Research in Social and Administrative Pharmacy 19 (2023) 1278–1285

Contents lists available at ScienceDirect

Research in Social and Administrative Pharmacy

journal homepage: www.elsevier.com/locate/rsap

Adaptation and validation of the revised Patients' Attitudes towards Deprescribing (rPATD) questionnaire for benzodiazepine receptor agonists

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ARTICLE INFO

Keywords:
Deprescribing
Benzodiazepine receptor agonists
Older adults
rPATD questionnaire
Psychometric properties
Questionnaire adaptation

ABSTRACT

Background: The revised Patients' Attitudes Towards Deprescribing (rPATD) questionnaire explores older adults' views on deprescribing in general. Those views may differ, however, when the target is a specific drug such as benzodiazepine receptor agonists (BZRA).
Objective: This study aimed to adapt the 22-item French rPATD questionnaire to create a BZRA-specific instrument and to assess the psychometric properties of this new tool.
Methods: The adaptation of the questionnaire comprised 3 steps: 1) item transformation during group discussions with 8 healthcare providers and 8 BZRA users (aged ≥65 years), 2) pre-test of the questionnaire with 12 other older adults to ensure items understanding, 3) evaluation of the psychometric properties of the new questionnaire with 221 older BZRA users recruited in Belgium, France, and Switzerland. Construct validity was assessed using exploratory factor analysis (EFA), internal consistency with Cronbach's alpha, and test-retest reliability with intraclass correlation coefficient (ICC).
Results: After the pre-test, the questionnaire had 24 items (19 adapted from the French rPATD, 3 removed, and 5 added). The EFA, however, found that several items performed poorly. Eleven items were consequently removed, based on statistical performance and clinical relevance. Three factors were extracted from the EFA performed on the 11 retained items and were named "Concerns about stopping BZRA", "BZRA inappropriateness", and "Dependence on BZRA". The questionnaire also includes two global questions about willingness to reduce BZRA dosage and willingness to discontinue BZRA. All factors showed acceptable internal consistency (0.68 ≤ Cronbach's alpha ≤0.74). Two factors showed acceptable test-retest reliability. The "Concerns about stopping BZRA" factor was found to vary over time (ICC [95%CI]: 0.35[-0.02; 0.64]).
Conclusions: We developed and validated a 13-item questionnaire to evaluate the attitudes of older people towards BZRA deprescribing. Despite some limitations, this questionnaire appears to be a useful tool for facilitating shared decision-making on BZRA deprescribing.

1. Introduction

Deprescribing is defined by Farrell et al. as "the planned and supervised process of dose reduction or stopping medication(s) that may be causing harm or are no longer providing benefits".[1] It aims to reduce polypharmacy and drug-related adverse effects, enhance medication

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https://doi.org/10.1016/j.sapharm.2023.05.010
Received 4 November 2022; Received in revised form 17 March 2023; Accepted 13 May 2023
Available online 8 June 2023

safety, and align treatment with patients' preferences regarding care goals.[1–3] Benzodiazepine receptor agonists (BZRA), which are prescribed to treat insomnia and anxiety, are among the medications with the highest priority for deprescribing.[4] In older adults, these medications have a poor risk-benefit balance and have been associated with a higher risk of falls and hip fractures and, if used long-term, with a risk of dependence, tolerance, and a decrease in cognitive functions.[5–8] Guidelines therefore recommend avoiding or stopping BZRA use after 4 weeks in older people.[9,10] Despite those recommendations, older adults frequently take BZRA, often for a long time.[11] Although a trend towards decreased use has been observed in Europe and Canada, prevalence remains quite high, with around 15–20% of older adults in the general population taking a BZRA.[12–15] This suggests that various barriers to BZRA deprescribing exist.

A key component of deprescribing is shared decision-making involving both physicians and their patients.[16] To explore patients' perspectives on deprescribing, Reeve et al. developed the revised Patient Attitudes Towards Deprescribing questionnaire (rPATD) in 2016.[17] A French-language cross-cultural version was validated in 2020 (French rPATD).[18] Although the questionnaires provide useful information about patients' attitudes toward deprescribing in general, they do not make it possible to assess attitudes towards the deprescribing of a specific medication class. Previous literature has suggested, however, that a patient's willingness to stop a specific medication could be influenced by the nature of the treatment.[19,20] To our knowledge, no validated tool exists that specifically assesses older adults' attitudes towards BZRA deprescribing. The aim of this study was, therefore, 1) to adapt the French rPATD questionnaire to create a version that would be specific to BZRA and 2) to validate this questionnaire in older people aged ≥65 who had been taking at least one BZRA for at least four weeks in primary care (PC) and nursing home (NH) settings in Belgium, France, and Switzerland.

2. Methods

The adaptation of the rPATD to BZRA comprised 3 steps, which are summarized in Fig. 1: 1) item transformation, 2) a pre-test of the questionnaire, and 3) validation of the questionnaire. Older adults corresponding to the inclusion and exclusion criteria stipulated below and healthcare professionals (HCP) were involved. The two first steps were conducted in Belgium only.

Patient met the inclusion criteria if they were aged 65 or over and having been taking at least one BZRA (ATC codes N05BA, N05CD, N05CF, or N03AE01) for at least 4 weeks. Clomethiazole (N05CM02) was added for Switzerland only, as it has a pharmacological profile similar to BZRA and is used there for the same indications.[21]

Exclusion criteria comprised suffering from psychiatric troubles or alcoholism (present or past), being unable to complete the questionnaire due to functional or cognitive decline, being unable to give consent, and not understanding or speaking French.

1. Item transformation of the French rPATD questionnaire

The item-transformation phase included a first round with a panel of HCPs and a second round with a panel of older adults. This phase enabled the evaluation of face and content validity. As in the original rPATD study, we used the Lawshe technique and calculated a content-validity ratio (CVR) for each item, using the written feedback described below.[22]

a. Round with healthcare professionals

After the French rPATD questionnaire had been transformed by replacing the word "medicine" with "benzodiazepines", 8 healthcare experts (2 geriatricians, 2 pharmacists, 2 general practitioners (GP), and 2 nurses) were each asked to provide written feedback on the transformed items. For each transformed item, they were asked to rate: 1) its relevance in assessing attitudes towards BZRA deprescribing and 2) its necessity in such a questionnaire. HCPs were also encouraged to add ideas or comments in designated blank spaces. The results were discussed collectively during 3 group sessions (each HCP attended only one) in order to reach agreement on which items to keep, delete, add, or transform. The results were then discussed with the research team, which led to the first draft of the questionnaire.

b. Round with older adults

Eight participants were recruited through a university for seniors and

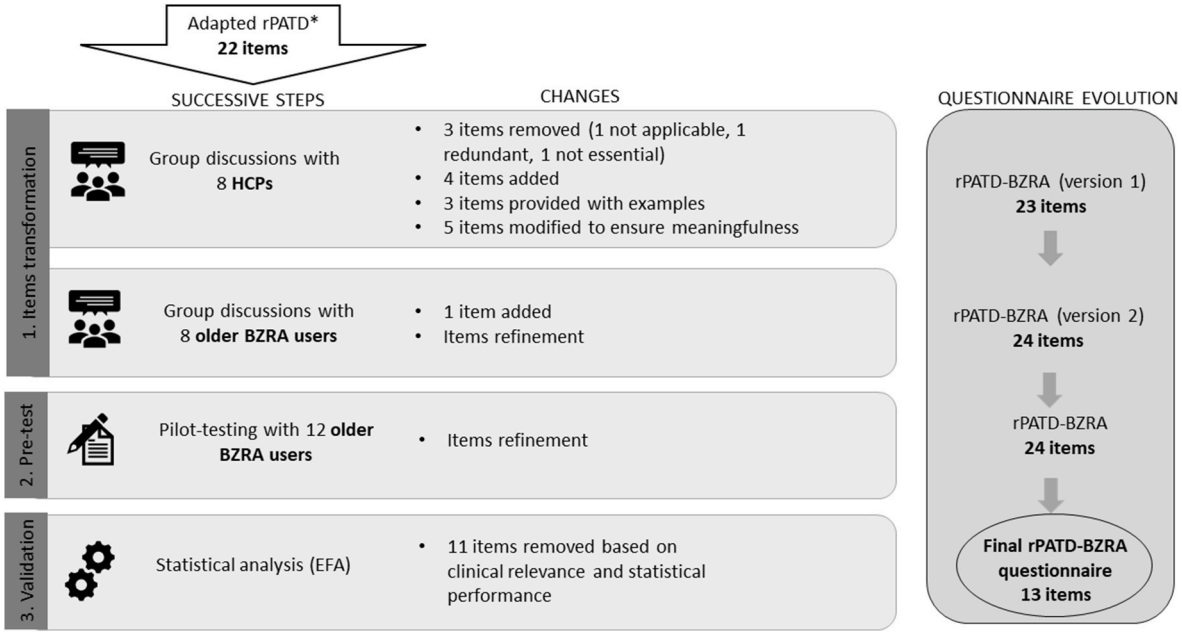

Fig. 1. Summary of the adaptation process. Legend: *: rPATD questionnaire with the word "benzodiazepine" replacing the word "medicine"; HCP: Healthcare professionals; rPATD: revised Patients' Attitudes towards Deprescribing questionnaire; BZRA: benzodiazepine receptor agonists, EFA: Exploratory factor analysis.

a geriatric rehabilitation hospital. They were each asked to provide written feedback on the first draft of the questionnaire and they discussed the results collectively during 2 group sessions (each older adult attending only one). This resulted in a second version of the questionnaire.

2. Pre-test of the questionnaire

To assess both the clarity of the items after transformation and the overall acceptability of the questionnaire, a convenience sample of 12 older adults was recruited. The participants were asked to complete the questionnaire, and the time taken to complete it was recorded. The participants were encouraged to "think aloud" and offer suggestions relating to the wording of the items or difficulties in understanding them. The results were then discussed with the research team, and further changes were made to some items.

3. Validation of the rPATD-BZRA questionnaire
   a. Sample size estimation and recruitment

Construct validity, test-retest reliability, and internal consistency required a larger sample of older adults. The recruitment of at least 200 participants was planned, the minimum sample size required to perform an exploratory factor analysis (EFA).[23] A 20% non-response rate was anticipated, based on the rPATD and French rPATD studies,[17,18] so the sample size was increased to 240 participants. To ensure proper representation of NH residents, among whom BZRA use is particularly high,[24] the sample was split into 160 participants from the PC setting and 80 from the NH setting. Participants were recruited in Belgium, France, and Switzerland, depending on the recruitment opportunities of the research teams involved. Participants in the PC setting were recruited through community pharmacies and general practitioners. They provided eligible patients with an envelope containing the information form, the consent form, and the questionnaire, as well as a stamped envelope in which to return the questionnaire and the signed consent form. For NH residents, a convenience sample of NHs was contacted regarding participation. A researcher or an NH staff member informed eligible residents, asked them to sign the consent form, and helped them to complete the questionnaire if required. Recruitment started in July 2020 and ended in November 2021. To improve the recruitment rate, in view of difficulties caused by the COVID-19 epidemic, an online questionnaire was also made available in January 2021 and distributed through older adults' associations and personal and professional networks in Belgium and Switzerland.

From the main sample, we selected 20 older adults for test-retest analysis. For practical reasons, only Belgian participants were selected. To ensure that the selection of participants was random, we selected one in every 5 participants in each setting until we had 6 NH residents and 14 PC patients. Those participants were contacted by phone (or, in the case of some NH residents, visited again) and asked to complete the questionnaire a second time, one to two weeks after the completion of the first questionnaire.

Paper questionnaires were encoded using REDCap as an electronic case report form.[25] Online questionnaires were hosted and distributed via Qualtrics software, Version 01/2021 (Qualtrics, Copyright © 2021. Provo, UT, USA. Available at https://www.qualtrics.com; accessed on January 2021). Databases from both platforms were merged before analysis.

   b. Data collection

The first part of the questionnaire collected socio-demographic data and medication-related information. In the second part of the questionnaire, the adapted items were rated on a Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree". At the end of the questionnaire, patients were asked if they had needed help answering it.

   c. Descriptive analysis of participants

A descriptive analysis of participants was performed. Categorical variables were expressed as numbers and percentages and continuous variables as mean ± standard deviation or median [P_{25} – P_{75}] depending on the normality assessment.

   d. Evaluation of the psychometric properties of the questionnaire

An exploratory factor analysis (EFA) was performed to assess construct validity. As with the rPATD and French rPATD questionnaires, global questions were excluded from the analysis.[17,18] The appropriateness of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin test and Bartlett's test of sphericity.[26] Factors were extracted using the principal axis factoring method and an oblique rotation (Promax) to consider correlations between factors. The number of factors was determined using the Kaiser-Guttman criterion (eigenvalue >1), the scree test, and parallel analysis. Loadings over 0.3 were considered significant. Items loading lower than 0.3 were removed from the analysis.

The internal consistency of each factor was estimated using Cronbach's alpha. A value over 0.7 was taken to indicate good internal consistency.[27] Corrected item-total correlations were calculated at the item level, a value > 0.30 being considered satisfactory.[28]

Test-retest reliability was assessed using linear-weighted Cohen's Kappa and percent agreement at the item level, and the intraclass correlation coefficient (ICC) at the factor level. Following Landis and Koch's guidance for Cohen's Kappa interpretation, we considered values ≤ 0 to be poor agreement, 1–20 to be slight agreement, 21–40 to be fair agreement, 41–60 to be moderate agreement, 61–80 to be substantial agreement, and ≥81 to be almost perfect agreement.[29] ICC values > 0.50 were considered acceptable.[30]

The analyses were performed using R software version 4.0.5 and the following packages: *irr*, *psych,* and *GPArotation*.[31–34] This study was approved by the Ethics Committees of CHU UCL Namur (Belgium) (NUB: B039201940824) and Limoges CHU (CE:335-2019-101).. No authorization from an ethics committee was required for Switzerland, where all data were gathered anonymously.

3. Results

The consecutive changes to the French rPATD at each step are summarized in Fig. 1.

1. Item transformation of the French rPATD to BZRA
   a. Healthcare professional panel

Every participating HCP provided individual written feedback. All but one attended a group session. The HCP that could not participate was interviewed by phone.

Three items were removed from the original questionnaire: "Taking my benzodiazepine every day is very inconvenient" was considered not applicable to benzodiazepines. "I feel that I am taking a large number of benzodiazepines" was judged redundant and replaced with "Sometimes I think that I take too many benzodiazepines". Finally, "I like to know as much as possible about my benzodiazepine" was judged not essential to the questionnaire.

Four items were added: "I am aware of the potential side effects of my benzodiazepine", "I know non-pharmaceutical methods of improving my symptoms", "I feel dependent on my benzodiazepine", and "If the doctor told me it was possible, I would be willing to reduce the dose of my benzodiazepine". The latter item was added to complete the global questions and allow the evaluation of "intermediary" willingness to accept BZRA deprescribing. For three items, examples were provided to make the questions easier to understand, for example: "I feel that my benzodiazepine is a burden to me (e.g., I need to plan to have it

at home/on me, I need to plan my prescriptions, I am afraid of not having it if I am hospitalized, etc.)". Five items were modified to make the wording relevant to the context of BZRA use. For example, "If my benzodiazepine was stopped, I would be worried about missing out on future benefits" was changed to "If my benzodiazepine was stopped, I would be worried about my health or well-being". Finally, the HCPs hesitated about the removal of three items: "I spend a lot of money on my benzodiazepine", "I am taking one or more benzodiazepines that I may no longer need", and "If I have questions about my benzodiazepine, I ask a healthcare professional". They agreed to keep them in the first draft of the questionnaire, letting the older adults decide whether to keep them or not.

b. Older adults' panel

Eight older adults aged 67 to 95 participated in the panel. Six older adults said they needed help with providing individual written feedback. A phone or face-to-face interview was then organized, resulting in a "think aloud" discussion, which provided the research team with valuable input. Of those 8 older adults, 5 participated in the group sessions. During this step, no items were removed. Several items were further revised for clarification. Participants stressed that they felt they had "no choice but to take benzodiazepines to feel or sleep well". Item 5 was added to include this new dimension.

2. Pre-test of the questionnaire

Twelve older adults aged between 65 and 92 years tested the questionnaire. The median time taken to complete the questionnaire was 20 min (interquartile range (IQR): 15–29). The wording of some items was further modified to improve clarity. For example, the wording of the item "If I have questions about my benzodiazepine, I ask a healthcare professional" was given a low score by older adults who used other reliable information sources, leading to a misleadingly low involvement score. The item was modified as follows: "If I have questions about my benzodiazepine, I ask a healthcare professional or I consult other reliable sources of information".

3. Psychometric evaluation of the rPATD-BZRA

a. Study participants

A total of 221 older adults were recruited in 3 countries: Belgium (n = 153), France (n = 48), and Switzerland (n = 20), of whom 208 completed a paper questionnaire and 13 the online version. The recruitment was stopped when the 200th complete questionnaire was received, as that was the minimal sample size required to perform statistical analysis.

Table 1 presents the main characteristics of the participants. One hundred and fifty-seven participants were recruited in the PC setting (71.0%) and 64 (29.0%) in the NH setting. The median age of the participants was 78.5 years; 71.9% were women. Fifty-five percent had completed at least higher secondary education. A sizeable majority (80.5%) of the participants used only one BZRA daily. For 84.2% of the participants, the initial prescriber of the BZRA was a general practitioner; for 43.9%, the BZRA was prescribed at the patient's request.

Overall, 42.5% of the participants reported that they needed assistance with completing the questionnaire. There were, however, considerable differences between settings: 85.9% of NH residents needed help, compared to only 24.8% of PC participants.

b. Construct validity

An EFA was carried out on the data of the participants who answered all the items (n = 200). Overall, no item was systematically not answered and there were few missing data. Many items showed a floor or ceiling effect >30% (see Supplementary Table 1). The data showed

Table 1
Description of the participants and their BZRA use (N = 221).

	Total	Primary care setting	Nursing home setting
	(N = 221)	(N = 157)	(N = 64)
Variable	n (%) or median [P25; P75]	n (%) or median [P25; P75]	n (%) or median [P25; P75]
Age, in years [a]	78.5 [72.0; 87.0]	76.0 [71.0; 82.0]	89.0 [84.0; 93.0]
65–74 years	76 (34.4)	67 (42.7)	9 (14.1)
75–84 years	68 (30.8)	59 (37.6)	9 (14.1)
≥85 years	76 (34.4)	30 (19.1)	46 (71.9)
Female [a]	159 (71.9)	113 (72.0)	46 (73.0)
Country			
Belgium	153 (69.2)	117 (74.5)	36 (56.2)
France	48 (21.7)	22 (14.0)	26 (40.6)
Switzerland	20 (9.0)	18 (11.5)	2 (3.1)
Education			
Primary or no education	38 (17.2)	16 (10.2)	22 (34.4)
Lower secondary	60 (27.1)	37 (23.6)	23 (35.9)
Higher secondary	69 (31.2)	57 (36.3)	12 (18.8)
Higher	54 (24.4)	47 (29.9)	7 (10.9)
Number of medications taken daily	5.5 [4.0; 8.0]	5.0 [3.0; 7.3]	7.0 [5.0; 9.3]
1–4	65 (29.4)	55 (35.0)	10 (15.6)
5–9 (polypharmacy)	90 (40.7)	64 (40.8)	26 (40.6)
≥10 (severe polypharmacy)	29 (13.1)	17 (10.8)	12 (18.8)
Missing values	37 (16.7)	21 (13.4)	16 (25.0)
Number of BRZA taken [b]			
1	178 (80.5)	132 (84.1)	46 (71.9)
≥2	32 (14.5)	23 (14.6)	9 (14.1)
Does not know	9 (4.1)	2 (1.3)	7 (10.9)
Type of BZRA use [b]			
Benzodiazepines	129 (58.4)	89 (56.7)	40 (62.5)
Z-drugs	64 (29.0)	54 (34.4)	10 (15.6)
Both benzodiazepines and z-drugs	17 (7.7)	12 (7.6)	5 (7.8)
Clomethiazole	0 (0.0)	0 (0.0)	0 (0.0)
Does not know	9 (4.1)	2 (1.3)	7 (15.6)
Top 3 of most used molecules (n = 247)			
Zolpidem	61 (24.7)	56 (35.7)	5 (7.8)
Alprazolam	43 (17.4)	31 (19.7)	12 (18.8)
Lormetazepam	37 (15.0)	21 (13.4)	16 (25.0)
Duration of BZRA use [b]			
Between 3 months and 1 year	9 (4.1)	8 (5.1)	1 (1.6)
More than 1 year	192 (86.9)	138 (87.9)	54 (84.4)
Does not remember	18 (8.1)	11 (7.0)	7 (10.9)
Frequency of BZRA intake during the last 7 days [d]			
Not at all	2 (0.9)	2 (1.3)	0 (0.0)
Less than daily	12 (5.4)	9 (5.7)	3 (4.7)
Once a day	150 (67.9)	112 (71.3)	38 (59.4)
Several times a day	53 (24.0)	33 (21.0)	20 (31.2)
Missing values	4 (1.8)	1 (0.6)	3 (4.7)
Reason(s) for BZRA use [c]			
Insomnia/sleep problems	128 (57.9)	91 (58.0)	37 (57.8)
Anxiety/stress	34 (15.4)	23 (14.6)	11 (17.2)
Both insomnia and anxiety	46 (20.8)	35 (22.3)	11 (17.2)
Other	2 (0.9)	2 (1.3)	0 (0.0)
Insomnia & other	5 (2.3)	4 (2.5)	1 (1.6)
Does not know	3 (1.4)	1 (0.6)	2 (3.1)
Initial prescriber of BZRA [c]			
GP	186 (84.2)	130 (82.8)	56 (87.5)
Specialist	18 (8.1)	15 (9.6)	3 (4.7)
Both GP and specialist	7 (3.2)	5 (3.2)	2 (3.1)
Other	3 (1.4)	3 (1.9)	0 (0.0)
Does not remember	4 (1.8)	3 (1.9)	1 (1.6)
BZRA initially prescribed on personal request [d]			
Yes	97 (43.9)	73 (46.5)	24 (37.5)
No	101 (45.7)	70 (44.6)	31 (48.4)
Does not remember	19 (8.6)	12 (7.6)	7 (10.9)

(continued on next page)

Table 1 (*continued*)

Variable	Total (N = 221) n (%) or median [P25; P75]	Primary care setting (N = 157) n (%) or median [P25; P75]	Nursing home setting (N = 64) n (%) or median [P25; P75]
BZRA initially prescribed during a hospitalization [e]			
Yes	21 (9.5)	14 (8.9)	7 (10.9)
No	184 (83.3)	137 (87.3)	47 (73.4)
Does not remember	11 (5.0)	5 (3.2)	6 (9.4)

BZRA: Benzodiazepine receptor agonists; GP: General practitioner.
[a] 1 missing value (0.5%).
[b] 2 missing values (0.9%).
[c] 3 missing values (1.4%).
[d] 4 missing values (1.8%).
[e] 5 missing values (2.3%).

average adequacy for factor analysis (Kaiser-Meyer-Olkin test: 0.75; Bartlett's test of sphericity $p < 0.001$). The scree test, Kaiser-Guttman criteria, and parallel analysis indicated an inconsistent number of factors to extract, from 2 to 7. Of all the potential solutions, none was statistically acceptable (low loadings or cross-loadings for several items, low percentage of explained variance, and/or low internal consistency of identified factors). The statistical performance and clinical relevance of each item were discussed by the research team members. Eleven items were removed on the basis of those two criteria (Supplementary Table 2). A new EFA was carried out on the data of the participants who answered all the retained items (n = 209). The data showed improved adequacy for factor analysis compared to the initial analysis (Kaiser-Meyer-Olkin test: 0.79; Bartlett's test of sphericity $p < 0.001$). The scree test, Kaiser-Guttman criteria, and parallel analysis indicated 2 to 3 factors to extract. Three factors were extracted. Loadings were significant for all items and, this time, no cross-loadings were observed. The final model includes 11 items and 2 global questions (see Table 2) and explains 47% of the variance. The factors were named "Concerns about stopping BZRA", "BZRA inappropriateness", and "Dependence on BZRA". The 2 global questions assess willingness to reduce the BZRA dose (item 23) and willingness to stop the BZRA (item 24). The final questionnaire in French and the English translation are available in Table 3.

c. Internal consistency

Two factors, "Concerns about stopping BZRA" and "BZRA inappropriateness" showed Cronbach's alpha values of 0.74, whereas the Cronbach's alpha for the "Dependence on BZRA" factor was slightly below the threshold of 0.70 (0.68, 95% confidence interval (CI):, (0.61; 0.76)). Item-total correlations were all above 0.30, which shows that there was a satisfactory correlation between each item and its factor.

d. Test-retest reliability

Of the 20 participants who completed the questionnaire both times, 16 were women (80%). The median age was 76 (IQR: 70.8–85). Half of the respondents had completed at least higher secondary education.

Table 2 presents the results for test-retest reliability. The results from the linear-weighted Cohen's kappa showed that 6 items had fair concordance and 5 items had moderate concordance. Two items were found to have only slight concordance. At the factor level, the "BZRA inappropriateness" and "Dependence on BZRA" factors were found to have acceptable test-retest reliability, whereas the "Concerns about stopping BZRA" factor had an ICC of less than 0.50, demonstrating the variability of the participant's responses over time.

4. Discussion

We adapted the French rPATD to the context of BZRA. Our final

Table 2
Psychometric assessment of the included items.

	Exploratory factor analysis (N = 209)	Internal consistency (N = 209)	Test-retest reliability (N = 20)	
	Factor loading	**Cronbach's alpha (95%CI)** Item-total correlation	**ICC (95%CI)** Linear-weighted Cohen's kappa	Percent agreement, tolerance = 1 (%)
Concerns about stopping BZRA		**0.74 (0.69; 0.80)**	**0.35 (-0.02; 0.64)**	
Item 11 (reluctant)	0.34	0.44	0.20	60
Item 12 (worry)	0.70	0.65	0.35	75
Item 13 (stress)	0.66	0.49	0.27	65
Item 14 (abandonment)	0.65	0.60	0.23	60
BZRA inappropriateness		**0.74 (0.68; 0.79)**	**0.71 (0.47; 0.86)**	
Item 9 (help reduction)	0.76	0.69	0.27	85
Item 10 (try stopping)	0.75	0.67	0.48	70
Item 7 (experience side effects)	0.44	0.48	0.49	95
Item 22 (satisfaction (R))	0.59	0.32	0.54	95
Dependence on BZRA		**0.68 (0.61; 0.76)**	**0.59 (0.28; 0.79)**	
Item 15 (bad experience)	0.40	0.42	0.33	75
Item 3 (dependent)	0.57	0.48	0.56	90
Item 5 (no choice)	0.88	0.59	0.17	65
Global questions				
Item 23 (willing to reduce BZRA)	NA	NA	0.35	70
Item 24 (willing to stop BZRA)	NA	NA	0.50	80

CI: confidence interval; ICC: intraclass correlation coefficient; BZRA: Benzodiazepine receptor agonists; R: reversed item (the scoring of this item was reversed so that greater satisfaction with the benzodiazepine currently being taken meant less perceived BZRA inappropriateness).

Table 3
Final questionnaire in French (+ English translation).

Préoccupations par rapport à l'arrêt des BZRA
Je serais hésitant(e) à l'idée d'arrêter ma benzodiazépine. (item 11)
Si ma benzodiazépine était arrêtée, je serais inquiet(e) pour ma santé ou mon bien-être. (item 12)
Si ma benzodiazépine était changée (exemple, changement de dose, de molécule, de marque), je serais inquiet(e) et/stressé(e). (item 13)
Si mon médecin me recommandait d'arrêter ma benzodiazépine, j'aurais le sentiment qu'il ne tient pas ou plus compte de mes symptômes. (item 14)
Caractère inapproprié des BZRA
J'aimerais que mon médecin m'aide à réduire la dose de ma benzodiazépine. (item 9)
Avec l'aide de mon médecin, l'aimerais essayer d'arrêter ma benzodiazépine pour voir comment je me sentirais sans celle-ci. (item 10)
Je crois que ma benzodiazépine me donne des effets secondaires. (item 7)
Globalement, je suis satisfait(e) de ma benzodiazépine actuelle. (R) (item 22)
Dépendance aux BZRA
Je sens que je suis dépendant(e) de ma benzodiazépine. (item 3[a])
J'ai le sentiment de ne pas avoir d'autre choix que de prendre ma benzodiazépine pour me sentir bien ou bien dormir. (item 5[a])
J'ai déjà eu une mauvaise expérience quand on a essayé d'arrêter ma benzodiazépine. (item 15)
Questions globales
Si mon médecin me le recommandait, je serais prêt(e) à diminuer la dose de ma benzodiazépine. (item 23[a])
Si mon médecin me le recommandait, je serais prêt(e) à arrêter ma benzodiazépine. (item 24)
English translation[b]
Concerns about stopping BZRA
I would be reluctant to stop taking my benzodiazepine. (item 11)
If my benzodiazepine was stopped, I would be worried about my health or well-being. (item 12)
If my benzodiazepine was changed [e.g.: change of dose, composition, brand name] I would get stressed. (item 13)
If my doctor recommended stopping my benzodiazepine, I would feel that he was not (or was no longer) taking my symptoms into account. (item 14)
BZRA inappropriateness
I would like my doctor to help me reduce my benzodiazepine dose. (item 9)
With my doctor's help, I would like to try stopping my benzodiazepine to see how I would feel without it. (item 10)
I believe that my benzodiazepine is giving me side effects. (item 7)
Overall, I am satisfied with my current benzodiazepine. (R) (item 22)
Dependence on BZRA
I feel dependent on my benzodiazepine. (item 3[a])
I feel like I have no choice but to take my benzodiazepine to feel okay or sleep well. (item 5[a])
I had a bad experience when my benzodiazepine was stopped before. (item 15)
Global questions
If my doctor recommended it, I would be willing to reduce the dose of my benzodiazepine. (item 23[a])
If my doctor recommended it, I would be willing to stop taking my benzodiazepine. (item 24)

R: reversed item (the scoring of this item was reversed so that greater satisfaction with the benzodiazepine currently being taken meant less perceived BZRA inappropriateness).

[a] New item compared to items adapted from French rPATD.

[b] Only the French questionnaire was validated.

questionnaire contains 13 items, of which 11 are distributed between 3 factors and 2 are global questions. Two of the factors derive from the rPATD ("Concerns about stopping BZRA" and "BZRA inappropriateness") and one is new ("Dependence on BZRA").

To our knowledge, few studies have adapted rPATD items to a specific medication class. Eldeman et al. partially adapted the rPATD, changing the word "medicine" to "alpha-blockers" in the "appropriateness" and "concerns about stopping" factors,[35] and Crutzen et al. did the same for cardiometabolic medications.[36] However, no validation of the changed questions was undertaken. This was the first study to fully adapt the rPATD questionnaire to a specific medication class and assess the psychometric properties of the adapted questionnaire.

Making the rPATD questionnaire specific to a medication class strongly impacted its structure. Two rPATD factors ("Burden" and "Involvement") were removed, mainly due to the poor statistical performance of the adapted items. This suggests that factors that are important to measure when considering deprescribing in general may no longer be relevant when considering a specific medication. The "Burden" factor might be less relevant to BZRA deprescribing for 2 reasons: 1) it concerns a medication that is taken once a day by most patients and 2) BZRA are perceived as relieving uncomfortable symptoms, which could make their use feel less burdensome. Different results might have been found if we had focused on a drug that was being taken several times a day, one requiring close monitoring, and/or one that was not perceived as providing symptom relief. In our study, items adapted from the "Involvement" factor showed a significant ceiling effect, as did many other items that were also found to have a floor or a ceiling effect. In the French rPATD, Roux et al. also found that factors had either a ceiling or a floor effect,[18] showing that some polarization already existed when exploring attitudes toward deprescribing in general. Specifying a medication class may have strengthened this polarization and limited the variance of these items and, therefore, their statistical power and relevance in the questionnaire. This may have been particularly true for BZRA, to which patients are strongly attached.[37]

Global questions in rPATD-BZRA assess not only willingness to stop the medication but also willingness to reduce the dose of the medication. Both dimensions of deprescribing, as defined by Farrell et al., are therefore considered.[4] Assessing willingness to reduce the dose is particularly important for BZRA; a dose reduction represents a reduction in the risk of adverse effects. Furthermore, this is also an important item for use in questionnaires in future research aimed at encouraging BZRA dose reduction and BZRA cessation, as explored in previous studies.[24,38]

The rPATD-BZRA questionnaire has some statistical limitations. First, poor test-retest reliability was found for the "Concerns about stopping BZRA" factor. Literature has shown, however, that health behaviour, self-efficacy, and risk assessment are mood sensitive.[39] Levels of concern could therefore vary depending on the patient's mood, or how well they slept the night before. Furthermore, participants responding a second time to the questionnaire were interviewed by phone (for those living in the PC setting), whereas the first completion of the questionnaire occurred alone, at home. Social desirability induced by the phone interview may have influenced how and whether concerns were expressed and altered test-retest reliability. Secondly, the "Dependence on BZRA" factor showed below-standard internal consistency (Cronbach's alpha <0.70). For both the original and French rPATD, however, lower values of Cronbach's alpha were tolerated for one factor.[17,18] Moreover, this low value could be explained by the small number of items evaluating dependence on BZRA: only 3 items are grouped in this factor and Cronbach's alpha is known to increase with the number of items.[27] Finally, 47% of the variance was explained by the items, suggesting that other dimensions might be missing. Beliefs about capabilities were highlighted as a major domain in a recent systematic review on barriers and enablers of BZRA deprescribing using the Theoretical Domains Framework.[37] In addition, as theorized in the COM-B model, it is capability that (along with opportunity and motivation) induces behaviour.[40] Capability is defined as "the individual's psychological and physical capacity to engage in the activity concerned" (p. 4).[40] So, as none of the items in the rPATD-BZRA assess self-perceived capability for BZRA deprescribing, we hypothesize that this could be one of the missing dimensions.

Although it is not statistically perfect, the rPATD-BZRA

questionnaire is still a useful tool for BZRA deprescribing in clinical practice. Fear of patients' resistance is a major barrier to physicians discussing BZRA deprescribing with older patients; this leads to clinical inertia.[41] Physicians, however, have an important role to play in BZRA deprescribing, especially GPs, who were the initial prescribers of BZRA for the vast majority of our respondents. A recent qualitative study has found that trust in physicians was essential for patients to consider and follow their recommendation to deprescribe BZRA.[42] This trust was strongly related to a clinical relationship based on shared decision-making, understanding, and open discussion.[42] Moreover, the first steps in the deprescribing process involve exploring patients' views and attitudes to deprescribing.[43,44] The rPATD-BZRA could help to initiate a patient-physician dialogue regarding BZRA deprescribing. Moreover, this new questionnaire is quite short compared to rPATD, which would enhance its acceptability and ease of use in busy clinical practice. Moreover, the rPATD-BZRA could also be helpful in targeting older adults who are more receptive to a BZRA deprescribing intervention, or in allowing more effective allocation of resources. Future work is needed to assess the predictive value of the rPATD-BZRA and ascertain the extent to which attitudes towards BZRA deprescribing predict actual BZRA deprescribing.

This study has several strengths and limitations. The first limitation is the long recruitment period due to the COVID-19 pandemic, which strongly hindered data collection. The COVID-19 crisis also increased anxiety and insomnia, which are indications for BZRA prescription.[45] In a national health interview survey carried out in December 2020 in Belgium, 23% of older adults declared that they had increased their sedative use compared to their use before the pandemic (including none).[46] A significant majority of the respondents had used BZRA for more than one year, but the pandemic may have affected their answers. Another limitation is that participants were selected by pharmacists, GPs, and NH staff members, who may have asked older adults whom they perceived to be more open and willing to participate. The possibility of selection bias cannot, therefore, be excluded. Finally, due to recruitment difficulties, statistical power was narrowly achieved. Despite these limitations, this study has several strengths. More vulnerable older adults (i.e. less educated participants or those aged $\geq$85 years) are represented fairly. Moreover, data were collected in 3 European countries in both NH and PC settings, which strengthened the results and their generalizability.

5. Conclusion

Adapting the French rPATD to BZRA revealed major differences between assessing attitudes towards deprescribing in general and assessing attitudes towards a particular medication class. Psychometric assessment of a questionnaire adapted to other medication classes is therefore essential to ensuring validity.

This 13-item questionnaire thus appears to be a useful tool, in both clinical practice and research, for assessing older adults' attitudes toward BZRA deprescribing. The rPATD-BZRA could facilitate the initiation of a conversation about BZRA deprescribing with older adults and their engagement in a shared decision-making process. It could be used in BZRA deprescribing interventions to help target more receptive participants or to identify specific barriers to address.

Authors' contributions (CRediT)

Catherine Pétein: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Data curation, Writing – Original Draft, Visualization, Writing – Review & editing, Project administration. **Anne Spinewine:** Conceptualization, Methodology, Resources, Writing – review & editing, Supervision, Project administration. **Marie-Laure Laroche:** Conceptualization, Resources, Investigation, Writing – review & editing, Project administration. **Anne Niquille:** Conceptualization, Resources, Investigation, Writing – review & editing, Project administration. **Séverine Henrard:** Conceptualization, Methodology, Software, Validation, Formal analysis, Visualization, Writing – Review & editing, Supervision, Project administration.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

None.

Acknowledgments

We would like to thank Dr. Emily Reeve, for permitting us to adapt her questionnaire and for having provided feedback on our results. We are also grateful to Prof. Gaëtane Caesens (UCLouvain) and the Support *en Methodologie et Calcul Statistique* (SMCS) team for providing expertise and assistance during the data analysis. We thank Mrs. Laura Jones for having proofread the manuscript for English. We also thank all healthcare providers and NH that helped in recruiting participants for this study, which required extra effort in the COVID-19 pandemic context. Finally, we thank warmly all older adults that participated in our study.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.sapharm.2023.05.010.

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