Aysha Mendes provides a synopsis and brief review of a selection of recently published research articles that are of interest to community nurses, highlighting key points to keep you up to date; a full reference is provided for those who wish to read the research in more detail

Aysha Mendes

Freelance writer

ayshamendesfreelance@gmail.com

Antipsychotic medications and post-stroke infection

New research exploring antipsychotic use in older people and examining their risk of infection following a stroke has been published in *Age and Ageing*. Studies conducted following stroke into post-stroke infection and antipsychotic use are scarce, explained Park et al. However, it is already known that stroke risk increases with age, and that infection risk appears to increase in people taking antipsychotic medication.

The aim of this study was to establish whether or not any link exists between antipsychotic use and the risk of infection after stroke. The researchers analysed data from adults across five university hospitals who experienced stroke between 2011 and 2020. The records from participants' inpatient stays were examined to establish whether antipsychotics had been administered. The primary outcome was infection following stroke after the first 2 days in hospital. The secondary outcome was the presence of pneumonia, bactaeremia or bacteriuria.

The sample was large: 23 885 patients who had experienced stroke for the first time. There were 2773 patients taking antipsychotic medication, and the researchers matched a cohort of non-users of the same number for comparison.

The results did not show an association between post-stroke risk and antipsychotic use. However, the authors advised that this does not necessarily confirm no association at all, and that practitioners must still exercise caution when prescribing these medications. Further research is needed on the same topic to gain further insight, the authors emphasised, because previous evidence did suggest antipsychotic use may be linked to increased infection risk.

Park H-Y, Jung M, Park G-Y et al. Investigating the link between antipsychotic use and post-stroke infections in older people: multi-centre propensity score analysis. Age Ageing. 2024;53(6):afae117. https://doi.org/10.1093/ageing/afae117

Handgrip strength, walking speed and cognitive function

Existing research has examined possible associations between handgrip strength, walking speed and cognitive function in older adults, but has not delved into the independent and combined associations between these factors. A study by Zhao et al (2024) that examines this has been published in *Aging and Mental Health*. The authors explored these factors among Chinese older adults and ensured the sample was representative of the population on a national level.

The researchers recruited 4577 adults who were more than 60 years of age, and measured their handgrip strength with a dynamometer. They assessed walking speed with a 2.5-meter walking test. These measurements were classified into groups including low, normal and high categories. Cognitive function was assessed using the Telephone Interview for Cognitive Status tool.

Interestingly, the two physical measurements (for walking speed and handgrip) were significantly associated with cognitive function. Low strength and low speed were linked with a higher incidence among participants of reduced cognitive function. Where the two were co-occurring, the rate of low cognitive function was even higher among the participants.

The authors concluded that low handgrip and low walking speed in older people are linked independently to low cognitive function, and the rate of low cognitive function increases further where the two factors occur together. This may warrant further research in order to ascertain the best approach in care, treatment and rehabilitation within the population of older people showing signs of having these traits.

Zhao X, Zhang H, Yu J, Liu N. Independent and combined associations of handgrip strength and walking speed with cognitive function in older adults: evidence from a national cross-sectional study. Aging Ment Health. 2024;1–8. https://doi.org/10.1080/13607863.2024.2360018

Anxiety in respiratory and sleep disorders

Respiratory Medicine has published a study exploring the mental health impact of respiratory and sleep disorders. Storer et al (2024) examined anxiety in particular, which has been associated with chronic physical health conditions in previous research. The authors also noted that anxiety can have a detrimental effect on quality of life and physical health outcomes.

Although there is a lot of research about the mental health impact of chronic illnesses, the authors noticed a sparsity of research with specific reference to sleep disorders and respiratory disease, and their association with anxiety. They conducted a systematic review and meta-analysis to gain insight into the global prevalence of anxiety among patients with these disorders.

The databases PubMed, Embase, Cochrane, PsycINFO and Google Scholar were used to carry out a search, from inception of each database to January 2023. The researchers searched for anxiety prevalence in people more than 16 years of age, who were respiratory and sleep medicine outpatients. The occurrence of anxiety symptoms was examined using self-report questionnaires, interviews and patient records. Overall, 116 studies were included,

consisting of 36 340 participants, spanning 40 countries.

The pooled prevalence of anxiety was 30.3%. Storer et al also looked at specific conditions within these categories, to determine whether anxiety was higher for one disease compared with others. They found that the highest rate of anxiety was 43.1% in patients with pulmonary tuberculosis. The lowest occurrence of anxiety was interestingly in outpatients with COVID-19, at 23.4%. However, further research could delve into specifically when patients experienced their anxiety, because there may have been a surge of anxiety for various reasons during the height of the pandemic, occurring with the presentation of COVID-19. Anxiety was found to be higher in women with sleep and respiratory disorders.

The authors concluded that anxiety is a common mental health presentation, particularly among patients with respiratory and sleep disorders. This study highlights the importance of clinicians in these fields noticing and nurturing the mental health of patients, with thorough assessment, care and treatment in a timely fashion, as there may be many community patients experiencing anxiety but not receiving appropriate support. The study's findings also serve as a reminder to consider the holistic nature of care, addressing both patients' physical and mental health.

Storer B Holden M Kershaw K et al. The prevalence of anxiety in respiratory and sleep diseases: a systematic review and meta-analysis. Respir Med. 2024;230:107677. https://doi.org/10.1016/j.rmed.2024.107677

Population-based interventions to prevent falls and related injuries
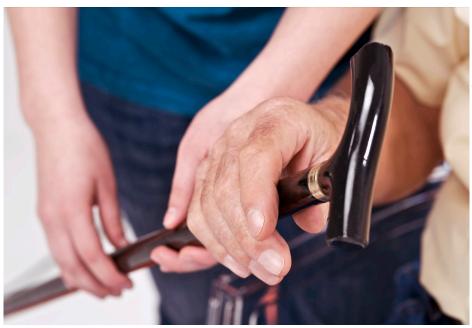
Falls currently occur in about one-third of older people aged over 65 years. While individualised care and interventions are important, there is a place for and value in population-level interventions. The authors note that such initiatives can be used to target the whole community, with the aim of addressing the underlying societal, cultural or environmental conditions that are increasing the risk of falls in the first place.

In an effort to review and synthesise current evidence on the effects of population-based interventions for the prevention of falls and fall-related injuries in older people, a study by Lewis et al (2024) published in *Cochrane Database Systematic Review* carried out a search of six databases. These included CENTRAL, MEDLINE and Embase, as well as two trial

A study has shown that handgrip strength and walking speed relate to cognitive function

registers in December 2020, along with a follow-up/top-up search of only the three databases mentioned in January 2023.

A total of nine studies were included, consisting of two cluster randomised controlled trials (RCTs) and seven non-randomised trials. Of these, five were controlled before-and-after studies (CBAs), and two were controlled interrupted time series (CITS). In seven of the included studies, the number of older adults ranged from 1200 to 137 000 people. The other two studies included only numbers for the total population (67 300 and 172 500 people). The length of these studies ranged from 14 months–8 years.

Lewis et al used the Prevention of Falls Network European (ProFaNE) taxonomy to classify the types of interventions in the included studies. All studies evaluated multicomponent falls prevention interventions and one study also included a medication and nutrition intervention. All studies included some or all components of exercise, modification of environments (eg home, community and public spaces), staff training, and knowledge and education.

In the medication and nutrition intervention study, older people in the intervention area were offered free calcium and vitamin D3 supplementation daily and women had fewer fall-related hospital admissions. However, the study was of very low certainty. Of the multicomponent studies, one cluster RCT reported lower rates of falls in the intervention area and the other studies

noted no difference in either the rate of falls between intervention and control areas, rate of falls inside or outside the home, number of fallers or fall-related injuries. However, once again, findings were inconsistent and unclear. The two cluster RCTs included either high or uncertain risk of bias and the non-randomised trials were classified as low-certainty evidence. There were very inconsistent findings between all studies and the authors noted possible imprecision in some effect estimates.

The study concluded that due to the low-certainty evidence, it is unclear whether population-based multicomponent or nutrition and medication interventions are effective at reducing falls or fall-related injuries in older adults. The authors pointed out the need for cluster RCTs that are both methodologically robust and which have sufficiently large communities and numbers of clusters representative of the larger population within the country. The authors suggested the rate of sampling needs to be established in order to identify the appropriate size of communities to include. They went on to say that future studies would need to describe interventions in sufficient detail so that the effectiveness of individual components in multicomponent interventions can be shown. **BJCN**

Lewis SR, McGarrigle L, Pritchard MW et al. Population-based interventions for preventing falls and fall-related injuries in older people. Cochrane Database Syst Rev. 2024;1(1):CD013789. https://doi.org/10.1002/14651858.CD013789.pub2