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ORIGINAL ARTICLE

Reasons for (not) discontinuing antipsychotics in dementia

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Abstract

Background: The gap between high antipsychotic prescription rates for patients with dementia and the guidelines' advice to prescribe cautiously indicates that barriers to discontinuation exist. This exploratory study used the theory of planned behaviour to give a first overview of the factors that influence physicians to discontinue antipsychotics in nursing home patients with dementia.

Methods: Forty-one physicians in the Netherlands completed an online survey based on the theory of planned behaviour.

Results: Half of the respondents agreed that antipsychotics have positive consequences for patients, such as calming effects. Physicians who indicated that they tend not to discontinue antipsychotics believe that antipsychotics are associated with positive consequences for nursing home staff. Physicians who tend to discontinue antipsychotics had a higher perceived behavioural control than those who indicated having a low intention.

Conclusion: To enhance discontinuation of antipsychotics, interventions should focus on both patient-related factors and staff-related factors. Prescribing decisions are influenced by staff-related factors that need to be addressed as well.

INTRODUCTION

Elderly people receiving long-term care in an institution frequently suffer from some type of neuropsychiatric symptoms encompassing aggression, shouting, agitation, and wandering.[1] These challenging behaviours can not only lead to harm to the resident but also to other residents and to staff members.[2]

Current guidelines call for psychological and social approaches as first-line treatment options for neuropsychiatric symptoms, with pharmacological recommendations, including cautious use of antipsychotics, considered as second-line treatment.[3] Despite this advice, antipsychotics are used often, which is an increasing concern,[4–6] and antipsychotic treatment has only modest efficacy in residents with agitation or aggression.[7,8] Evidence also exists that antipsychotics are associated with severe adverse events.[9,10] However, it is estimated that more than half of residents on antipsychotics were not prescribed them in accordance with guidelines, with one in four patients having no appropriate indication.[11] Furthermore, the consumption of these drug are often poorly monitored,[12,13] which results in high and chronic use.[14]

The antipsychotic prescription rate ranges between 11% and 38%,[15,16] even though studies have shown that antipsychotic use can be stopped safely without a rise in challenging behaviour.[17,18] Clearly, barriers exist to putting this knowledge into practice. To facilitate antipsychotic discontinuation and optimization, it is necessary to understand the factors that influence clinical decision making (behaviour).

A first study into potential barriers to discontinuing antipsychotic prescription for dementia patients identified several factors encountered by general practitioners and nurses.[14] General practitioners and nurses agreed on the majority of barriers, with 'reoccurrence of behavioural problems if antipsychotics are discontinued' and 'negatively affecting the quality of life if antipsychotics are discontinued'

as the most important barriers encountered by both.[14]

In the study by Azermai *et al.*, no behavioural theory was used. Using theoretical models to study theory-based cognition potentially provides a generalizable framework within which to consider factors that influence behaviour and the development of interventions to modify them. One such theoretical model—the theory of planned behaviour (TPB)-[19]—has been validated to predict human behaviour, and it has been previously used to investigate factors associated with prescribing medications.[20]

The TPB consists of three main variables—attitude towards the behaviour, subjective norm, and perceived behavioural control—that influence the intention and, in turn, behaviour.[19] The more favourable the three key variables are, the stronger the intention of performing the behaviour should be.[21] Intention is assumed to immediately precede behaviour.[21] Attitude arises from a set of beliefs about the behavioural consequences and evaluations of the consequences. An example of such an attitude is the belief that discontinuing will result in disease relapse or reoccurrence of behaviour.[14,22] Subjective norm is based on individual perceptions of social pressures regarding the behaviour.[23] Examples of such elements include the belief that the patient's family is opposed to antipsychotics or perceived pressured from other staff to discontinue antipsychotics.[14,24,25] Perceived behavioural control is determined by the physician's perceived ease of performing the behaviour,[23] and it is reflected in the their belief that they are able to discontinue the prescription, are confident about the decision, and are in control of the decision.

Therefore, in the present study, we used the TPB as a framework to explore the influencing factors perceived by elderly care physicians in their decisions to discontinue antipsychotic treatment in Dutch nursing home residents living with dementia.

METHODS

Setting and participants

We conducted an online survey among elderly care physicians working in nursing homes. The questionnaire was published on the website of the Dutch Association of Elderly Care Physicians and Social Geriatricians (Verenso) and distributed via the organization's newsletter in May 2015.[26] Of the approximately 1500 elderly care physicians in the Netherlands, the vast majority is a member of this association and therefore had access to the questionnaire.

Instrument

Demographics and job characteristics

The sociodemographic variables in the study included each physician's gender, age, professional experience (number of years working with dementia patients), type of nursing home (small scale, traditional, or a combination of both), antipsychotic prescription rate (reported percentage of patients taking antipsychotics), and use of alternatives to antipsychotics (Table 1).

TPB variables

For each construct of the TPB, items were formulated based upon the literature and interviews with

Table 1 Demographics of the elderly care physicians and their prescriptions ($N = 41$)

Characteristics	*n* (%)	Mean ± SD
Age (years)		47 ± 10
Experience in elderly care (years)		16 ± 9
Gender		
Male	11 (27)	
Female	30 (73)	
Type of facility		
Small-scale	16 (39)	
Traditional	6 (15)	
Combination of both	19 (46)	
Weeks until discontinuation		14 ± 16
Residents currently using antipsychotic (%)		22 ± 15
0–10%	10 (24)	
11–20%	17 (42)	
21–30%	8 (20)	
31–40%	2 (5)	
41–50%	1 (2)	
51–60%	3 (7)	
More than 60%	—	
Availability and use of alternatives to antipsychotics	Availability	Use[†]
Tools (e.g. blanket, table/chair)	32 (80)	26 (65)
Occupational therapy	37 (92)	37 (93)
Emotion-focused care (validation-, reality-oriented therapy)	35 (87)	34 (85)
Sensory stimulation	34 (85)	33 (83)
Cognitive therapies	30 (75)	23 (74)
Medication	38 (95)	37 (93)
Other therapies (e.g. acupuncture, music)	19 (48)	17 (43)
Not available	—	—

[†] Use figures are *n*(%).

two physicians to identify salient beliefs.[27] Before the questionnaire was distributed, the researchers and one physician determined the time to complete the questionnaire and tried to resolve any ambiguities, which eventually led to a few final amendments.

The TPB variables were all formulated as statements that could be answered on a 5-point Likert

Table 2 Frequencies of the single items of the theory of planned behaviour (N = 41)

Statements	Disagree (1–2) (n (%))	Neutral (3) (n (%))	Agree (4–5) (n (%))
Direct attitude (when not to prescribe antipsychotics)			
Dementia	4 (10)	10 (24)	27 (66)
Behavioural problems	4 (10)	18 (44)	19 (46)
Beliefs about treatment effects (perceived effects of antipsychotic treatment on patients)			
Physiological calmness of the patient	8 (19)	13 (32)	20 (49)
Smaller risk of harm to other patients	5 (12)	17 (42)	19 (46)
Suppressed behavioural problems	8 (20)	14 (34)	19 (46)
Smaller risk of harm to staff	5 (12)	18 (44)	18 (44)
Psychological rest for the patient	16 (39)	8 (19)	17 (42)
Positive influence on behaviour	8 (20)	21 (51)	12 (29)
Less resident suffering	20 (49)	9 (22)	12 (29)
Less resident distress	16 (39)	14 (34)	11 (27)
Positive effect on quality of life	16 (39)	17 (41)	8 (20)
Smaller risk of self-harm to the patient	16 (39)	17 (42)	8 (19)
Less drooling	14 (34)	22 (54)	5 (12)
Less rigour	29 (71)	10 (24)	2 (5)
Suppressed emotions	32 (78)	7 (17)	2 (5)
Decreased sedation of resident	36 (88)	3 (7)	2 (5)
Reduced risk of falling for patient	38 (93)	3 (7)	—
Beliefs about effects on staff (i.e. perceived effects of antipsychotic treatment on staff)			
Less staff distress	11 (27)	3 (7)	27 (66)
Reduced workload	10 (24)	10 (24)	21 (51)
Reduced psychological burden	13 (32)	7 (17)	21 (51)
Less need for patient contact	16 (39)	14 (34)	11 (27)
Easier contact with patient	25 (61)	7 (17)	9 (22)
Higher ease of care	18 (44)	16 (39	7 (17)
More supervision of patient	30 (73)	6 (15)	5 (12)
Social pressure to discontinue antipsychotics			
Family of patient	32 (78)	8 (20)	1 (2)
Physician	36 (88)	4 (10)	1 (2)
Psychologist	37 (90)	4 (10)	—
Nursing assistant	40 (98)	1 (2)	—
Nurse	39 (95)	2 (5)	—
Resident	39 (95)	2 (5)	—
Social pressures that demand the discontinuation of antipsychotics			
Family of patient	25 (61)	14 (34)	2 (5)
Physician	28 (68)	11 (27)	2 (5)
Psychologist	29 (71)	8 (19)	4 (10)
Nursing assistant	31 (76)	9 (22)	1 (2)
Resident	36 (88)	4 (10)	1 (2)
Nurse	34 (83)	5 (12)	2 (5)
Normative beliefs about the positive effects of antipsychotics			
Nursing assistant	4 (10)	12 (29)	25 (61)
Nurse	4 (10)	17 (42)	20 (49)
Family	7 (17)	16 (39)	18 (44)
Psychologist	14 (34)	12 (29)	15 (37)
Physician	14 (34)	13 (32)	14 (34)
Resident	20 (49)	18 (44)	3 (7)
Perceived behavioural control of antipsychotic discontinuation			
Feeling confident	1 (2)	1 (2)	39 (96)
Feeling in control	5 (12)	3 (7)	33 (81)
Feeling capable	3 (7)	9 (22)	29 (71)
At ease with discontinuation	12 (29)	11 (27)	18 (44)

scale. Attitude was measured directly based on two statements related to the desirability of prescribing antipsychotics to dementia patients and to dementia patients with behavioural problems. Responses ranged from 'highly undesirable' (1) to 'highly desirable' (5). The two attitude statements showed a moderate internal consistency (Cronbachs $\alpha = 0.65$). Attitude was also measured indirectly through the assessment of beliefs about treatment effects and beliefs about effects on staff. Beliefs about treatment effects were measured by 16 statements related to the benefits and side-effects of antipsychotics (Table 2). Beliefs about effects on staff were measured by six statements related to the possible effects of patients' taking antipsychotics on staff (Table 3). All statements had response options ranging from 'totally disagree' (1) to 'totally agree' (5). Both indirect attitude scales showed a good internal consistency with a Cronbach's α of 0.86 and 0.73, respectively. Items were averaged into a scale score after the negative items were revised.

To assess the normative beliefs, physicians were asked how they perceived the opinions of six important reference individuals (e.g. nurses, patients' family members) regarding the discontinuation of antipsychotics (Cronbach $\alpha = 0.80$) (Table 2). In addition, physicians were asked to indicate the extent to which these six reference persons either explicitly requested or demanded discontinuation of antipsychotics. The answers to these 12 questions were averaged into a social pressure score (Cronbach $\alpha = 0.82$).

Physicians' perceived behavioural control was assessed based on four statements. The statements assessed the perceived difficulty in discontinuing a patient's antipsychotics, the perceived ability to do so, self-efficacy (confidence), and control of the decision ('In cases where I consider it desirable, it is easy for me/I am capable/I am confident/I have got the control to discontinue a patient's antipsychotics'.). These statements were scored between 'totally disagree' (1) to 'totally agree' (5). Cronbach's α of perceived behavioural control was 0.84, indicating a high internal consistency.

Intention was measured with two statements that assessed if the physicians wanted or intended to reconsider the prescribed antipsychotics and stop if possible (Table 3). Responses were on a 5-point scale ranging from 'totally disagree' (1) to 'totally agree' (5). A mean score of the two questions was calculated. Because of skewness, the responses were divided into two groups: (i) physicians who indicated having a low intention to discontinue prescribing antipsychotics (<5); and (ii) physicians who indicated having a high intention to discontinue prescribing antipsychotics (>5). The average of the two items generated the total intention score with a Cronbach's α of 0.91.

Table 3 Nurses' intention to call for antipsychotics ($N = 41$)

Intention	*n* (%)	Mean ± SD
Inclination to critically reconsider the prescription of antipsychotics and stop if possible		4.7 ± 0.6
Low intention (<5)†	14 (34)	
High intention (5)†	27 (65)	

† Mean score of the two questions, each ranging from 1 to 5.

Statistical analysis

Data were analyzed with SPSS version 22.0 (IBM Corp., Armonk, NY, USA). The mean scores were calculated for each construct. Group comparisons were performed with a *t*-test for independent groups. The level of significance was set at $P < 0.05$.

RESULTS

Sample characteristics

For this exploratory study, our data collection came to an end after 41 elderly care physicians completed the questionnaire. Of these participants, 30 (73%) were women (Table 1). They had a mean ± SD age of 47 ± 10 years and had 16 ± 9 years of experience in elderly care. Almost half of the physicians were

Table 4 Scale means ± SD and means ± SD per group ($N = 41$)

		Indicated intention	
Statements	Scale mean	Low (0–4.5)	High (5)
Direct attitude	3.5 ± 0.7	3.5 ± 0.6	3.6 ± 0.8
Beliefs about treatment effects	2.8 ± 0.5	2.8 ± 0.5	2.8 ± 0.5
Beliefs about effects on staff	2.8 ± 0.6	2.7 ± 0.6	2.9 ± 0.6
Social pressures	1.8 ± 0.4	1.8 ± 0.3	1.7 ± 0.5
Normative beliefs	3.1 ± 0.6	3.2 ± 0.5	3.2 ± 0.6
Perceived behavioural control	3.9 ± 0.8	3.4 ± 0.7	4.1 ± 0.7*

*$P < 0.05$ for comparison between experimental conditions (intention high vs low) using an independent *t*-test.

working in a combination of small-scale and traditional nursing homes.

Based on participant responses, an average of 22% of patients are prescribed antipsychotics, and no single physician prescribed antipsychotics to more than 60% of patients. More than 85% of the elderly care physicians indicated that antipsychotics are prescribed to 30% of their patients at most. The availability and use of alternatives to antipsychotics are shown in Table 1. All therapies are available and used as indicated by more than 70% of the respondents. Medication (95%) was the most commonly available therapy, and the most commonly used alternatives were occupational therapy (93%) and medication (93%).

Intention to discontinue antipsychotics

The scores on intention are shown in Table 3. The vast majority of the respondents (65%) reported that they want and are inclined to reconsider the prescription of antipsychotics.

Beliefs about discontinuation: descriptive scores on TPB variables

The responses to the single items underlying these determinants were closely investigated to get a deeper understanding of the determinants for intention and behaviour (Table 2).

The direct attitude measures indicated that the use of antipsychotics in dementia patients was mostly regarded as undesirable (66%). On the beliefs about treatment effects scale, physicians agreed most frequently on items related to the calming effects of antipsychotics on patients (49%) and lowering the risk of harm to the staff members (46%). For the beliefs about effects on staff scale, the majority of physicians agreed that antipsychotics helped reduce staff distress (66%), workload (51%), and psychological burden (51%).

The underlying normative belief items indicated that most physicians (61%) felt that nursing assistants viewed the effects of antipsychotics positively. Almost half of the participants agreed that nurses and family members (49% and 44%, respectively) viewed the effects of antipsychotics positively. The measures of the social pressures scale indicated that, according to the participants, the vast majority of reference persons disagreed with the discontinuation of antipsychotics.

The most important underlying items of the perceived behavioural control scale were confidence, control, and capability. The majority of physicians felt confident (96%), in control (81%), and capable (71%) to discontinue antipsychotics. However, less than half of the participants (44%) agreed that discontinuation was easy to execute.

Association of the TPB variables with intention and behaviour to discontinue antipsychotics

Of the TPB variables, only behavioural control was significantly associated with the intention to discontinue antipsychotics (Table 4). Physicians who indicated having a higher intention to discontinue antipsychotics had a higher mean score on perceived behavioural control (4.1 ± 0.7) than those who indicated having a low intention (3.4 ± 0.7).

DISCUSSION

This exploratory study based on the TPB aimed to give an overview of the different influencing factors perceived by elderly care physicians in discontinuing antipsychotic treatment. The majority of elderly care physicians in our study did not agree with that antipsychotics had several negative consequences for patients. For instance, they did not agree that antipsychotics have negative consequences on (motor) functioning, suppressed emotions, or sedation (i.e. increased sedation), although the literature often described these consequences.[28,29]

In our study, the physicians were aware of some potential side-effects, but they did not agree on all of them. A possible explanation for this lack of awareness of the full range of side-effects is that the patients in this frail population are in a severe state of dementia and already have a high risk of falling, requiring wheelchair, or becoming immobile; therefore, these events are not necessarily attributed to the use of antipsychotics. Cornegé-Blokland *et al.* also suggested that another explanation for this is that physicians tend to value their own subjective experience more than evidence from the literature.[30] Additionally, the majority of the physicians of the current study believed that antipsychotics are associated with positive consequences for the staff, such as reduced staff distress, workload, and

psychological stress. It is known that staff distress is correlated with psychotropic drug use,[16] which could be mirrored in the view of the respondents.

This study showed that physicians who indicated having a higher intention to discontinue antipsychotics had a higher perceived behavioural control than those who indicated having a lower intention. This could be an important starting point for the development of interventions concerning the discontinuation of antipsychotics. These interventions could focus on enhancing physicians' belief that they are able to discontinue these drugs. In particular, the (un)ease of discontinuing antipsychotics could be addressed, especially given that physicians mentioned that they feel confident and capable of discontinuing antipsychotics. More research should be performed on how to facilitate the discontinuation of antipsychotics.

The elderly care physicians in our study felt little pressure from the patients, their family, or the staff to discontinue antipsychotics, but earlier studies found opposing results.[24,31] Feeling pressured to continue patients on an antipsychotic drug prescription could lead to a low intention for discontinuing antipsychotics because discontinuation could lead to problems within the health-care team. This would mean, however, that physicians value the opinions of those around the patient (e.g. care staff, other patients) over those of the individual patient. Additionally, the lack of pressure felt by elderly care physicians may be due to the available alternatives, as a lack of alternatives was mentioned as a reason for feeling pressure.[32] In this study, all the elderly care physicians indicated that several alternatives are available and are also in use. Whether these alternatives are tried before the use of antipsychotics is commenced is unclear. These alternatives could also be used simultaneously with antipsychotics to address severe challenging behaviour, especially as more complex cases need a multi-level strategy.[33]

Although we did not detect a correlation between all the variables of the theoretical framework, we believe that the framework was of additional value because it has been validated in numerous studies.[34] For this study, it offered a good structure and assessed the influence of new determinants such as beliefs about capabilities and social influences. These determinants were not previously investigated by Azermai *et al*.[14] Additionally, the framework helped to order relevant factors for discontinuation. In hindsight, our measures of intention as absolute values may not have measured these variables well. Social desirability and the controversy of this topic might have influenced the results.

The results of this study have some limitations. We conducted the research in a limited selection of elderly care physicians. The final sample size is not fully representative of the population of elderly care physicians in the Netherlands. However, staff characteristics such as gender, age, and professional experience are comparable to previous research in Dutch nursing homes.[35] Yet, we cannot rule out any selection bias. Previous research in Australia and New Zealand indicated that female geriatricians often rank adherence to evidence-based guidelines as important for deprescribing medications.[36] Indeed, in this study, the majority of the elderly care physicians stated that on average they discontinue antipsychotics within 14 weeks (12 weeks is recommended in the guidelines). The large range of answers (range: 2–30 weeks), however, indicated chronic use of antipsychotics, which was also shown by Azermai *et al.* (average duration: 27 (5–828) weeks).[14] From this, there seems to be a need to acknowledge the barriers to antipsychotic discontinuation and to start discontinuation of antipsychotics in practice. Additionally, physicians' characteristics, such as experience, may influence their decision making. We therefore divided the sample into groups based on age (≤45 vs >45 years old) and looked for group differences using a *t*-test for independent groups ($P < 0.05$). However, we did not find any differences between the two groups regarding their scores on the TPB variables or intention.

The current study looked at only physician's intention, which is the most important variable to predict behaviour. We did not look at behaviour because we were only able to take reported behaviour into account. Future research should also look at behaviour, preferably actual behaviour, by checking prescription rates instead of stated past behaviour. Finally, we did not take different types of dementia into account. Physicians might prescribe differently and use different psychotropic drugs for different types of dementias. However, prescribing and discontinuing the use of psychotropic drugs may be mainly based on the neuropsychiatric symptoms of the patient.

Despite the limitations of this exploratory study, it provides a complete overview of possible factors that

might influence prescription behaviour according to the TPB. As such, this study may provide concrete suggestions for further research. Most importantly, the relatively positive attitude of physicians regarding the expected effects of antipsychotic treatment for caregivers and the expectation that known side-effects will not occur require confirmation and deeper insight.

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