


ORIGINAL ARTICLE

A Quasi-experimental study on prevention and reduction of involuntary treatment at home (PRITAH) in people with dementia

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Abstract

Aim and objectives: To examine the implementation (reach, dose, fidelity, adaptations, satisfaction), mechanisms of impact (attitude, subjective norm, perceived behavioural control and intention) and context of the PRITAH intervention.

Background: Involuntary treatment, defined as care provided against one's will, is highly prevalent in home care. The PRITAH intervention comprises policy, workshops, coaching and alternative measures for professional caregivers to prevent and reduce involuntary treatment in home care.

Design: Quasi-experimental study.

Methods: Eight home care teams from two care organisations participated in this study. Guided by the Theory of Planned Behavior, the mechanisms of impact were evaluated with questionnaires. Implementation and context were assessed using attendance lists, evaluation questionnaires, focus groups and logbooks. The study adhered to the TREND checklist.

Results: 124 of 133 eligible professional caregivers participated (93%). All four components were delivered with minor deviations from protocol. Participants' subjective norms and perceived behavioural control changed over time in favour of the intervention group. No effects were seen for attitude and intention. Barriers included an unclear policy and lack of communication between stakeholders. The multidisciplinary approach and possibility to discuss involuntary treatment with the specialised nurse were described as facilitators.

Conclusions: Prevention and reduction of involuntary treatment at home is feasible in home care practice and contributes to changing professional caregivers' subjective norms and perceived behavioural control, prerequisites for behavioural change in order to prevent and reduce involuntary treatment. A follow-up study on the effectiveness of PRITAH on actual use, prevention and reduction of involuntary treatment in home care is needed. Future studies should emphasise the role of family caregivers

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and GPs and actively involve them in the prevention and reduction of involuntary treatment.

Relevance to clinical practice: Involuntary treatment is commonly used in dementia home care and professional and family caregivers need to be supported in prevention and reduction of involuntary treatment in people with dementia.

KEYWORDS

dementia, home care, intervention, involuntary treatment

1 | INTRODUCTION

The ageing population has great impact on health care: there is an increased need for support by family caregivers and professional home care, especially for persons with a cognitive impairment (Genet et al., 2011). Most persons with cognitive impairment live at home and many caregivers perceive the care for their loved one as difficult and burdensome (Ballard & Corbett, 2010; Etters et al., 2008). Complex care needs, behavioural changes and cognitive decline can sometimes lead to situations in which caregivers provide care against someone's will, referred to as involuntary treatment (Hamers et al., 2016). Involuntary treatment is defined as treatment provided without the consent of the client and/or to which the client opposes, and includes (1) non-consensual care such as forced hygiene or forced administration of food, (2) psychotropic medication, such as antipsychotics and anxiolytics, without indication and (3) physical restraints such as the use of bed rails or restraint belts.

Involuntary treatment is commonly used in home care, with prevalence rates ranging from 25% to 52% in persons with a cognitive impairment (Hamers et al., 2016; Moermans et al., 2018; Scheepmans et al., 2018). The prevalence of physical restraints in home care ranges from 6% to almost 48% in several European countries (Beerens et al., 2014). Psychotropic drug use in home care was even higher, varying from 60% to almost 90% (Beerens et al., 2014). Professional and family caregivers are confronted with complex dilemmas, for example to force some to get showered, or accept someone's wish to not be showered and risk any consequences due to reduced hygiene. In stressful situations, they may experience the need for an acute solution, although this might be against the will and not be the most optimal long-term solution. Common reasons to use involuntary treatment are preventing falls or injuries and managing resistive or aggressive behaviour (Evans & Fitzgerald, 2002; Lach & Chang, 2007). Involuntary treatment is also used to delay or prevent nursing home admission, although other family caregivers opt for coercive admission in some cases (Lloyd-Sherlock et al., 2019). However, the use of these measures can be ineffective, unsafe, harmful and even lead to death (Evans et al., 2003; Hofmann & Hahn, 2014). Involuntary treatment is associated with several physical and psychological effects, such as incontinence, pressure ulcers, depression, dizziness, discomfort, aggression and fear (Evans et al., 2003; Georgieva et al., 2012; Guthrie et al., 2010; Miles & Irvine, 1992). Finally, involuntary treatment is in conflict with providing person-centred care, which embraces values such as autonomy and personal choice (Kim & Park, 2017).

What does this paper contribute to the wider global clinical community?

- This study confirms that the PRITAH intervention, which aims to prevent and decrease involuntary treatment in people with dementia living at home, is feasible in daily home care practice.
- The PRITAH intervention has a positive effect on professional caregivers' subjective norms and perceived behavioural control regarding prevention and reduction of involuntary treatment.
- This study provides new insights into the working mechanisms needed to realise behavioural change in professional caregivers in order to prevent and reduce involuntary treatment.

2 | BACKGROUND

Caregivers may not always realise that they provide involuntary treatment, for example by forcing someone to eat or by hiding psychotropic medication in food. Perceptions on what constitutes 'good quality of care' also differ between caregivers, and they may not be aware of the negative consequences of involuntary treatment (Mengelers et al., 2019). Since professional caregivers are considered 'visitors' at someone's home, they often feel obliged to accept the demands of family caregivers, which can put them in a difficult situation, especially when these demands are against the client's will (Scheepmans et al., 2014). Family caregivers may not be aware of regulations that prohibit or alternative measures to prevent the use of involuntary treatment. They play an important role in the request and use of involuntary treatment, which is often provided behind closed doors. Therefore, it is essential that professional caregivers foster dialogue with family caregivers and discuss how to deal with complex care dilemmas that may lead to the use of involuntary treatment.

Education and coaching are not sufficient to realise behavioural change in professional caregivers (den Gulpers et al., 2011; Huizing et al., 2006; Ouden et al., 2019; Resnick et al., 2016), thus, we developed the multi-component PRITAH (Prevention and Reduction of Involuntary Treatment At Home) intervention. PRITAH consists of (1) a policy template for the home care organisation; (2) workshops

and practical assignments; (3) consultation and coaching; and (4) alternative measures to prevent or reduce involuntary treatment. The intervention is primarily focused on professional caregivers, since they are the constant factor in caring for persons with dementia, have the most direct knowledge of the person with dementia, their family caregiver(s) and home situation, and are able to estimate their needs, wishes and challenges. Professional caregivers are the most suitable to educate and engage family caregivers in the decision-making process to avoid involuntary treatment.

According to the Theory of Planned Behavior (Ajzen, 2011), behaviour (the use of involuntary treatment) is influenced by four mechanisms of impact: attitude, subjective norm, perceived behavioural control and intention. These mechanisms are the main targets of the PRITAH intervention and were considered the intermediate processes (mediators) that explain subsequent behavioural change. However, participants' behaviour and mechanisms of impact can also be influenced by the implementation and context of the intervention (Moore et al., 2015). Therefore, the aim of this study is to gain insight into the (1) implementation (e.g. delivery of the intervention and interaction with the participants), (2) mechanisms of impact and (3) context of the PRITAH intervention based on the Medical Research Council (MRC) guidelines (Moore et al., 2015).

3 | METHODS

3.1 | Sampling and setting

The study was conducted in two care organisations (A and B), both partners of the Living lab in Aging and Long-term Care in the South of the Netherlands (Verbeek et al., 2020). In the Netherlands, professional home care is delivered by small-scale teams working in specific districts. A home care team usually consists of about 10 professional caregivers who provide personal care and support clients in performing activities of daily living (ADL) such as toileting, dressing and bathing. The team includes at least one district nurse (a bachelor-educated registered nurse), vocationally trained registered nurses and (certified) nurse assistants (Zorginstituut Nederland). The district nurse functions as the supervisor of the team and perform the formal needs assessment of clients (Maurits et al., 2018). The tasks and responsibilities of the bachelor-registered nurse, vocationally trained registered nurse and (certified) nurse assistants are more difficult to distinguish, since they all provide ADL care (Zorginstituut Nederland), however, the registered nurses also coordinate care and provide skilled services such as wound care. Additionally, dementia case managers provide counselling for persons with dementia and their family caregivers (Van Mierlo et al., 2014) and domestic workers perform household tasks and instrumental activities of daily living, including cooking, laundry and grocery shopping (Giebel et al., 2015). All play an important role in observing situations in which community-dwelling persons with dementia are at risk for involuntary treatment.

From both organisations, four home care teams were selected. The four home care teams from organisation A provide care for community-dwelling persons with dementia. The four home care teams from organisation B provide care for community-dwelling persons in general, of which about 15–20% has a cognitive impairment or dementia. Randomisation of home care teams was not possible and teams were assigned to control or intervention group based on availability and geographical data to avoid contamination bias. Participants included all members of the home care teams as well as all dementia case managers and a maximum of six domestic workers providing care for the same clients as the selected home care teams. Domestic workers only attended the first workshop since the content of the other workshops is beyond the scope of their responsibilities.

3.2 | The intervention

The intervention comprises four components: (1) a policy change within the home care organisation discouraging the use of involuntary treatment, (2) three 2.5-h workshops including practical assignments and case study discussions, (3) consultation and coaching by a specialised nurse and (4) discussion and provision of alternatives. The design and content of the PRITAH intervention were published previously (Mengelers et al., 2020) and can be found in the [Appendix 1](#). A pilot study (Mengelers et al., 2020) indicated that the PRITAH intervention was feasible in home care practice. Suggestions from the feasibility study resulted in the following adjustments: (1) actively inform participants about the organisation's policy change via an information letter and presentation by the organisation's managing board, (2) a clear guideline to instruct participants how to apply the new policy change step-by-step into home care practice, (3) a more proactive role for the specialised nurse (e.g. organising consultation meetings), (4) the district nurses' role as 'champion' to support and facilitate reduction and prevention of involuntary treatment within their team, (5) provide more information regarding the new 'Care and Coercion' legislation which is active in the Netherlands since January 2020, and (6) a more multidisciplinary approach and actively inform family caregivers and GPs. Within both organisations, a specialised nurse (registered nurse with extensive experience in providing care for persons with a cognitive impairment) was appointed to provide the workshops, consultation meetings and coaching. Both specialised nurses received a training before the start of the intervention, consisting of literature for self-study and four themed meetings with the researcher in which the aim and content of the intervention were discussed. Before the start of the study, the researcher informed all participating district nurses about the study and their role as the 'champion' of their team. They are responsible for supporting the participants, stimulate prevention and reduction of involuntary treatment and additionally function as the contact person for the participants, researchers and the specialised nurse (den Luz et al., 2019; Ouden et al., 2019).

3.3 | Measures

The implementation, mechanisms of impact and context of the PRITAH intervention was evaluated using the Medical Research Council (MRC) guidelines (Craig et al., 2013). We used the Transparent Reporting of Evaluations with Nonrandomized Designs (TREND) checklist when writing our manuscript (Des Jarlais et al., 2004) (Appendix S1). Table 1 presents an overview of all measures used.

Background characteristics of the professional caregivers were collected through a questionnaire at baseline including age, gender, level of education, current role, years of working experience in elderly care and home care, hours of work per week and experienced burden at work.

Implementation was evaluated using the following process indicators: reach, dose, fidelity, adaptations and satisfaction (Craig et al., 2013; Moore et al., 2015). Table 1 presents an overview of the operationalisation of these process indicators and the data collection methods. All participants completed an evaluation questionnaire after each workshop, assessing participants' satisfaction regarding the workshop and specialised nurse, what they learned from the workshop, experienced facilitators and barriers, and suggestions for improvement. It took about 10 min to complete the questionnaire. The researcher kept a logbook with field notes during the workshops and consultation meetings to check whether all components were conducted according to protocol. A subsample of three participants per intervention group, including at least one nurse, one dementia case manager and one domestic worker, were invited to participate in focus groups. The focus groups addressed the participants' view of the: (1) content of the workshops, (2) practical assignments, (3) consultation and coaching and (4) changes in home care practice (e.g. the use of alternatives).

The **mechanisms of impact** were assessed using a self-administered questionnaire based on the Theory of Planned Behavior (Ajzen, 2011). Participants' *attitude* (20 items), *subjective norms* (5 items), *perceived behavioural control* (9 items) and *intention* (4 items) were rated on a 5-point scale ranging from 0 (totally disagree) to 5 (totally agree). Five additional items assessed how often involuntary treatment was discussed with colleagues during the past 30 days. Participants were asked (1) how many clients with (a risk of) involuntary treatment were discussed, (2) what was discussed, (3) who it was discussed with, (4) what agreements were made regarding the use of involuntary treatment and (5) whether this discussion leads to reduction or prevention of involuntary treatment. The questionnaire was completed 4 weeks before the start of the intervention (T0) and 6 weeks after the final workshop (T1).

Context was defined as the barriers and facilitators that influenced the implementation and impact of the PRITAH intervention (Craig et al., 2013; Moore et al., 2015). This was assessed by the logbook and notes, evaluation questionnaires and focus groups.

3.4 | Data collection

The managing board of the participating organisations received an information letter explaining the aim of the study. If interested, they were invited for a meeting to discuss the policy change regarding involuntary treatment. If the managing board provided consent to participate, the policy template was adjusted to the specific context. Once the home care teams were selected, an information meeting was held for all participants. The aim of the study was explained, informed consent was implemented, and data were collected. Then, all family caregivers received an information letter including the aim of the study and a description of involuntary treatment. An information meeting for family caregivers was planned to be organised. All GPs involved in the care for community-dwelling persons within the selected districts received an information letter explaining the aim of the study and the organisation's policy regarding the use of involuntary treatment. After workshop one and two, participants had 3 weeks to perform a practical assignment which was discussed during the following workshop. The specialised nurse facilitated the workshops, was available for coaching and discussed alternatives for involuntary treatment throughout the intervention period. The data collection procedure for the control group and intervention group were the same. Six weeks after the last workshop focus groups were held at both organisations.

3.5 | Ethics

The study design and protocol were reviewed and approved by an institutional review board in September 2019. Data were stored on a password-protected hard drive which could only be accessed by the researchers involved in this study. Personal identities were pseudonymised via an ID code. Only the researcher (AM) knew the participants' identities and results from data analyses could not be linked to an individual person.

3.6 | Statistical analysis

Background characteristics and quantitative data from the questionnaires and attendance lists were analysed using descriptive statistics. Data were analysed using SPSS Statistics version 25. Mixed regression analyses with random intercept were used to test whether participants' attitude, subjective norm, self-efficacy and intention regarding involuntary treatment differed between the intervention and control group, with participants as random factor and pre/post results as repeated measures. Cases were excluded from analyses if no data were collected on both T0 and T1. Based on a priori theoretical assumptions and scatterplots of the background demographics and outcome variables, no covariates were added to the analyses. Qualitative data from the focus groups were recorded (with consent of the participants) and transcribed by the researcher (AM). To analyse all qualitative data (e.g. focus groups and open questions), an

TABLE 1 Overview of process indicators, measures and data collection

Component and definition	Data source	Measure	Type of data collected	Timing
Implementation				
<i>Reach</i> Extent to which participants come into contact with the intervention	Participants	Questionnaire Attendance lists	Background characteristics Number of attendees and reasons for drop out	T0 Continuously
<i>Dose</i> Quantity of the intervention that was implemented	Participants Researcher and workshop provider	Questionnaire Logbook and notes	Components implemented Performance according to protocol	Continuously Continuously
<i>Fidelity</i> Extent to which the PRITAH intervention was implemented as planned	Participants Researcher and workshop provider	Questionnaire Focus group Logbook and notes	Evaluation of workshops Experience with intervention and implementation in practice Components implemented, deviations and timing	Continuously T1 Continuously
<i>Adaptations</i> Alterations made to the intervention to achieve better contextual fit	Researcher and workshop provider	Logbook and notes	Changes in content, procedure, activities of the intervention	Continuously
<i>Satisfaction</i> Participants' satisfaction with the intervention	Participants	Focus group Questionnaire	Satisfaction and experiences with (implementing) the intervention Evaluation of workshops	T1 Continuously
Mechanisms of impact				
<i>Attitude</i> Individual's settled way of thinking or feeling about something	Participants	Questionnaire	Attitude towards involuntary treatment use (20 items)	T0 + T1
<i>Subjective norms</i> Individual's perception influenced by the judgment of significant others	Participants	Questionnaire	Subjective norms towards involuntary treatment use (5 items)	T0 + T1
<i>Perceived behavioural control</i> Individual's perceived ease or difficulty of performing a particular behaviour	Participants	Questionnaire	Perceived behavioural control regarding implementation in daily practice (5 items) and prevention and reduction of involuntary treatment use (4 items)	T0 + T1
<i>Intention</i> Individual's readiness to perform particular behaviour	Participants	Questionnaire	Intention to prevent/reduce involuntary treatment use in daily practice (4 items)	T0 + T1
<i>Discussing involuntary treatment</i> What is discussed, with who, how often and what was the conclusion	Participants	Questionnaire	<ul style="list-style-type: none"> • Number of clients • What is discussed, with who • Agreements and results 	T0 + T1
Context				
<i>Barriers & facilitators</i> External factors that may influence implementation or outcomes of the intervention	Participants Researcher and workshop provider	Questionnaire Focus group Logbook and notes	Facilitators and barriers experienced during the intervention Facilitators and barriers in terms of implementation in practice Changes in content, procedure, activities of the intervention	Continuously T1 Continuously

iterative process with multiple rounds of analyses, evaluation and adaptations was conducted. Based on the open questions from the evaluation questionnaires, a codebook was created with categories deriving from the data itself. These categories were discussed with

a second assessor (MB) and formed the basis for the interview guide for the focus groups. Finally, based on the topics from the interview guide and open questions, a summary was written presenting the most important information per topic.

4 | RESULTS

4.1 | Sample

A total of 125 of the 133 (94%) eligible professionals agreed to participate. Reasons to not participate included other obligations (4), prolonged illness (1) or because they would no longer be working within the selected team in the short term (3). One participant from organisation B dropped out due to personal reasons. Of the remaining 124 participants, 70 participants followed the intervention and 54 provided care as usual (control group). In total, all participants provided care for 159 persons with dementia (115 persons at organisation A and 44 persons at organisation B). Most participants (90%) were female, and ranged in age from 18 to 66 (mean = 47.0, SD = 12.2). There were no statistically significant differences in background characteristics between the control and intervention groups or between participants from organisation A and B. Separate

focus groups were held for organisation A and B with four participants, including two licensed vocational nurses, a dementia case manager and a district nurse or registered nurse. More information on participant characteristics is provided in [Table 2](#).

4.2 | Implementation

4.2.1 | Reach

Seventy of the 77 eligible professional caregivers participated in the intervention (91%). The overall attendance rate of the three workshops was 78% at organisation A and 85% at organisation B. At organisation A, the attendance rate of the first and second workshop was 84% and 68% at the last workshop. Two of the seven domestic workers did not attend the first workshop. At organisation B, the first workshop was attended by 97%, followed by 93% and 63% at

TABLE 2 Participants characteristics

	Organisation A		Organisation B		Organisation A + B together	
	Intervention	Control	Intervention	Control	Intervention	Control
Professional caregivers	N = 37	N = 28	N = 33	N = 26	N = 70	N = 54
Female <i>n</i> (%)	35 (95%)	26 (93%)	28 (85%)	22 (85%)	63 (90%)	48 (89%)
Age mean (SD)	49 (11.1)	47 (13.9)	44 (12.4)	49 (11.4)	46.4 (11.9)	47.8 (12.7)
Years of experience in elderly care mean (SD)	19 (11.2)	22 (14.0)	15 (10.5)	17 (12.5)	17.2 (10.9)	19.0 (13.1)
Years of experience in home care mean (SD)	13 (10.5)	15 (11.3)	12 (9.1)	9 (7.6)	12.7 (9.8)	11.5 (10.0)
Education, <i>n</i> (%) ^a						
Low	8 (22%)	10 (36%)	6 (18%)	5 (19%)	14 (20%)	15 (28%)
Intermediate	19 (51%)	11 (39%)	19 (58%)	14 (54%)	38 (54%)	25 (46%)
High	10 (27%)	7 (25%)	8 (24%)	7 (27%)	18 (28%)	14 (26%)
Amount of work hours per week, <i>n</i> (%)						
0–10 h	1 (3%)	N.A.	N.A.	N.A.	1 (1%)	N.A.
10–20 h	9 (24%)	6 (21%)	3 (9%)	5 (19%)	13 (18%)	11 (20%)
20–30 h	19 (51%)	12 (43%)	22 (67%)	15 (58%)	41 (59%)	27 (50%)
30–40 h	7 (19%)	10 (36%)	8 (24%)	6 (23%)	15 (21%)	16 (30%)
Experienced burden at work ^b mean (SD)	4.8 (2.0)	4.5 (2.1)	4.8 (2.0)	4.3 (1.9)	4.8 (1.9)	4.5 (2.1)
Current function, <i>n</i> (%)						
District nurse	2 (5%)	2 (7%)	5 (15%)	2 (8%)	7 (10%)	4 (7%)
Registered nurse (in training)	N.A.	3 (11%)	N.A.	3 (12%)	N.A.	6 (11%)
Licensed vocational nurse	3 (8%)	2 (7%)	4 (12%)	3 (12%)	7 (10%)	5 (9%)
Certified nursing assistants	18 (49%)	8 (29%)	13 (39%)	9 (35%)	31 (44%)	17 (32%)
Nurse assistant	1 (3%)	N.A.	3 (9%)	1 (4%)	4 (6%)	1 (2%)
Dementia case manager	6 (16%)	6 (21%)	2 (6%)	1 (4%)	8 (12%)	8 (15%)
Domestic worker	7 (19%)	7 (25%)	6 (18%)	6 (23%)	13 (19%)	13 (24%)

^aLow = lower vocational or advanced elementary education. Intermediate = intermediate vocational or higher secondary education. High = higher vocational education, university.

^bHow stressful do you find your job?, rated on a 10-point scale ranging from 0 (not stressful at all) to 10 (very stressful).

workshop two and three. All seven domestic workers attended the first workshop.

4.2.2 | Dose

All four components (policy, education, coaching and consultation, and alternatives) were delivered to the intervention teams. The content of the organisations' new policy was consistent with the template provided by the researcher. All attendees at the first workshop received an information letter and were informed about the organisation's policy change on involuntary treatment via a short presentation by the managing board and/or policy advisor. At the end of the intervention, participants received a step-by-step guideline on how to apply the new policy into practice. All three workshops were offered, including two practical assignments, which were also sent per e-mail to the participants who missed the workshop. Both specialised nurses provided proactive coaching and visited the home care teams three times to discuss cases. The implications of the 'Care and Coercion' legislation and alternative measures to prevent involuntary treatment were discussed throughout the intervention. All GPs involved in the care for persons with dementia receiving care from the intervention teams from organisation A ($n=24$) and B ($n=8$) were informed about the organisation's policy change. An information letter was sent to the family caregivers and/or client's addresses due to a lack of contact details. Some family caregivers were contacted by the district nurse by phone. Because of missing contact details, privacy issues and a lack of time for district nurses, family caregivers were not invited for an information meeting.

Overall, 34 practical assignments were handed in at organisation A and 35 at organisation B. The assignment should be made individually and took an average of 27 min to complete. At organisation A, one team made the assignment together during a team meeting because they found the assignment difficult to make individually. Themes described in the practical assignment varied from avoiding personal care, resistiveness to personal hygiene and carrying an alarm bell, to shutting off gas, the use of physical restraints (e.g. posey bed, belt restraint, bedrails), taking away the car (keys) and clients resisting (assistance during) food or medication intake. Resistiveness to ADL care, especially showering and medication intake, was most common. Alternatives for involuntary treatment were discussed with colleagues, family caregivers and the client him- or herself and included adjusting the care moment, the use of extra support (e.g. day care, dementia case manager or GP), and sometimes just accepting the resistance. Participants also exchanged experiences on dealing with different opinions and how to involve family caregivers in the decision-making process.

4.2.3 | Fidelity

In two teams (one of both organisations), the policy change was presented by the policy advisor instead of the managing board due to

other obligations. The evaluation questionnaires indicated that for 87% of the attendees at workshop 1 from organisation A and 78% from organisation B the key message of the organisation's policy was clear. Workshop two and three started with a 30-min consultation meeting to discuss the practical assignments. In three out of four teams this took a bit longer, which led to a delay or other components being discussed less extensively.

Fidelity regarding the workshops varied between both organisations. At organisation A, all key components from the workshops were covered but the time needed to cover the components differed per team. For organisation B, the logbook and field notes revealed that some components were not fully discussed (regulations and stakeholders regarding the 'Care and Coercion' legislation) or were addressed faster than intended (registration of involuntary treatment in client's electronic health records). Five participants had to leave 15–30 min earlier and some components took more time than planned because participants had additional questions. Due to time restrictions, the domestic workers from organisation B could not join the workshop and a separate workshop was organised for these domestic workers ($n = 6$).

4.2.4 | Adaptations

Some minor adjustments were made during the study, such as in workshop 1 to better fit the domestic workers' job responsibilities for those attending the separate workshop of organisation B. Based on the evaluations after each workshop, the content or way of presenting was sometimes adjusted for the following teams. Posters were used during workshop three and the amount of information was reduced because some participants indicated it was too difficult.

4.2.5 | Satisfaction

Participants' satisfaction regarding the workshops and specialised nurse varied per organisation. From organisation A, participants rated the workshops with a 8.1 out of 10 and the specialised nurse with a 8.4. All participants who filled in the evaluation questionnaire after workshop three ($n = 24$) would recommend the workshops to colleagues. Participants indicated that the presentations were clear, educational, interactive and relevant for daily practice. Discussing case studies and exchanging experiences was evaluated as useful and contributed to more knowledge and awareness regarding involuntary treatment. Some participants reported that they wished to learn more about the 'Care and Coercion' legislation.

From organisation B, participants rated the workshops with a 7.1 out of 10 and the specialised nurse with a 7.3. Half of the attendees at workshop three ($n = 7$) would recommend the workshops to colleagues. Although the content of the workshops was clear for most participants, higher educated participants indicated that some content was already known and there was a lack of depth. Participants wished to discuss more practical examples and solutions for daily

practice and thought the specialised nurse should stimulate (more) interaction between participants. Participants of the focus group interview suggested that the practical assignment should be performed as a team instead of individually, because in daily practice you work within a team. Although the key message of the organisation's policy was clear for nearly all participants, the majority wanted more instructions and advice on how to translate this to home care practice.

4.3 | Mechanisms of impact

Data on participants' attitude, subjective norm, perceived behavioural control and intention are shown in Table 3. Data from four participants were missing on T0 due to illness ($n = 1$) or absence during data collection ($n = 3$). At T1, data from 17 participants could not be collected due to illness ($n = 2$) pregnancy leave ($n = 1$), resigning their job ($n = 2$), absence during data collection ($n = 7$), or because after mid-March, professionals were no longer asked to fill in questionnaires due to the COVID-19 crisis in the Netherlands ($n = 5$). Participants' attitudes regarding involuntary treatment were similar between intervention and control group at T0, which did not change after the intervention period (ICC = 0.84, $b = -0.06$ p -value = 0.288). Overall participants had a neutral attitude regarding involuntary treatment. A statistically significant treatment effect (adjusted for baseline differences by means of between intervention and time interaction) was seen on participants' subjective norms (ICC = 0.66, $b = 0.20$, p -value = 0.043), indicating that the intervention group believed that the use of involuntary treatment was less supported by the organisation and colleagues compared to the control group. Similar results were seen for perceived behavioural control with

a statistically significant treatment effect (ICC = 0.62, $b = 0.35$, p -value = 0.010) indicating that perceived behavioural control increased in favour of the intervention group. Finally, no evidence was found for an effect of the intervention on participants' intention to prevent and reduce involuntary treatment (ICC = 0.53, $b = 0.09$, p -value = 0.488).

Field notes indicated that attitudes towards involuntary treatment strongly varied between participants. The statement 'freedom is more important than safety' led to much discussion, with half of the participants agreeing. The risk of serious injury or death was reported as the main reason to use involuntary treatment, since caregivers often encounter potentially dangerous situations, such as leaving the gas on or wandering outside. The majority indicated that they do not force persons with dementia to eat and rather risk that a person with dementia falls than restraining him/her. Professionals find it difficult that family caregivers sometimes expect certain actions from them (such as forcing persons with dementia to eat or lock them up at home), while you are not (legally) allowed to do so. They consider themselves as 'guests' at their home, which is different from nursing home residents where they are institutional employees.

4.3.1 | Discussing involuntary treatment

After the intervention, participants from both organisations indicated that involuntary treatment was less often discussed. Involuntary treatment is most often discussed with nursing staff and least discussed with domestic workers and dementia case managers. A complete overview of how often involuntary treatment is discussed, with who and whether this lead to prevention or reduction of involuntary treatment can be found in the Appendix 2.

TABLE 3 Self-reported change in attitude, subjective norm, perceived behavioural control and intention^a

	Organisation A		Organisation B		Organisations A & B	
	T0	T1	T0	T1	T0	T1
Intervention	N = 36	N = 35	N = 32	N = 27	N = 68	N = 62
Attitude	2.9 (0.3)	2.9 (0.3)	3.1 (0.3)	3.0 (0.2)	3.0 (0.3)	2.9 (0.3)
Subjective norm	3.1 (0.4)	3.5 (0.5)	3.0 (0.4)	3.5 (0.4)	3.1 (0.4)	3.5 (0.5)
Perceived behavioural control	3.6 (0.5)	3.9 (0.5)	3.6 (0.4)	3.9 (0.7)	3.6 (0.4)	3.9 (0.6)
Intention	3.9 (0.4)	4.2 (0.5)	3.9 (0.6)	4.1 (0.6)	3.9 (0.5)	4.2 (0.6)
Control	N = 27	N = 22	N = 25	N = 23	N = 52	N = 45
Attitude	3.0 (0.3)	3.0 (0.3)	3.1 (0.3)	3.0 (0.2)	3.1 (0.3)	3.0 (0.3)
Subjective norm	3.2 (0.5)	3.3 (0.5)	3.0 (0.4)	3.4 (0.4)	3.1 (0.5)	3.3 (0.5)
Perceived behavioural control	3.7 (0.4)	3.7 (0.6)	3.6 (0.5)	3.6 (0.4)	3.7 (0.4)	3.6 (0.5)
Intention	3.8 (0.6)	4.2 (0.5)	4.0 (0.4)	4.0 (0.6)	3.9 (0.5)	4.1 (0.6)

^aAll scores were measured on a 5-point Likert scale, ranging from 1 (totally disagree) to 5 (totally agree). Some items were reverse coded. A higher score indicates: A more positive attitude towards involuntary treatment (involuntary treatment is more accepted). The subjective norm that involuntary treatment should not be applied. More perceived behavioural control to prevent/reduce involuntary treatment use. Higher intention to prevent/reduce involuntary treatment use.

4.4 | Context

Frequently mentioned barriers included unclear policy and difficulty translating this into home care practice, lack of communication within the organisation and between the stakeholders (e.g. nurses, domestic workers, dementia case managers), lack of (financial possibilities for) alternative interventions and large time investment. Most barriers were mentioned from participants of organisation B. The different roles and education levels of the participants make it challenging to provide an intervention that is interesting, understandable and innovative for all participants. In addition, there is a certain hierarchy and team culture within organisations that may (not) contribute to feeling supported by colleagues and the managing board. Participants indicated that although they know who to contact for advice, it often takes a long time to arrange things or receive feedback, while home care practice needs to continue and time is limited. Finally, a lack of motivation or time were mentioned as barriers. Facilitators included the multidisciplinary approach, availability of the specialised nurse and discussing involuntary treatment with professionals from outside the home care team. The intervention provided opportunities to apply the acquired knowledge and skills into practice via practical assignments and case discussions. Participants indicated that this contributed to their awareness and helped them prevent and/or reduce involuntary treatment. Suggestions for improvement included better time management (prevent delay and try not to discuss too much information within a short time frame), a (more) proactive attitude from the specialised nurse (organisation B) to motivate and stimulate the participants, and a better fit between the content of the intervention program and participants' current knowledge (e.g. more depth and detail for some and more explanation for others).

5 | DISCUSSION

The PRITAH intervention showed positive effects on professional caregivers' subjective norms and perceived behavioural control regarding the use of involuntary treatment. Both are prerequisites for professional caregivers to prevent and reduce involuntary treatment. No effects were found for PRITAH on participants' attitudes and intention. The view that the organisation's policy was unclear and a lack of communication between involved caregivers were cited as barriers. The multidisciplinary approach and possibility to discuss involuntary treatment with other professionals and the specialised nurse were expressed as facilitators. This study confirms that the adapted PRITAH intervention is feasible in home care practice. All four components (policy, workshops, coaching and consultation, alternatives) were delivered to the intervention group with minor deviations from protocol.

Although this study does not provide insight into the effectiveness of PRITAH on actual prevention and reduction of involuntary treatment, it provides new insights into the working mechanisms needed to realise behavioural change in professional caregivers.

Since education and coaching are not sufficient to realise a change in participants' attitudes and behaviour (Evans et al., 1997; Gulpers et al., 2011; Huizing et al., 2006), the components of policy change and (access to) alternatives were added. During the PRITAH intervention, a new policy aimed at reduction and prevention of involuntary treatment was introduced and participants discussed how to realise this during consultation meetings guided by a specialised nurse. This may explain the change in subjective norms. Discussing case studies and proactive coaching may have also contributed to participants' higher perceived behavioural control to prevent and/or reduce involuntary treatment. Participants received practical advice and tips on how to prevent and reduce involuntary treatment and were able to implement this in daily practice. Face-to-face meetings, such as the workshops and consultation meetings, with practical activities, are most likely to impact professional caregivers' ability to manage complex behavioural changes in persons with dementia such as resistiveness (Fossey et al., 2020), and thus prevent or reduce involuntary treatment. In addition, it is important to offer tailored alternatives to prevent resistance or involuntary treatment (Volicer & Hurley, 2003). Professionals were encouraged to study the individual, context and environment to search for possible alternatives. Small changes in the care (process), such as a bed bath instead of bathing in a shower or bathtub (Sloane et al., 2004) or simply letting 'no morning persons' sleep late, can sometimes already reduce resistance (Volicer & Hurley, 2003). The EXBELT intervention, consisting of similar components as PRITAH, also demonstrated the importance of alternative measures and was effective in reducing and preventing physical restraints in nursing home residents (Gulpers et al., 2011).

There may be several explanations for a lack of effect on attitude and intention. First, the theory of planned behaviour assumes that changing a person's intention requires a change of attitude. The lack of effect on professional caregivers' intention may be (partly) explained by the lack of effect on attitude. Second, attitudes towards involuntary treatment vary greatly between professional (and family) caregivers and the different types of involuntary treatment. Physical restraints are the least accepted (Mengelers et al., 2019) and least commonly used type of involuntary treatment (Hamers et al., 2016; Moermans et al., 2018; Scheepmans et al., 2018) and this study only assessed attitudes towards involuntary treatment in general without the distinction between non-consensual care, psychotropic medication and physical restraints. Third, whether or not to apply involuntary treatment is a difficult choice that is often made within a team instead of individually. Family caregivers and GPs did not participate in the workshops and consultation meetings, and their absence may explain why professional caregivers' attitudes and intention regarding the use of involuntary treatment did not change. Family caregivers and GPs are more accepting of involuntary treatment than nursing staff (Mengelers et al., 2020) and discussing case studies would encourage both professional and family caregivers to critically reflect on their own attitude and intention regarding the use of involuntary treatment. Finally, although a previous prevalence study indicated that involuntary treatment is commonly used in these districts

(Hamers et al., 2016), two of the four intervention teams (one from both organisations) reported that involuntary treatment was never or rarely used within their team. It is reasonable that if you are not (often) confronted with (the risk of) involuntary treatment, you might consider it unnecessary to change your way of thinking about and/or dealing with involuntary treatment. This may also explain why involuntary treatment was less often discussed after the intervention.

This study has several strengths and limitations. One of the strengths is the inclusion of both dementia home care teams and general home care teams, which increases the generalisability of the findings and supports previous results that PRITAH is feasible in home care (Mengelers et al., 2020). Another strength is that this study provides insight into the implementation as well as the mechanisms of impact and context. It is important to include all three factors, since they all influence each other. Finally, although a RCT was not possible, contamination bias was prevented as much as possible by selecting home care teams based on geographical distance. A limitation of this study is the relatively small sample of 124 participants, therefore results must be interpreted with caution. Another limitation is that it is unknown to what extent the Dutch law 'Care and Coercion' that went into effect in January 2020 had an impact on the results of this study, as it may have influenced the control group. In addition, PRITAH is a multi-component intervention which, similar to others (Gulpers et al., 2011; Metzeltin et al., 2017), cannot be fully standardised and the context and needs of the participants may have led to small deviations from the protocol. This causes differences in the degree of implementation between the intervention teams and may influence the mechanisms of impact. However, this may also be considered a strength since a tailor-made approach contributes to achieving optimal results (Ryan & Lauver, 2002). No standardised or validated questionnaires could be used to measure participants' attitude, subjective norm, perceived behavioural control and intention regarding the use of involuntary treatment. The questionnaire was developed using the guideline on how to construct a theory of planned behaviour questionnaire (Ajzen, 2006). Commonly used concepts and items from theory of planned behaviour questionnaires were adapted to the current context and pilot tested in three respondents. Finally, PRITAH is primarily aimed at professional caregivers and it was difficult to reach family caregivers. Professional caregivers do not always have contact details of the family caregivers or are not allowed to share them due to privacy issues.

6 | CONCLUSIONS

This study provides insight into the prerequisites for prevention and reduction in involuntary treatment in dementia home care. The effects of PRITAH on participants' subjective norms and perceived behavioural control legitimise the need for a large follow-up study on the effectiveness of the PRITAH intervention on professional caregivers' behaviour change and actual prevention and reduction of involuntary treatment. Although the PRITAH intervention is mainly aimed at nursing staff, dementia case managers and domestic workers, the role of family caregivers and GPs in the use of involuntary

treatment need to be emphasised and they should actively participate in the intervention in order to prevent and reduce involuntary treatment in home care.

7 | RELEVANCE TO CLINICAL PRACTICE

This manuscript is especially valuable for professional caregivers such as nurses and care organisations who focus on providing person-centred (dementia) care. In addition to education and a clear policy, coaching and alternatives are needed to provide professional caregivers with knowledge and tools to support them in dealing with involuntary treatment. Involuntary treatment is commonly used in home care for PwD (Mengelers et al., 2020), but also prevalent in nursing homes (Gjerberg et al., 2013; Gulpers et al., 2011; Wagner et al., 2007) or hospitals (Kalula & Petros, 2016; Lay et al., 2011). Although these studies do not refer to involuntary treatment, terms such as coercive care, resistiveness to care and restraints are related to involuntary treatment as they all describe care to which the client resists and/or does not provide consent for.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Data collection and draft of the manuscript: AM; Data interpretation: AM and MB and discussed with all other authors; development of the research protocol: all authors; Provide feedback and approval of the final version: all other authors.

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SUPPORTING INFORMATION

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APPENDIX 1

Summary of the content of the PRITAH intervention program

Policy	The policy was communicated via an information letter and shortly presented during the first workshop. The key message included: <ul style="list-style-type: none"> • Discouragement of the use of involuntary treatment • Underscoring the importance of person-centred care and individualised alternatives
Workshops	Three 2.5-h workshops each with own theme(s): <ul style="list-style-type: none"> Workshop 1: Increasing knowledge & awareness Workshop 2: Conducting a problem analysis & communicating with stakeholders Workshop 3: Regulations and stakeholders regarding the 'Care and Coercion' legislation, registration of involuntary treatment in client records and alternative interventions Two practical assignments in-between the workshops: Case studies to practice the skills they gained during the workshops in home care practice. The case studies were discussed during workshop 2 and 3
Coaching and consultation	Coaching: The specialised nurse was available for coaching if participants needed advice and visited multiple home care team meetings to assist professional caregivers in preventing/reducing involuntary treatment use Consultation: Workshop 2 and 3 started with a 30-min discussion on case studies (practical assignments) led by the specialised nurse
Alternative intervention	<ul style="list-style-type: none"> • Alternative interventions were discussed during the workshops and consultation • Participants received a comprehensive list of alternatives and multiple sources with an overview of alternatives

APPENDIX 2

Discussing involuntary treatment

	Intervention		Control	
	T0	T1	T0	T1
Organisation A	N = 36	N = 34	N = 27	N = 19
Did you discuss involuntary treatment the last 30 days? Yes <i>n</i> (%)	20 (56%)	10 (29%)	14 (52%)	8 (42%)
Concerning how many clients? (mean + SD)	3.2 (4.4)	1.4 (1.0)	2.3 (2.3)	2.8 (3.1)
Who did you discuss it with? ^a <i>n</i> (%)				
GP	6 (30%)	3 (30%)	4 (28%)	4 (21%)
Nursing staff	17 (85%)	7 (70%)	11 (79%)	5 (26%)
Dementia case manager	3 (15%)	2 (20%)	4 (29%)	1 (5%)
Domestic worker	1 (5%)	N.A.	N.A.	1 (5%)
Client	7 (35%)	4 (40%)	10 (71%)	4 (21%)
Family caregivers	15 (75%)	9 (90%)	11 (79%)	7 (37%)
Other family member(s)	4 (20%)	N.A.	3 (21%)	1 (5%)
Did this lead to prevention of involuntary treatment? ^a Yes <i>n</i> (%)	8 (40%)	3 (30%)	5 (36%)	5 (26%)
Did this lead to a reduction of involuntary treatment? ^a Yes <i>n</i> (%)	7 (35%)	4 (40%)	7 (50%)	3 (16%)
Organisation B	N = 31	N = 27	N = 25	N = 23
Did you discuss involuntary treatment the last 30 days? Yes <i>n</i> (%)	18 (58%)	8 (30%)	8 (32%)	7 (30%)
Concerning how many clients? (mean + SD)	1.6 (0.7)	2.1 (1.9)	1.8 (1.0)	1.6 (0.5)
Who did you discuss it with? ^a <i>n</i> (%)				
GP	3 (17%)	4 (15%)	1 (13%)	3 (13%)
Nursing staff	13 (72%)	5 (19%)	7 (88%)	7 (30%)
Dementia case manager	1 (6%)	2 (7%)	N.A.	3 (13%)
Domestic worker	1 (6%)	1 (4%)	N.A.	N.A.
Client	6 (33%)	3 (11%)	5 (63%)	2 (9%)
Family caregivers	8 (44%)	5 (19%)	4 (50%)	2 (9%)
Other family member(s)	2 (11%)	2 (7%)	3 (38%)	2 (9%)
Did this lead to prevention of involuntary treatment? ^a Yes <i>n</i> (%)	8 (44%)	5 (19%)	2 (25%)	2 (9%)
Did this lead to a reduction of involuntary treatment? ^a Yes <i>n</i> (%)	6 (33%)	2 (7%)	2 (25%)	1 (4%)

^a Numbers and percentages do not add up to 100% because in some cases multiple clients were discussed, more than one measure of involuntary treatment was used, and/or involuntary treatment was discussed with multiple stakeholders.