Original Article

Nonpharmacologic Pain Management Interventions in German Nursing Homes: A Cluster Randomized Trial

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HBSTRACT:

The reported prevalence of pain among nursing home residents (NHRs) is high. Insufficient use of analgesics, the conventional pain management strategy, is often reported. Whether and to what extent nonpharmacologic therapies (NPTs) are used to manage the pain of NHRs in Germany is largely unknown. The aim of this cluster-randomized trial was to assess the NPTs provided and to enhance the application and prescription of NPTs in NHRs on an individual level. There were six nursing homes in the intervention group and six in the control group. There were 239 NHRs, aged ≥ 65 years, with an average Mini-Mental State Examination score of at least 18 at baseline. Pain management interventions (cluster level) included an online course for physicians and 1-day seminar for nurses. Data on NPT applied by nurses and therapeutic NPT prescribed by physicians were obtained from residents' nursing documentation. Face-to-face interviews with NHRs assessed the NPT received. At baseline, 82.6% of NHR (mean age 83 years) were affected by pain, but less than 1 in 10 received NPT. The intervention did not result in a significant increase in the NPT applied by nurses, but did significantly increase the therapeutic NPT prescribed by physicians. Residents were active in using NPT to self-manage their pain. Given the prevalence of pain in NHRs, there is a clear need to improve pain management in this population. Extended use of NPT offers a promising approach. We recommend that nurses provide residents with education on pain-management techniques to support them in taking a proactive role in managing their pain.

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Received December 29, 2013; Revised September 2, 2014; Accepted September 2, 2014.

The authors acknowledge the financial support of the German Federal Ministry of Education and Research. The authors declare that there are no conflicts of interest.

1524-9042/\$36.00 © 2015 by the American Society for Pain Management Nursing http://dx.doi.org/10.1016/ j.pmn.2014.09.002

BACKGROUND

The reported prevalence of pain among older adults residing in nursing homes (NHs) is high, ranging from 3.7% to 79.5% (Takai, Yamamoto-Mitani, Okamoto, Koyama, & Honda, 2010). In Germany, approximately every other resident suffers from pain (Dräger et al., 2012; Osterbrink et al. 2012). Empirical evidence suggests that pain in this population is overlooked undertreated often and (Hadjistavropoulos, Kaasalainen, Williams. & Zacharias, 2013; Herman, Johnson, Ritchie, & Parmelee, 2009; Hutt, Pepper, Vojir, Fink, & Jones, 2006; Russell, Madsen, Flesner, & Rantz, 2010). Indeed, international data indicate that 45%-80% of nursing home residents (NHRs) report pain that can be considered undertreated (AGS, 2002; Lukas et al., 2013). Despite evidence that unrelieved pain causes substantial problems functional (e.g., and psychosocial impairments) for NHRs and results in increased health care utilization (AGS, 2002; Herman et al., 2009), no gold standard for pain management in NHs has yet emerged (Swafford, Lachmann Miller, Tsai, Herr, & Ersek, 2009).

The most common approach to managing pain is the use of analgesic drugs (AGS, 2002); however, insufficient use of analgesics often is reported in NHRs (de Souto Barreto, Lapeyre-Mestre, Vellas, & Rolland, 2013; Kölzsch et al., 2012; Takai et al., 2010).

In contrast, analyses of whether and to what extent nonpharmacologic pain treatments (NPTs) are used to manage pain in NHRs in Germany and beyond are scarce. Yet several international and national guidelines recommend the application of NPTs as an integral part of pain management in older adults (AGS, 2002; DNQP, 2005, 2011) for the following reasons: NPT enhances the therapeutic effects of analgesics (AGS, 2002), may reduce required drug dosages (AGS, 2002; Park & Hughes, 2012), and also may reduce adverse events and side effects of pharmacotherapy (Bruckenthal, 2010; Park & Hughes, 2012). The latter aspect plays an especially important role in NHRs, who are particularly vulnerable to complications from polypharmacy due to multimorbidity. Furthermore, NPTs are suitable for patients seeking alternative approaches to pain management or who-based on positive experiences in their personal pain biography-prefer to use selfmanagement strategies. The empirical evidence on the benefits of several NPTs is reported as "emerging"; in particular, physical and psychosocial NPTs have been identified as effective adjuncts to conventional pharmacologic strategies (Park & Hughes, 2012). NPTs are known to have few side effects and to be

cost-effective (Park & Hughes, 2012). Categories of NPTs—also known as "nondrug therapies," "complementary therapies," or "alternative methods"—include educational measures (emphasized by AGS, 2002), physical activity, physiotherapy/occupational therapy, psychological and psychotherapeutic methods, passive/instrumental methods, and self-treatment measures (Dräger, Könner, Budnick, Kreutz, & Kopf, 2013).

Although isolated pain management programs for older NHRs have recently been piloted in other countries (Herman et al., 2009; Tse & Ho, 2013; Tse, Vong, & Ho, 2012), interventions including NPTs to improve pain management in NHs in Germany are lacking. Against this background, the multidisciplinary research team that conducted the present study developed an interdisciplinary clinical practice guideline for pain management in NHRs (Wulff et al., 2012). This guideline condenses the latest research findings and recommendations on the (nonpharmacologic and pharmacologic) treatment of pain in older patients and addresses all professionals involved in pain management in NHs (e.g., physicians, nurses, administrators). It served as a theoretical basis for the educational intervention for nurses and physicians developed in the context of the present study "PAIN Intervention."

The objectives of this study were to assess the NPTs provided in NHs and to enhance the application of NPTs by nurses and the prescription of therapeutic NPTs by physicians through the intervention. The objectives were targeted at the individual participant level. A cluster design was chosen for reasons of feasibility (the intervention can only be administered to a group) and to avoid contamination of the intervention (Cochrane Collaboration, 2002).

METHODS

Research Questions

- 1. What kinds of NPTs are applied by nurses and prescribed by physicians to manage pain in NHRs and to what extent are NPTs provided? What kinds of NPTs are received by NHRs?
- Does the intervention result in an increased application of NPT by nurses and in an increased prescription of therapeutic NPTs by physicians?

Trial Design

The study was a cluster randomized, controlled trial. Clusters were 12 NHs in Berlin, with an average cluster size of 126 residents. A single for-profit company operated all NHs. Access and written consent was provided by the senior manager ("gatekeeper"). Download English Version:

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