no norms could be established for staff: patient ratios in OT services. A limitation of the study: it is over three decades old and uses limited citations in the bibliography. Crawford et al (1992) discusses increased pressure from the MDT for OTs to complete more group work, to achieve more patient contacts, and the MDT valuing quantity over quality. This was often perpetuated when OTs were outnumbered by nurses and psychiatrists (Simpson et al, 2005). Ashby et al (2013) and Fortune (2000) support this: they argue that OT roles and responsibilities were often negatively influenced in a workplace dominated by nurses and doctors who were working within biomedical models.

Simpson et al (2005) and Crawford et al (1992) found that patients' individual outcomes were more important to the OTs than group numbers, describing their main priorities as assessing activities of daily living (ADL); supporting needs on discharge and linking patients with community resources to achieve long term recovery outcomes. This is linked to the theories that underpin the OT profession, i.e., providing meaningful occupation focused interventions in a client centered manner (Fisher, 2014).

Though small in scale, the study Fortune (2000) found that OTs in mental health wards quickly identified gaps on the ward and were described as chameleons. OTs adapt their practice to meet the needs of the service, helping the team where needed; despite this work not being occupationally focused. Being useful in the workplace then led to positive feedback and reinforcement of this behavior by the team. However, adopting roles imposed by others perpetuated issues with professional identity and may have prevented whole communities from benefiting from the unique value of OT (Fortune, 2000). The small-scale study by Ashby et al (2013) found that poor professional identity led to a reduced validation of occupational practice and reduced job retention.

A study by Munro and Baker (2007) looked specifically at practice papers that evaluated workforce interventions which had altered the skill mix on inpatient mental health wards. The findings imply that patient feedback and the involvement of all professional members of the MDT should be at the forefront of all staffing research, based on evidence and national benchmarks, and not reactive to financial demands or staff shortages (Munro and Baker, 2007). However, common findings among these articles demonstrated that increased staffing levels per shift had a direct impact on increasing one to ones and therapeutic interventions as well as reducing violence and aggression (Munro and Baker, 2007). The main critique of this practice review involves it only being able to analyze two studies from the UK, and that none of these interventions discussed counting OTs into the ward numbers.

Whilst there were some methodological flaws in the study by Davies (2015), it discussed a pilot study previously under trial in a UK NHS Trust that had OTs in independent teams match shift patterns to those of nursing staff, increasing opportunities for personal care and cooking assessments at more meaningful times of the day. Additionally, Davies (2015) reported an increase in the amount of contact between OTs and friends, families and carers during visiting times and increased therapeutic groups in the evenings and on weekends These studies tell us that historical inconsistencies exist in the use and provision of Occupational Therapists in acute mental health settings, as well as a poor understanding of the unique and valued contribution of Occupational Therapy by the MDT within these settings. What remains left unanswered is which staffing model best benefits the patients and where Occupational Therapists are best placed in these settings. Therefore, the objective of this study focuses on whether the use of an experimental staffing model including Occupational Therapists indicates best practice for staff and patients.

Methods

Datasets

This is a longitudinal comparative study using a combination of quantitative and qualitative electronic records and acute care group archived data from ten wards within one of three NHS Mental Health Trust in the region of South East England. Due to the researcher being party to the experimental staffing model in this territory, and the investigator also to being affiliated with the local University in which the Trusts is based, they conducted their research here. This approach was adopted due to the historical nature of the events being examined and the convenience of access to data. The Trust held all data; specific details of data origin are detailed in the results table below.

This study compared data from five pieces of quantitative evidence; with average and percentage differences identified where possible. Complete years of data were compared where possible, for fair and accurate data comparison:

- Quantity and completion of ADL assessments, per month.
- Quantity of groups, run monthly.
- Recruitment and retention figures, per year.
- Quantity of patient behavior related incidents reported by or involving OTs or in therapy areas, per month.
- Staff Survey results, per year.

These five pieces of data were the most relevant to the study objectives =
Four additional pieces of qualitative data underwent coding and thematic analysis:

- OT student evaluation feedback from each placement on all sites. Gathered by Practice Placement Facilitator Lead for feedback to support the ongoing development and improvement of students' placement experiences.
- Patient reported outcome measure on the OT service given as a questionnaire annually during OT week on all inpatient sites. Gathered yearly by AHP Leads, this feedback informs ongoing service developments and quality improvement projects within the Trust.
- Patient and Carer compliments and complaints gathered by patient experience lead for all inpatient sites to ensure high standards of safe and effective care are delivered to patients and carers. This ensures the Trust is accountable by listening to feedback and patient satisfaction.
- Patient comments and feedback from the Patient Reported Experience Measure completed on discharge from inpatient acute services on all inpatient sites. This is designed to gather patient satisfaction reports and to highlight to senior leaders themes regarding best practice and areas of concern.

It was felt that the quantitative data alone did not capture the staff, patient, or student experiences of the experimental staffing model or the subsequent return to OT led teams; and inclusion of this data added value to this study.

Data was taken from all inpatient sites; items related to food, medication, doctors and heating were excluded from this study. Significantly more data was available during the experimental staffing model due to the longer period of time being analyzed; this is considered in the results to avoid a focus on quantities.

Procedure

This study covers the period February 2016 - June 2019, (during experimental staffing) and July 2019 – March 2021 (OT led teams).

Kelly (2020) argues that when conducting data archive analysis, researchers need to be clear and specific when requesting information; otherwise, this can have a negative impact on the quality of data and the validity of the research. For the purposes of this study (conducted during the COVID-19 pandemic) the researcher gathered data by sending emails with a clear explanation of data requests. In addition, the researcher held video conference calls with different departments, and used screen sharing technology to view and discuss the data required. All data within the Trust was stored and provided electronically, no manual or paper searches were conducted. All data was stored on a password-protected Trust laptop, which only the researcher had access to. To avoid and protect against researcher bias in this stage of the study, requests for data were checked and revised by two independent parties following full ethical approval from the Trust and University to conduct the study.

Analysis

Quantitative: The results of this data did not undergo any statistical analysis but were used as illustrative purposes to draw conclusions from this study. The quantitative data has been presented in a table to demonstrate a comparison between the two time periods.

Qualitative: Coding and theming was conducted for both periods using Braun and Clarke's (2006) six-stages of thematic analysis. Themes were then divided into positive and negative categories, then further synthesized into a comparative narrative. The process by which the six steps were followed is identified below:

Step 1: Become familiar with the data, Step 2: Generate initial codes, Step 3: Search for themes, Step 4: Review themes, Step 5: Define themes, Step 6: Write-up.

Full ethical approval and consent was gained in 2020 from the Kent and Medway NHS and Social Care Trust and Canterbury Christ Church University to request and access data to complete this research.

Results

Quantitative Results

The data collected is presented in Table 1, showing the area being analyzed, the data from both time periods, and a comparison of the results.

Figure 1. below shows comparative percentages for all quantitative data sets.

Table 1 and Figure 1 present the results of the data collection for the quantitative datasets for both time periods being compared in the study. The table details the original source of the data, with accurate numerical figures

stated, and provides a comparison between the two different time periods. The Figure presents a percentage comparison for the data; however, no statistical analysis exists of these datasets. To demonstrate the relationships between the different datasets, the results were aggregated into percentages.

Table 1. Quantitative descriptive results

Quantitative results	During experimental staffing model February 2016–June 2019	Occupational Therapy led OT teams. July 2019–March 2021	Results compared
Quantity of standardized OT ADL assessments completed; gathered from a monthly electronic health record audit database.	Average assessments per month per team: 89. Average incomplete assessments per month: 42. Average per month: 9.3 completed by qualified OT.	In full year 2020 average assessments per month: 54. Average incomplete assessments per month: 2. Average per month: 16 completed by qualified OT.	More assessments completed by individual OTs; less incomplete assessments and more assessments are completed by qualified staff since OTs are in OT led teams.
Quantity of therapy groups; gathered from historical audits and electronic diaries.	From historical paper audits 715 groups per month per site.	From electronic diaries and performance data. 894 groups per month per site.	20% improvement in quantity of groups since OTs are in OT led teams.
Recruitment and retention figures of OTs gathered at point of recruitment and post ending; gathered automatically and supplied by the rostering team for all inpatient sites.	40 months. 21 new starters in the total period. 24 leavers in the total period. Majority of leavers in this period were the new starters. Average of 7 new starters per year. Average of 7.3 leavers per year. 100% turnover of staff. Average length of service for newly qualified or basic grade OTs was 8 months. Of the total 24 leavers in this period (not including retirement) 22 left the Trust altogether. Some to become unemployed. Two stayed in the Trust and one of these was for a promotion.	21 months. 4 new starters. 3 leavers all left for promotions. 1 Leaver in 2019 went onto a promotion in a different Trust. None of the New starters since June 2019 have left the Trust at this point.	Improved retention rates since OTs have been in OT led teams.
Patient behavior related incident reports involving OTs or in therapy areas; Recorded on the Trust incident reporting system.	When comparing incidents for the three full years during experimental staffing per year the average is 7.6; equivalent to 0.63 per month.	In a full year of data for 2020 there were four incidents; equivalent to 0.33 per month.	52% reduction in patient behavior related incidents involving OTs or in therapy areas since OTs have been in OT led teams.
Staff Survey	OT survey results were included in MDT results at this time. 51 questions were matched across five year averages and percentages compared. The answers of four questions were improved for the years 2016, 2017, and 2018, compared to 2019 and 2020.	OT survey results were made separate from the MDT results when OTs were OT led. The answers to 28 questions had improved results in both 2019 and 2020, compared to 2016, 2017 and 2018. 26 of the 51 questions had the highest scores in 2020 compared to all previous years analyzed.	Over 50% of the staff survey results had the highest positive scores in 2020 compared to the previous five years.

Qualitative Results

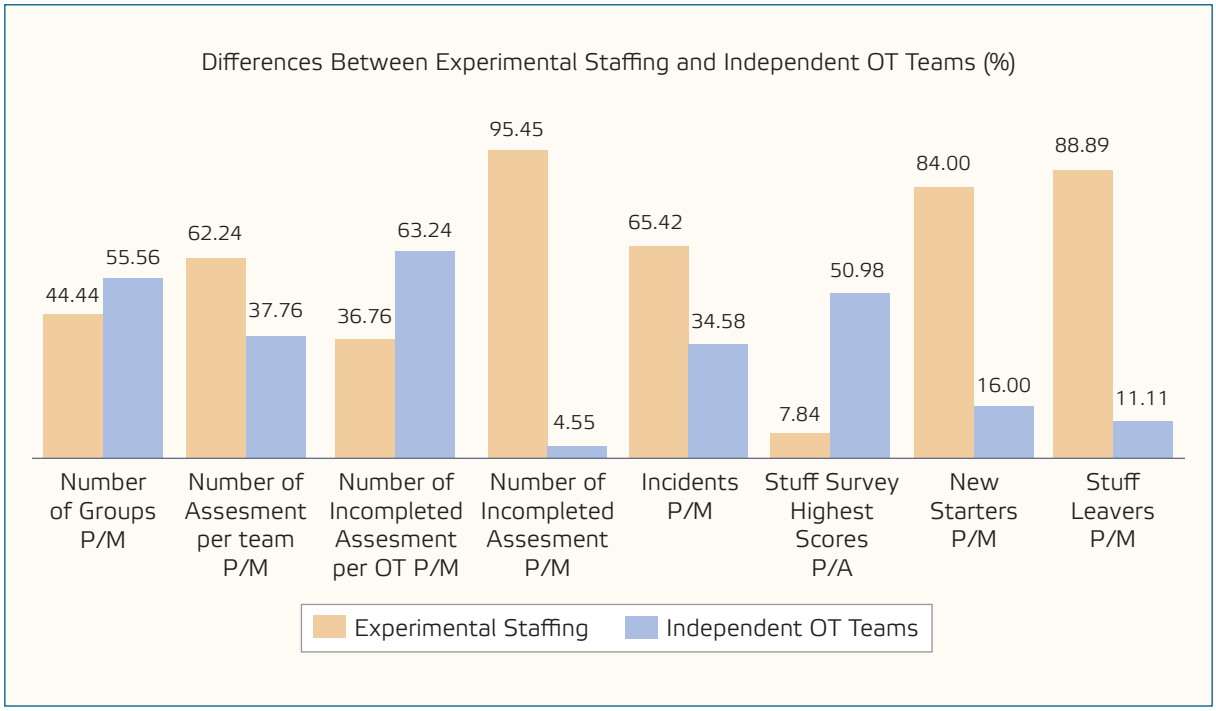
Themes have been divided into similarities and differences within the qualitative data. Braun and Clarke's (2006) six stage model of thematic analysis was used to draw any comparisons within the different staffing models.

Similarities

More staff

A strong theme across both time periods was a request from patients for "more staff" on the wards. Across both time periods patients requested more OT services, groups, activities and interventions. Respondent feedback requesting "More staff" totaled 13% during the experimental staffing model and 9% when OTs where in independent OT teams.

Figure 1. Comparative percentages for all quantitative data sets



However, during the experimental staffing model, there was a subtheme of requests for "more OT staff". Quotes taken during the experimental staffing period support this: "OT not always available due to time commitments"; "OT's were too busy."; "OT's are too busy doing non-OT work, be beneficial for them and us if they were not in the numbers. More time for groups and activities."

OT is valued and has a positive impact on mental health

A strong theme in both periods is that OT services are valued by patients, and more direct OT intervention is desired; regardless of which staffing model is being used. Patients' feedback showed that OT was valued highly, with positive ratings of 44% during experimental staffing, and 57% following the change in staffing model. When discussing the benefits of OT services, patients expressed that, "(OT) has helped me to do some of the things I used to enjoy which has helped to improve my mood and make negative thoughts less dominant." There was additional feedback on feeling listened to, reduced anxiety, improved mood, increased motivation and better social skills, with one patient quoted saying, "It (OT) helps confidence and integrates communication amongst patients".

Patients also discussed the value of going outside for OT activities and the benefits of accessing green spaces. "Occupational therapy has helped me immensely by getting me out and helping with my mental state of mind and educating and relaxing with meditation, art, and walking in the natural places".

Environment and facilities

There was consistent feedback across both time periods that the ward environments and facilities needed improvement. Patients across both time periods requested increased access to fitness facilities, gym equipment, and physical activity.

Positive feedback about the ward team

Positive feedback about the ward team stretched across both time periods. There was feedback regarding improved communication and students indicating that the team worked well together when OTs were OT led. Throughout both time periods, patients valued the same selection of four specific group interventions which included art, music, self-care, and cooking.

Differences

Professional identity

Some variation manifested between the role of OT services when comparing both time periods, as patients were able to be clearer about the role of OT when they were OT led. This is apparent in the language they used around mobility, equipment, and skills for living in the home; with a clear emphasis on the important role an OT played in "supporting my discharge home" or "giving me the skills to live at home".

Feedback from students on placement during the experimental staffing model stated there was not enough time to complete OT workload and they described placement as "busy", "stressful" and "pressured". In addition to this, researchers found an increase in the positive feedback from OT students on placement in OT led teams, reporting a wonderful placement experience with increased learning opportunities, knowledge, and skills.

OT has a positive impact on feeling safe

A new theme that emerged in the data during OT led teams was a reported "feeling of safety" on the wards. Patients expressed, "I am in a safer environment" and "felt very safe" or described the ward as "a safe place to be". This was also shown when patients spoke about how "OT [Team] makes the ward therapeutic and calmer. OT staff save the ward when chaotic".

Once OTs were OT led, patients no longer requested more one-to-one time with staff, potentially indicating this need was being met.

A significant difference between the two time periods was the analysis of overall positive and negative feedback. During therapeutic staffing, 56% was positive feedback and 44% of overall feedback was negative, whereas when OTs worked in independent teams, this increased to 73% positive feedback and 27% negative feedback.

Discussion

The findings of this study would suggest that OTs in working age adult acute mental health inpatient wards for this South East England NHS Trust are best placed in OT led teams. This model appears to mirror staffing models in some European countries that have established mental health inpatient units (Samele et al, 2013). Currently, no European standards for staffing levels or models for inpatient adult mental health and Occupational Therapy provision, are determined by availability of Occupational Therapists and population needs of each country (Kunze et al, 2004). Although it is important to note that some countries do not have established mental health hospitals or systems, and do not provide Occupational Therapy provision in these settings (Samele et al, 2013).

The qualitative feedback in this study adds value and meaning to the quantitative results, with a reduction in occupational therapy provision of groups and assessments coinciding with feedback from patients that there was a lack of Occupational Therapy provision on the wards. These findings are supported by the criticism and recommendations made by the CQC (2019), who inspected the Trust during the experimental staffing model. One can therefore argue that counting OTs in the ward numbers resulted in outcomes that would increase institutionalization and MH inpatients being deprived of the opportunity to participate and engage in meaningful occupations (Whiteford et al, 2019).

During the staff and patient feedback pilot study gray paper conducted during the experimental staffing model, OT staff gave feedback that they felt a distinct lack of professional identity; reduced sense of value; lack of time for role-specific tasks and poor team morale (Demirbasa et al, 2018). Simpson et al, (2005) argues that completing OT assessments stands as an integral part of an OT role and has a strong link with professional identity. Additionally, Shorten and Crouch (2014) state that occupationally focused interventions lead to improved recovery outcomes for mental health patients. Therefore, the conclusion can be drawn that qualified OTs being given the time and recognition to complete full assessments when teams were OT led improved the quality of assessments, resulted in effective delivery of services and better outcomes for patients.

The lack of professional recognition regarding Occupational Therapy provision, captured in this study, is likely linked to the poor retention rate data of OT's during the experimental staffing period. Ashby et al (2013) support this; they argue that poor professional identity is shown to be linked to poor job retention. Many of the OTs in this study were new registrants and therefore the experimental staffing model did not achieve the aims of the AHPs into Action and NHS Long Term Plan (NHS England, n.d.; 2019a) of securing the future workforce

by making it the career of choice and supporting new registrants to stay in their chosen profession. Additionally, Health Education England (2021) found that positive placement experiences can be attributed to decisions around whether students stay in that profession or not, thus indicating that students in this study were more likely to remain in the profession and have a positive placement experience when teams were OT led.

A positive outcome of the experimental staffing model found that OTs had more opportunity for career progression into leadership roles, such as ward management. Vacancies that were previously exclusively for Nursing and Midwifery Council registered applicants are now open to Health and Care Professions Council registered professions. This opens up further career progression opportunities for OTs such as service manager and operational lead team roles. Additionally, these career opportunities have continued since the experimental staffing model ended. NHS England (2019b) argues that recruiting into leadership roles from a diversity of professions will enable trusts to deliver the integrated and multi-professional working essential for transformative patient care.

As well as additional leadership opportunities since being in OT led teams, there have also been increased opportunities for profession specific continued professional development courses – such as Postgraduate Sensory Integration, Talking Mats and Assessment of Motor and Process Skills training. The Royal College of Occupational Therapists (2019) states that development opportunities should be made possible and supported by employers as they improve the quality of services and provide a direct benefit for patients.

The CQC (pg. 7, 2019) inspection echoes the results of this comparative study around the lack of access to physical fitness interventions as it states that 'patients were not appropriately supported to access the gym, there was an inconsistency in structured activities'. This constituted a theme across both time periods and continues to be an unmet need. The Trust has since addressed this issue and employed sports and exercise instructors on all inpatient sites who sit within the OT-led team; these improvements have only become possible since OT teams have been OT-led.

Quantitative results indicate OTs were more likely to be involved in patient behavior-related incidents during the experimental staffing model. One should expect this result, however, as OT's were spending more physical time on the ward and were actively involved in the day-to-day running of the units. However, during an inspection the CQC (2019) found that there were consistently low staffing numbers; which resulted in patients and staff reporting feeling unsafe during the experimental staffing model. In contrast to this, a new theme of "safety"emerged when OTs were OT-led. Patients discussed "feeling safe", "feeling secure" and the "staff keeping them safe"; this was significant enough to form a new subtheme. These findings indicate that having OTs in OT led teams can contribute to a therapeutic atmosphere on inpatient mental health wards and can result in patients having an increased sense of safety. Birken and Bryant (2019) support this; they state OTs are experts in creating safe, therapeutic spaces for patients.

A strong theme occurring across both time periods was that OTs had a positive impact on mental health and contributed to preparing the patient for discharge from the hospital and building skills for living at home. However, patients were better able to articulate the aims of Occupational Therapy discharge planning and skill building when OTs formed OT led teams. Having OTs practicing in an occupationally focused manner, therefore, and having a clearly defined role in the team appears to have contributed to an improved patient understanding of the profession; Birken & Bryant (2019) suggest that an increased understanding of professional aims can lead to improved recovery outcomes.

A strong theme across both time periods involved a request for more staff, with no differentiation from patients about what professional groups were needed. The Trust was inspected by the CQC during the experimental staffing model in 2018 and although the Trust was rated as Good overall, the Acute wards for working-age adults required improvement as they were not sufficiently safe, effective, or well led (CQC, 2019). In December 2020, when the experimental staffing model had ended, the Trust was again inspected by the CQC (2021) and the Trust was found to have enough staff to keep patients safe; a strong culture of team working and mutual support manifested between different professions (CQC, 2021). The findings of these two CQC inspections taken at different time periods, reinforce the results of this comparative study. In addition to this, the Staff Survey results show a 50% increase in positive results for matched questions in 2020 compared to the previous five years. These findings support the results of this comparative study: that OTs working in OT-led teams have a positive impact on the overall experience of the MDT. It is also interesting to recognise that these measured improvements occurred during the challenges of COVID-19.

European countries that are developing their mental health inpatient services could consider the findings in this study and the wider experience of the UK NHS inpatient mental health service provision when planning any staffing models.

Strengths and Limitations

Verheij et al (2018) argue that data archive research using electronic health records poses possible sources of bias. An example of this: the researcher compared hand-recorded data against electronic data due to changes in technology over time. Additional limitations are that the 1st researcher is not independent and has expressed researcher bias. Furthermore, this study was carried out in one South East UK NHS Trust and it is acknowledged that the results of this study cannot be generalized and further research is needed in other UK NHS Trusts.

This study possesses increased knowledge and understanding of how OTs in working age adult acute mental health inpatient wards can work effectively and introduced an evidence base for experimental staffing models affecting OTs. The benefits of using a longitudinal study allowed the analysis of changes over time and the recognition of the long term impact on staff and patients.

Conclusion, Implications, and Future Directions

In conclusion, the results of this study have supported the complex hypothesis that suggests OTs in this UK NHS Trust were likely to be more effective when working within the OT-led staffing model. OTs being included in the ward numbers had a negative impact on various clinical, professional, and patient factors, and the impact it had on job retention meant it was not sustainable. Patients reported feeling safer and their needs were being met when OT teams were OT-led. In addition, this study has demonstrated that patients highly value OT and they would like more OT interventions to be available. Additionally, this study has demonstrated that should the unique contribution of Occupational Therapy be not valued or understood by senior leaders, this has a negative impact on decision making for the wider MDT.

The aims of the experimental staffing model were to address the staffing shortages; however, the findings of this study and the two CQC (2019; 2021) inspections indicate that the staffing shortages were not resolved by using this experimental staffing model. Additionally, the financial decision to reduce nursing and HCA numbers resulted in OTs filling gaps and adopting the roles of other team members. Increased focus on diagnosis and treatment of the patients' mental health impairment meant that Occupational Therapy practice on the wards became influenced by the medical model of disability (NHS Practitioner Health, 2010). When considering the use of alternative staffing models where staff are expected to take on additional responsibilities, a multidisciplinary approach to embedding therapy needs to be considered wherein unique professional contributions are respected and valued whilst simultaneously meeting the needs of the patients. There should be mutual respect for boundaries between roles, valuing the expertise of each professional and clear expectations of teams' members, with a shared aim of completing the workload in the best interest of the patients. Appropriate training should be in place to support any role expectations that sit outside of normal professional practice, and these should be considered the exception and not the norm. For example, were the OT not available at the weekend, then Nurses should have the appropriate skills and knowledge to run a Health and Wellbeing group. Likewise, an OT should have the appropriate skills and training to cover a Nurse needing a break from eyesight observations and can use the time effectively to engage in meaningful occupation or functional assessment with the patient. Both these examples sit within the scope of practice of each professional group – but it is mutually recognised that these tasks are the exception and not the norm. What this study has brought to light is that the use of OT staff to fill Nursing vacancies in this UK NHS Trust was not cost effective or in the best interests of patients, staff, or students.

It is a recommendation of this study that the CQC and the World Health Organisation European Framework state what staffing models are being used when carrying out inspections. Furthermore, it is recommended that AHP leaders are involved in the development of future staffing reviews and Trusts who are using experimental staffing models carry out their own independent reviews and evaluations.

Mental Health Trusts that are already using experimental staffing models should consider carrying out their own independent research, service evaluation, or audit, as further evidence remains needed from a wider scope of practice; especially from Trusts or European Hospitals that have used alternative staffing models successfully. Staffing models should be led by research, patient feedback and be MDT led; not driven by finance and staff shortages. In addition, AHP Leaders and OT managers should be involved from the very start of staffing reviews. Lloyd and Williams (2010) argue OTs should define their roles within mental health wards and evolve with services; otherwise those roles may be defined by others.

Key findings are outlined below:

- The experimental staffing model which included OTs in the ward numbers was not successful in addressing staffing shortages.
- OTs in working age adult acute inpatient mental health wards for this South East UK Trust are best placed in OT-led teams.
- AHP Leaders should be involved in large scale staffing reviews.

Funding

The authors received neither financial nor non-financial support for the research (including data acquisition) and/or authorship and/or publication of this article.

Author contributions

Nina PHOENIX: conceptualization, design, methodology, funding acquisition, investigation, project administration, data management, formal analysis, interpretation, supervision, writing original draft, writing review and editing.
Julie TAYLOR: supervision, writing review and editing.

Declaration of interest statement

Nina Phoenix is employed by the organization where the research was conducted. No further conflict of interest to declare.
Julie Taylor has no conflict of interest to disclose.

Ethical statement

This manuscript is the authors' original work.
The studies involving human participants were reviewed and approved by Kent and Medway NHS and Social Care Partnership Trust Clinical Audit and Service Evaluation Group authorization number 305/20.
All patients/participants participated in the research voluntarily and anonymously. The patients/participants provided their written informed consent to participate in this study. Their data are stored in coded materials and databases without personal data. We have policies in place to manage and keep data secure.

ORCID
Nina PHOENIX https://orcid.org/0000-0001-7061-3839
Julie TAYLOR https://orcid.org/0000-0003-4583-225X

References

Ashby, S., E., Ryan, S., Gray, M., & James, C. (2013). Factors that influence the professional resilience of occupational therapists in mental health practice. *Australian Occupational Therapy Journal, 60*(2), 110–119. https://doi.org/10.1111/1440-1630.12012

Bate, S., Marriot, T., & Vanstone, A. (2019). The Transition to an Occupational Therapy-Led Service. *OT News*, *27*(4), April. https://viewer.joomag.com/occupational-therapy-news-ot-news-april-2019/0520065001554901598?short&

Birken, M., & Bryant, W. (2019). A Photovoice study of user experiences of an occupational therapy department within an acute inpatient mental health setting. *British Journal of Occupational Therapy, 82*(9), 532–543. https://doi.org/10.1177/0308022619836954

Care Quality Commission. (n.d.). *Effective staffing case studies*. Retrieved August 10, 2022, from https://www.cqc.org.uk/publications/themed-work/effective-staffing-case-studies

Care Quality Commission. (n.d.). *Provider Inspection Reports*. Retrieved March 6, 2020, from https://www.cqc.org.uk/provider/RXY/reports

Care Quality Commission. (n.d.). *Provider Inspection Reports*. Retrieved May 19, 2021, from https://www.cqc.org.uk/provider/RXY/reports

Clarke, V., & Braun, V. (2006). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist, 26*(2), 120–123.

Crawford, G., Johnson, S., Morris, S., & Steeples, S. (1992). Are norms the Key to Manpower Planning? *British Journal of Occupational Therapy, 55*(2), 49–52. https://doi.org/10.1177/030802269205500204

Davies, L. (2015). Extended working hours model for occupational therapy service on mental health wards. In College of Occupational Therapists 39th Annual Conference & Exhibition and Specialist Section – Work Annual Conference: 30 June – 2 July 2015, Brighton, Centre Brighton, Sussex. *British Journal of Occupational Therapy, 78*(8, Supplement), 1–131. https://doi.org/10.1177/0308022615583236

Department of Health. (2007). *Mental Health: New Ways of Working for Everyone. Developing and sustaining a capable and flexible workforce.* (Progress Report. Report no. 7938). https://www.nscap.org.uk/doc/NWW for Everyone.pdf

Eldridge, D., McFrederick, M., & Barber, P. (2015). *Safe Staffing – "Therapeutic Staffing Levels"*. Trust Board Report. Report no. TBI/15-16/069, 24 September. South East – Local NHS Trust.

Fisher, A, G. (2014). Occupation-centred, occupation-based, occupation-focused: Same, same or different? *Scandinavian Journal of Occupational Therapy, 21*(sup1), 162–173. https://doi.org/10.3109/11038128.2014.952912

Fortune, T. (2000) Occupational Therapists: Is our therapy truly occupational or are we merely Filling Gaps? *British Journal of Occupational Therapy, 63*(5), 225–230. http://dx.doi.org/10.1177/030802260006300507

Gilburt, H. (2020, March 10). *Securing money to improve mental healthcare…but no staff to spend it on*. https://www.kingsfund.org.uk/blog/2019/10/mental-health-staff-shortage

Health Education West Midlands. (n.d.). *The Mental Health Staffing Framework*. Retrieved May 3, 2021, from https://www.england.nhs.uk/2015/06/mh-safe-staffing/

Health Education England. (n.d.). *Reducing Pre-registration Attrition and Improving Retention. The 'Impact of COVID-19 on Students' Survey Key Findings*. Retrieved May 1, 2021, from https://www.hee.nhs.uk/our-work/reducing-pre-registration-attrition-improving-retention

Kelly, S. (2020, December 11). *Archival research: Using data in social science research* [Video]. Sage Research Methods. https://www.doi.org/10.4135/9781526442895

Kunze, H., Becker, T., & Priebe, S. (2004) Reform of Psychiatric services in Germany: hospital staffing directive and commissioning of community care. *Psychiatric Bulletin, (28)*6, 218–221. http://dx.doi.org/10.1192/pb.28.6.218

Lloyd, C., and Williams, P, E. (2010). Occupational therapy in the modern adult acute mental health setting: a review of current practice. *International Journal of Therapy and Rehabilitation, 17*(9). https://doi.org/10.12968/ijtr.2010.17.9.78038

Ma, E., Kritsimali, A., Olby-Clements, B., Boyd, K., & Demirbasa, B. (2022). Innovative Staffing Solutions to Nursing Shortages in Acute Mental Health Inpatient wards. *Mental Health Nursing, 43*(2), 103–110. https://doi.org/10.1080/01612840.2021.1961331

Mahase, E. (2020). Workforce crisis has left mental health staff at "breaking point" as demand rises. *British Medical Journal*, *368*(88). https://doi.org/10.1136/bmj.m88

Mind. (n.d.). *Mental health crisis care services 'under-resourced, understaffed and overstretched'*. Retrieved December 10, 2021, from: https://www.mind.org.uk/news-campaigns/news/mental-health-crisis-care-services-under-resourced-understaffed-and-overstretched/

Mind. (n.d.). *Hospital treatment for your mental health*. Retrieved December 10, 2021, from: https://www.mind.org.uk/information-support/guides-to-support-and-services/crisis-services/treatment-in-hospital/

Munro, S., & Baker, J. (2007). Outcomes associated with skill mix interventions in acute mental health wards: A synthesis of evidence. *The Journal of Mental Health Training, Education and Practice, 2*(3), 25–33. http://dx.doi.org/10.1108/17556228200700018

NHS England. (2013). *NHS Services, Seven Days a Week Forum. Summary of Initial Findings*. Report no. 00889. https://www.england.nhs.uk/midlands/wp-content/uploads/sites/46/2019/05/forum-summary-report.pdf

NHS England. (n.d.). *How to ensure the right people, with the right skills, are in the right place at the right time*. Retrieved March 7, 2021, from: https://www.england.nhs.uk/wp-content/uploads/2013/11/nqb-how-to-guid.pdf

NHS England. (2016). *The Five Year Forward View for Mental Health. A report from the independent Mental Health Taskforce to the NHS in England*. England: NHS England. https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf

NHS England. (n.d.). *AHPs into Action: Using Allied Health Professionals to transform health, care and wellbeing*. Retrieved May 1, 2021, from: https://www.england.nhs.uk/publication/ahps-into-action/

NHS England. (2019a). *The NHS Long Term Plan*. https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf

NHS England. (2019b). *Developing allied health professional leaders: a guide for trust boards and clinicians*. https://www.england.nhs.uk/wp-content/uploads/2021/04/nhsi-developing-ahp-leaders-print.pdf

NHS Practitioner Health. (2010). *Disability, Equality, Diversity and Inclusivity. What are they, and why are they important?* https://www.practitionerhealth.nhs.uk/disability-equality-diversity

Robertson, E. (1984). The role of the Occupational Therapist in a Psychotherapeutic Setting. *British Journal of Occupational Therapy, 47(4),* 106–110. https://doi.org/10.1177/030802268404700403

Royal College of Occupational Therapists. (n.d.). *Occupational Therapists facilitate recovery for those with mental health problems. Occupational Therapy Evidence, Fact sheet*. Retrieved August 13, 2022, from: https://www.rcot.co.uk/files/fact-sheet-mental-health

Royal College of Occupational Therapists. (n.d.). *RCOT contributes to new CPD principles in health and social care*. Retrieved May 1, 2021, from: https://www.rcot.co.uk/news/rcot-contributes-new-cpd-principles-health-and-social-care

Samele, C., Frew, S., & Urquía, N. (n.d.). *Mental health Systems in the European Union Member States, Status of Mental Health in Populations and Benefits to be Expected from Investments into Mental Health. European profile of prevention and promotion of mental health (EuroPoPP-MH)*. Retrieved December 5, 2022, from: https://health.ec.europa.eu/system/files/2016-11/europopp_full_en_0.pdf

Shorten, C., & Crouch, R. (2014). Acute Psychiatry and the Dynamic Short-Term Intervention of the Occupational Therapist. In C. Crouch, & V. Alers (Eds.), *Occupational Therapy in Psychiatry and Mental Health* (5th ed., pp. 115–125). Wiley Blackwell. http://dx.doi.org/10.1002/9781118913536.ch8

Simpson, A., Bowers, L., Alexander, J., Ridley, C., & Warren, J. (2005). Occupational Therapy and Multidisciplinary Working on Acute Psychiatric Wards: The Tompkins Acute Ward Study. *British Journal of Occupational Therapy, 68*(12), 545–551. https://doi.org/10.1177/030802260506801203

Verheij, R., A., Curcin, V., Delaney, B., C., & McGilchrist, M., M. (2018). Possible sources of bias in Primary Care Electronic Health Record Data Use and Reuse. *Journal of Medical Internet Research, 20*(5), e185. https://doi.org/10.2196/jmir.9134

Whiteford, G., Jones, K., Weekes, G., Ndlovu, N., Long, C., Perkes, D., & Brindle, S. (2020). Combatting occupational deprivation and advancing occupational justice in institutional settings: Using a practice-based enquiry approach for service transformation. *British Journal of Occupational Therapy, 83*(1), 52–61. https://doi.org/10.1177/0308022619865223

World Health Organisation. (n.d.). *WHO says governments spend only 2% of budgets on mental health*. Retrieved December 11, 2022, from: https://www.openaccessgovernment.org/who-budget-on-mental-health/130792/