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Feasibility and Acceptability of the Gerontological Personality Disorders Scale (GPS) in General Practice: A Mixed Methods Study

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ABSTRACT

Although the Gerontological Personality Disorders Scale (GPS) can aid in detecting personality disorders (PDs) in older adults in general practice, its availability does not guarantee its use. This study therefore aimed to examine the feasibility and acceptability of the GPS from an older adult, informant, and professional perspective. A convergent parallel mixed methods study was conducted. Qualitative data were collected through semistructured interviews with four general practitioners and four nurse practitioners and were analyzed thematically. Quantitative data were collected through a 5-item questionnaire completed by 329 older adults and 329 informants. The thematic analysis revealed five major themes regarding feasibility and acceptability according to the professionals: taboo to ask intimate questions, quite unfamiliar with these disorders, assets, PDs are a topic of interest in general practice, and preconditions. Descriptive statistics showed that most older adults and informants found the GPS items to be clearly phrased, easy to understand, and nonconfrontational or not unpleasant to answer. The GPS is a feasible and acceptable instrument for detecting PDs in older adults in general practice. Educating professionals about PDs in older adults and the GPS is important prior to its use in daily practice and might further increase its acceptability.

Recently, interest in personality disorders (PDs) in older adults (>60 years old) has increased because of the rapidly growing aging population and the serious consequences of PDs for both patients and their environment. The prevalence rate is substantial at approximately 8% in the older adult general population (Schuster, Hoertel, Le Strat, Manetti, & Limosin, 2013). PDs are associated with various negative effects: decreased physical functioning (Powers & Oltmanns, 2012), increased health service utilization and use of medical resources (Lawton & Oltmanns, 2013; Powers & Oltmanns, 2012; Twomey, Baldwin, Hopfe, & Cieza, 2015), poor treatment outcomes of comorbid psychiatric disorders (Stevenson, Brodaty, Boyce, & Byth, 2011), and increased mortality rates due to suicide and other causes (Björkenstam, Björkenstam, Holm, Gerdin, & Ekselius, 2015). Fortunately, findings have consistently indicated that PDs in older adults are treatable to some extent (Lynch et al., 2007; Videler, Rossi, Schoevaars, van der Felz, & Alphen, 2014).

PDs often remain unrecognized even though they are severe disorders, and both general practitioners (GPs) and nurse practitioners (NPs)[1] could experience many (interpersonal) difficulties with older adults with PDs such as treatment rejection and noncompliance with somatic and mental care (van Alphen, Derksen, Sadavoy, & Rosowsky, 2012). Underrecognition might be due to several factors including agism (Nelson, 2004), deviating phenomenological manifestation (van Alphen et al., 2012), a complex clinical picture because of comorbidity of psychiatric or somatic disorders (Schuster et al., 2013) and the scarcity of accurate instruments to detect PDs in older adults (Oltmanns & Balsis, 2011; Rossi, Van den Broeck, Dierckx, Segal, & Van Alphen, 2014).

To fill this gap, the diagnostic accuracy of the Gerontological Personality Disorders Scale (GPS; van Alphen, Engelen, Kuin, Hoijtink, & Derksen, 2006) was recently evaluated in general practice (Penders, Rossi, Metsemakers, Duimel-Peeters, & van Alphen, 2016). The results of that study were promising in providing an adequate tool to GPs who want to take a first step in detecting PDs in their older adult patients but lack the skills and time to systematically conduct extended diagnostic procedures.

Improving the detection of PDs in general practice is of importance because it enables GPs and NPs to take personality

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[1]The NPs in this study are doctors' assistants who received a 2-year postgraduate higher professional education and are trained to provide health promotion and maintenance through the diagnosis and treatment of acute illnesses and chronic conditions.

functioning into account when considering their approach and communication to optimize older adults' treatment compliance. Furthermore, it allows GPs to make faster and more specific referrals to mental health settings where further diagnostic assessments and treatment options are available.

Although the GPS might aid in detecting PDs in general practice, the availability of the instrument does not guarantee that it will be used. New instruments are often not easily implemented (Grol & Wensing, 2011a). Successful implementation depends on multiple factors including the characteristics of the innovation, the professionals applying the innovation, and patient characteristics (Grol, 1992; Wensing, Bosch, & Grol, 2010). To facilitate the development of effective strategies to implement the GPS in general practice, the feasibility and acceptability of this instrument were examined from the perspective of patients, informants, GPs, and NPs using a mixed methods design.

Methods

Design and context

As optimizing patient care is an interplay between clinical practice and research (Grol & Wensing, 2011b), this study took a pragmatic stance that highlighted the research question by using diverse methods that best suited the study's purpose (Morgan, 2007). This mixed methods study occurred in the context of a psychometric analysis of the GPS as described in a previous article (Penders et al., 2016). A convergent parallel design (Creswell, 2015) with equal priority was used to ensure the comprehensiveness and triangulation of the results. The perspectives of the GPs and NPs (qualitative data) and those of the older adults and informants (quantitative data) contributed to a more integrated understanding of the feasibility and acceptability of the GPS in general practice. Figure 1 depicts both a flowchart and the study design, including the sequence of data collection and analysis for the qualitative and quantitative strands. The Medical Ethical Review Commission of the Maastricht University Medical Center (MUMC+) in the Netherlands granted ethics approval (Approval No. MEC 09-4-060).

Participants

In total, 704 participants were included. For information on dropout, see Figure 1.

Qualitative strand

The participants were approached by telephone and purposively selected based on their profession (GP [$n = 4$] or NP [$n = 4$]) in the general practices that provided the patients who participated in the quantitative strand. All but one (refusal because of high workload) of these practices consented to participate. Next, one GP and NP per participating practice were asked to use the GPS during medical encounters during the following month to gain experience with this instrument, after which an interview was planned at a time and date of their choosing. All the GPs were male. Their average age was 61.3 years (range = 59–64, $SD = 2.1$) with a mean of 32.5 years of work experience (range = 31–34, $SD = 1.3$). All the NPs

were female with an average age of 36 years (range = 28–43, $SD = 6.8$). Their work experience ranged from 4 to 10 years ($M = 8.3$, $SD = 2.9$).

Quantitative strand

The participants consisted of both older adults ($n = 348$, of which 329 were retained in the analyses) and informants ($n = 329$), all of whom had previously participated in a psychometric study on the GPS (Penders et al., 2016). In that study, the older adults were nonrandomly sampled from five general practices in the south of the Netherlands. The recruitment was limited to Dutch-speaking patients of 60 years or older who had a Dutch-speaking informant who was also willing to participate. Older adults with florid psychiatric disorders, cognitive dysfunctions, and major attentional problems as a result of sedation or alcohol use, intellectual disabilities, or a life expectancy of less than 3 months were excluded. The older adults assigned their informants. No other specifications or conditions were provided.

Approximately half of the older adults were male ($n = 149$). The average age was 69.9 years (range = 60–91, $SD = 7.4$). They were screened for psychiatric disorders using (a) the Alcohol Use Disorders Identification Test (Babor, Higgings-Biddle, Saunders, & Monteiro, 2001), (b) the Geriatric Depression Scale (Yesavage et al., 1983), (c) the Brief Symptom Inventory (De Beurs, 2008), and (d) a Dutch informant questionnaire on personality (Barendse & Thissen, 2006; Barendse, Thissen, Oei, Rossi, & van Alphen, 2013). Based on this screening, 7.3% of the older adults were identified as at risk of being harmful alcohol users, 8.5% were classified as having mild to severe depression, 18.5% had (very) high levels of somatic complaints, 7.6% had (very) high levels of (subjective) cognitive problems, 8.5% had (very) high levels of interpersonal sensitivity, 16.7% had (very) high levels of anxiety, 13.4% had (very) high levels of hostility, 10.9% had (very) high levels of phobia, 10.0% had (very) high levels of paranoid thoughts, 8.8% had (very) high levels of psychoticism, and 17.0% were identified as having a PD.

Of the 329 informants, 138 were male. Their average age was 64.4 years (range = 25–89, $SD = 11.8$). Table 1 shows their demographic information.

Measures

Qualitative strand

The semistructured interview was specifically developed for this study and consisted of 44 (mainly) open-ended questions covering the GPs' and NPs' attitudes toward PDs in older adults, their experience with the GPS, and study participation (Table 2). The questions addressing experience with the use of the GPS were based on the quality criteria formulated by the Dutch Committee on Testing (2010) of the Dutch Institute of Psychologists (NIP) regarding the test material.

Quantitative strand

The GPS (Table 3) is a 16-item, age-specific screening instrument designed to detect PDs in older adult inpatients (van Alphen et al., 2006), which is now also available for general practice (Penders et al., 2016). It consists of a self-report version (GPS patient version; GPS–pv) and an informant version (GPS–iv). To minimize method variance, the
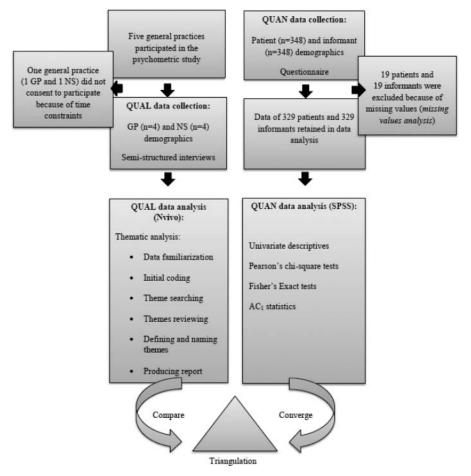
Figure 1. Convergent parallel mixed methods design: Qualitative and quantitative study arms with data collection and analysis procedures.

only difference between the self- and informant-report version is that the self-report items are worded in the first person (e.g., "I hope that others solve my problems"), and the informant-report items are worded in the third person (e.g., "He/she hopes that others solve his/her problems"). The 16 statements, which are derived from the PD diagnostic criteria of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV;* American Psychiatric Association, 2000), assess both habitual behaviors (HAB) and biographical information (BIO; i.e., life characteristics), and these statements are endorsed as being either true or false. The GPS guideline states that the presence of severe psychiatric disorders such as dementia, psychosis, or major depression could negatively affect the reliability and validity of the instrument and therefore suggests not using the GPS–pv in such cases. However, the GPS–iv can be used in such circumstances by instructing the informant to answer the questions with the patient in mind when he or she does not suffer from the present psychopathology.

To date, two studies have addressed the psychometric properties of the GPS in different settings. In the older adult inpatient population (i.e., receiving care at an ambulatory department of geriatric psychiatry), the GPS–pv had moderate (HAB scale) to excellent (BIO scale) test–retest reliability with reasonable sensitivity and specificity (approximately 70%) for both subscales (van Alphen et al., 2006). The informant version had low sensitivity (45%) and a good score for specificity (78%). Recently, the

diagnostic accuracy of the GPS was assessed in Dutch general practice (Penders et al., 2016). The test–retest reliability of the GPS subscales and the total scale was strong (GPS–pv: $r_s = .56$ [HAB], $r_s = .67$ [BIO], $r_s = .66$ [total]; GPS–iv: $r_s = .52$ [HAB], $r_s = .65$ [BIO], $r_s = .68$ [total]). Based on statistics related to diagnostic accuracy, the GPS–iv is preferable to the GPS–pv; the sensitivity and specificity were 78% and 65%, respectively, for the GPS–iv, and 83% and 27%, respectively, for the GPS–pv.

The 5-item self-report questionnaire was specifically developed for this study and consisted of items addressing the feasibility and acceptability of the GPS from the perspectives of older adults and informants (Table 4).

Data collection

Qualitative strand
Data on the GPs' and NPs' experiences with the GPS and their opinions on its feasibility and acceptability were collected using semistructured interviews (Table 3). The first author conducted the interviews in the general practice of the participants between 2012 and 2013, and they lasted between 19 and 44 min each. All the interviews were audio recorded with the participants' consent.

Quantitative strand
The first author collected data on the older adults' and informants' perspectives on the feasibility and acceptability of the GPS

Table 1. Demographic features of older adults and informants.

	Older adults	Informants
Age		
Years (SD)	69.9 (7.4)	64.4 (11.8)
Range	61–91	25–89
Gender (%)		
Men	149 (45.3)	138 (41.9)
Women	180 (54.7)	191 (58.1)
Marital status (%)		
Single	14 (4.3)	—
Married/civil partnership	249 (75.7)	—
Cohabit	7 (2.1)	—
Two household family (LAT)	7 (2.1)	—
Divorced	9 (2.7)	—
Widowed	43 (13.1)	—
Housing (%)		
Dwelling house	323 (98.2)	—
Sheltered accommodation	1 (0.3)	—
Elderly home	2 (0.6)	—
Other	3 (0.9)	—
Educational level (%)		
Elementary school	36 (10.9)	20 (6.1)
School of domestic science/trade school	141 (42.9)	107 (32.5)
Senior secondary vocational	64 (19.5)	98 (29.8)
Senior general secondary/preuniversity	12 (3.6)	10 (3.0)
Higher professional	60 (18.2)	68 (20.7)
University	16 (4.9)	26 (7.9)
Nature of relationship (%)		
Partner	251 (76.3)	
Sibling	9 (2.7)	
Child	44 (13.4)	
Grandchild	1 (0.3)	
Brother/sister-in-law	1 (0.3)	
Friend	9 (2.7)	
Son/daughter-in-law	2 (0.6)	
Other	12 (3.7)	
Duration of relationship in years (%)		
1–5	10 (3.0)	
6–10	9 (2.7)	
11–15	7 (2.1)	
16–20	8 (2.4)	
21–25	11 (3.3)	
26–30	8 (2.4)	
31–35	17 (5.2)	
36–40	40 (12.2)	
41–45	49 (15.0)	
46–50	59 (18.0)	
51–55	46 (14.0)	
56–60	35 (10.6)	
61–65	14 (4.3)	
66–70	4 (1.2)	
71–75	1 (0.3)	
76–80	0 (0.0)	
81–85	0 (0.0)	
86–90	1 (0.3)	
Missing data	10 (3.0)	

Note. — = data were not obtained; LAT = Living Apart Together; in a relationship but living apart.

during a 10- to 20-min home visit (for data collection purposes only) at a date and time of the participants' choosing between 2009 and 2012. First, she administered the GPS to the older adults followed by a self-report questionnaire (Table 4). In the meantime, the informants completed their GPS version and subsequently completed the 5-item questionnaire.

Data analysis

Qualitative strand
One of the two independent research assistants transcribed the recordings verbatim. The first author checked the transcripts

Table 2. Semistructured interview for general practitioners and nurse practitioners.

Attitude toward personality disorders in older adults
What is your professional attitude toward personality disorders in older adults?
Is this something that has your attention (interested in, actively …)?
What is your attitude toward detection of personality disorders in older adults?
Is detection of personality disorders in older adults necessary?
If yes, why?
If not, why?
Is (should) detection of personality disorders in older adults (be) a task of the general practitioner?
If yes, why?
If not, why?
Is (should) detection of personality disorders (be) a task of the nurse specialist?
If yes, why?
If not, why?
Experience with the administration of the GPS
The GPS starts with an introductory text. Is this text clear (enough)?
Did you deviate from this text?
If yes, why?
How did the patients react to the introductory text?
Was the GPS easy to fit in your consult?
If yes, why?
If not, how did you deal with this?
How do you judge the scoring method of the GPS?
Did you find the items comprehensible?
If not, which items weren't?
What made them less comprehensible?
Did you find the items unambiguous?
If not, which items weren't?
What made them ambiguous?
Did you find the items concise?
If not, which items weren't?
What made them elaborate?
Did you have to explain certain items?
If so, what items?
And how did you explain them?
How do you judge the format and layout of the GPS?
How do you judge the number of GPS items, from your own perspective?
How do you judge the number of GPS items, from the patient's perspective?
How went the administration of the GPS?
How do you judge the usage of the GPS?
What are the strengths of the GPS?
What are the weaknesses of the GPS?
Does the GPS have an added value in your practice?
If yes, in what way?
If not, why not?
Do you intend to use the GPS?
If yes, for what reason?
With which patients will you and will you not use it?
If not, why not?
Do you judge the GPS to be a useful instrument to detect personality disorders in older adults?
If yes, why?
If not, why?
Experience with participation in study
How did you experience your participation in the current study?
Did your participation in the current study change your opinion and/or attitude toward personality disorders in older adults?
If yes, how and what did it change?
If not, why?

Note. GPS = Gerontological Personality Disorders Scale. Originally, these questions were in Dutch; they are translated for this publication.

against the original recordings and complemented them if needed. The qualitative data management software NVivo version 9 was used (QSR International Pty Ltd., 2010). Two authors with different professional backgrounds (the first author, a PhD student and psychologist, and the second author, a social worker, legal expert, and health service researcher) read and analyzed the transcripts independently

Table 3. List of items of the Gerontological Personality Disorders Scale–patient version (GPS–pv).

	Yes	No
Habitual behavior (HAB)		
1 I don't like growing older because I become less attractive	1	0
2 I often worry about my health	1	0
3 I'm often concerned about my memory	1	0
4 I hope that others solve my problems	1	0
5 I'm often afraid of losing those who care for me, such as members of the family or my partner	1	0
6 I'm often taken advantage of by others	1	0
7 I find it difficult to fend for myself	1	0
Biographical information (BIO)		
1 In my life I've been to see the doctor for many vague physical complaints	1	0
2 I have sometimes said to my family or friends that I don't want to live any longer	1	0
3 In the past I've been admitted to a psychiatric institution or convalescent home because of nerves	1	0
4 At important times in my life I've had a lot of trouble with nerves, stress, or moodiness	1	0
5 In the past I've already had treatment from a psychiatrist or psychologist	1	0
6 I have sometimes tried to end my life	1	0
7 At the most I've only had 1 acquaintance or friend in my life	1	0
8 In my life I've not been very interested in sexual contact	1	0
9 In the past I've often taken tranquilizers and/or sleeping pills	1	0

using Braun and Clarke's (2006) inductive thematic analysis (see Table 5). Throughout the last phase of analysis, the findings were translated from Dutch to English. During the analysis, discrepancies and disagreements were discussed until consensus was reached.

Quantitative strand

All statistical tests were performed using SPSS Windows version 20.0 (IBM Corp., 2015). A prior formal analysis (missing value analysis [MVA]) was conducted to identify missing values. Based on the MVA that revealed that the amount of missing data was low (< 5%) and seemed to be random as well as the fact that the measurement of the items complicated estimating the missing values, cases with missing values and their matched patient or informant were omitted from further analysis ($n = 38$). Next, descriptive statistics were used to summarize the participants' characteristics and responses to the questionnaire.

The triangulation of methods (quantitative and qualitative data), different sources (patients, informants, GPs, and NPs), varying professional backgrounds (GP, health service researcher or epidemiologist, psychologist and social worker, legal expert, and health service researcher), reflexivity (reflexive journal), and the creation of an audit trail contributed to the trustworthiness of the study. Transparency in analysis and reporting was achieved by providing extensive verbatim quotations.

Results

Qualitative results

Five major themes emerged from the thematic analysis. The themes all related to the feasibility or acceptability of the GPS.

Taboo to ask intimate questions

All the professionals described the GPS as having some sensitive items that can form a barrier to its administration. For example,

Table 4. Questions regarding the Gerontological Personality Disorders Scale (GPS) for older adults and informants.

1. How do you judge the number of GPS questions?
   - ☐ Too many
   - ☐ Many
   - ☐ Good
   - ☐ Few
   - ☐ Too few
2. How do you judge the language level of the GPS questions?
   - ☐ Difficult
   - ☐ Normal
   - ☐ Easy
3. Did you find the GPS questions comprehensive?
   - ☐ Yes
   - ☐ No
4. Did you find the GPS questions unpleasant to answer?
   - ☐ Yes
   - ☐ No
5. Did you find the GPS questions confronting to answer?
   - ☐ Yes
   - ☐ No

Remarks and/or comments:

GP[3] identified these items and explained sensitivity as follows: "There are questions that may embarrass people a little. Especially older adult patients. Questions about suicide and sexuality. Well, then you have an 82-year-old sitting in front of you, yeah, they are just not used to these (questions)." The transcripts, especially those of the NPs, gave the impression that there was more to the response, as illustrated in the following excerpt from NP[4]: "I did find them (questions) clear, yeah. However, I did find some questions (about suicide and sexuality) difficult to ask … the people responded very normal, but as a person, you sometimes find it hard to ask such questions." This response suggested that there might be some kind of taboo related to asking intimate questions. This was supported by the following response by NP[2]: "The question about sexual contact was difficult. … I thought to myself, "Can I flat out (bluntly) ask this question?", whereas you also ask diabetics whether they experience sexual problems. It can be related to diabetes, and you therefore explain it."

Quite unfamiliar with these disorders

This theme emerged when discussing the sensitivity related to asking intimate questions and comparing the responses of the

Table 5. Overview of data analysis based on Braun and Clarke's phases of thematic analysis.

Phase	Description of the process
1	Start data immersion by actively (re-)reading data and listening to audio recordings. Note initial ideas.
2	Generate initial codes by collating data relevant to each code across the complete data set.
3	Generate potential themes by collating codes and gathering all data relevant to each potential theme.
4	Review and refine the themes by checking if there is a coherent pattern across both data extracts and the entire data set.
5	Define and name themes after ongoing analysis in which a clear conceptual idea arises of the various themes and how they fit together.
6	Provide an illustration of the themes with quotations presenting vivid and lucid examples of the point being made, making links to the research questions and literature.

Note. This analysis is a dynamic and recursive process, moving back and forth between phases.

professionals. All of the NPs independently expressed a lack of knowledge concerning PDs in older adults. NP[2] said, "Well … of course I am not totally familiar with the whole PDs business, like what information you need to detect it in a person." NP[1] responded, "As for myself, I just know too little about it." This knowledge gap might have contributed to the sensitivity and the reluctance to ask intimate questions.

Assets
As opposed to the barriers, all the professionals described the GPS as having assets including plain and brief questions and a clear and concise introduction and being smooth and easy to administer. Another addressed asset was its administration time. For instance, NP[4] said, "It does not take much time. Therefore, I think it should be possible (to fit in a consultation)." Similarly, GP[4] added, "It went swiftly and fast." Both the GPs and NPs also voiced that the GPS had added value. GP[2] described the awareness of PDs in older adults created by the use of the GPS. He explained, "You immerse yourself … that alone is enough to increase the level of knowledge, which initially was 5% to 25%. That alone provides new glasses to look through. Then, you look more carefully, and pick them out more easily." It might also provide surprising new insights, as NP[1] put it: "Well, by asking these questions, you gain more insight into how people think. I was surprised by some people because I had a completely different view of them. When they answered the questions, I thought 'Oh, I totally did not expect that from you.' Therefore, I certainly find that meaningful." GP[4] found that using the GPS could also trigger reflection. He expressed the following: "This (GPS) draws your attention to questions that make you think, 'Hey, what exactly is the situation?', so it gives you a little pause for thought."

PDs are a topic of interest in general practice
In all the transcripts, the professionals expressed that PDs in older adults were a hot issue in their daily practice. The professionals, especially the GPs, considered recognizing and dealing with these disorders to be part of their job responsibilities. "You try to be attentive to whether PDs play a role when people get into trouble," said GP[4]. Their interest in this topic might also be due to the complicating effect that PDs are believed to have on their tasks. GP[3] stated that recognizing PDs is difficult and that they negatively affect treatment options. He said, "You do not recognize a PD very easily. In addition, it is even harder because of multimorbidity; I would almost say it gets bogged down. … Yeah, and then you do not recognize it, but it does sometimes make your treatment ineffective." PDs also seemed to require some professional flexibility. As NP[2] put it, "In consultations, you are often confronted with patients with PDs. This just complicates your working method. You must approach these people very differently than people without PDs. Because of it (PD), you sometimes really get stuck in communication. A PD complicates things. Then, you will be facing very different things. … You just have to change your approach completely." GP[2]'s response illustrated that, aside from complicating the care for the patient, their sensitivity to PDs might also be emotionally bound. He voiced, "After 34 years, you certainly have … of course they are not all new patients … you regularly encounter the same problem. 'Goddamn it, has he not

mastered it by now? Does he still not get it?' And there are people with whom you ALWAYS end up in a discussion. … There is always something happening. In addition, then you think 'For God's sake, I am not talking about that!,' people who agitate/provoke you personality-wise." He continued, "I think, as for myself, it would be good to know more about it and have some tools to know how to address certain personalities. That I could leave my emotions aside … that I will not take the easy way out, because it keeps dragging on … I would like to have some tools." In line with this, GP[3] stated, "How can you address it (PDs), so that it affects both general practitioners and patients the least?" Another professional, NP[2], said, "How do you make it intelligible/how do you recognize it? How do you address it? Additionally, what kind of tools/resources are available?" These excerpts illustrate the need for resources to both recognize and address PDs, which seems to be commonplace among professionals.

Preconditions
This theme connoted the professionals' feelings that there were certain requirements to facilitate the use of the GPS. According to the professionals, available time, a clear indication for administration, a validated instrument, and a contribution to the service provided in general practice are preconditions that must be met. Additionally, receiving education on PDs in older adults and how to use the GPS is needed, as expressed by NP[2] as follows: "Also the question about 'I have only had one acquaintance' … quite some people responded with 'Yes, I do not have more,' then you think, 'Oh dear, do I have to go into greater depth, or not?'" In addition to the professionals' need for more knowledge, they stated the importance of properly informing the patients about the GPS, as illustrated by the following excerpt from GP[2]: "For every patient, I think the introduction is key to the instrument."

Quantitative results

Responses to the questionnaire and comparison of the participants' responses
Overall, most older adults and informants judged the GPS to have a good number of comprehensive and normal language items. Nearly all the older adults and informants did not find the items unpleasant to answer or confrontational (Table 6). The interrater reliability was calculated with the AC1 statistics, a method that does not depend for its validity on the assumption of independence between raters. Also, when trait prevalence is high or low, the more traditional kappa measure of agreement tends to underestimate interrater reliability. The AC1, on the contrary, is less affected by high or low trait prevalence and thus a more stable measure and stable agreement coefficient. It reduces the overall agreement by chance to the right magnitude, as this index is calculated in such a manner that the propensity for chance agreement is proportional to the portion of ratings that might lead to an agreement by chance (Gwet, 2008). Table 6 shows that the agreement between the older adults' and informants' responses ranged from moderate (language level) to almost perfect (comprehensive questions), according to the Landis and Koch (1977) Kappa benchmark scale.

Table 6. Older adults' and informants' responses regarding the Gerontological Personality Disorders Scale (GPS).

	Older adults (%)	Informant (%)
How do you judge the number of GPS questions?		
Too many	1 (0.3)	1 (0.3)
Many	12 (3.7)	48 (14.6)
Good	306 (93.0)	257 (78.1)
Few	9 (2.7)	21 (6.4)
Too few	1 (0.3)	2 (0.6)
AC_1		.73
SE		.03
CI		[.68, .79]
How do you judge the language level of the GPS questions?		
Difficult	1 (0.3)	2 (0.6)
Normal	221 (66.7)	263 (79.5)
Easy	109 (32.9)	66 (19.9)
AC_1		.55
SE		.04
CI		[.48, .62]
Did you find the GPS questions comprehensive?		
Yes	329 (99.4)	330 (99.7)
No	2 (0.6)	1 (0.3)
AC_1		.99
SE		.01
CI		[.98, 1.00]
Did you find the GPS questions unpleasant to answer?		
Yes	13 (4.0)	11 (3.3)
No	316 (96.0)	318 (96.7)
AC_1		.95
SE		.01
CI		[.92, .97]
Did you find the GPS questions confronting to answer?		
Yes	30 (9.1)	31 (9.4)
No	299 (90.9)	298 (90.6)
AC_1		.80
SE		.03
CI		[.74, .85]

Note. For the agreement between patient and informant responses (interrater reliability), we executed Gwet's (2008) AC_1 statistics.

Responses to GPS items and judgments about the GPS

As the professionals identified GPS items BIO 2 (suicide ideation), BIO 6 (suicide attempt), and BIO 8 (hyposexuality) to be sensitive questions that might have been potentially unpleasant to answer or confrontational for older adults and informants, we took a closer look at these items.

Both the older adults and informants who found the GPS to be unpleasant to complete or confrontational predominantly answered "no" to BIO 2 (93.0%, 97.6%), BIO 6 (97.7%, 95.2%), and BIO 8 (81.4%, 88.1%). Conversely, most of the older adults and informants who dealt with verbalized suicide ideation ($n = 17$, $n = 18$), suicide attempt ($n = 12$, $n = 22$) or hyposexuality ($n = 98$, $n = 78$) did not find the GPS questions to be unpleasant or confrontational (91.2%, 97.2%; 91.7%, 90.0%; and 91.8%, 93.6%, respectively).

To check whether there was an association between the findings described, Pearson's chi-square tests and Fisher's exact tests were executed. The tests showed no significant associations between judging the GPS items to be either unpleasant to answer or confrontational and the actual response to the sensitive GPS items (see Table 7).

Discussion

Although previous research has shown that the GPS might aid in the detection of PDs in older adults in general practice (Penders et al., 2016), its availability does not guarantee its use. To facilitate the development of effective implementation strategies of the GPS in this setting, this mixed methods study examined the feasibility and acceptability of this instrument from an older adult, informant, and professional perspective. The experience of all the participants with the GPS was overall very positive; it was judged to be a feasible and acceptable instrument for detecting PDs in older adults in general practice.

Further, this study revealed that the professionals experienced reluctance asking some of the more intimate GPS items addressing verbalized suicide ideation, suicide attempt, and hyposexuality. This is in line with previous research identifying suicidal ideation, sexual activity, and other mental illness, among others, to be sensitive topics to discuss in the health care context (McBride, 2010; Mellor et al., 2013; Roberts, 1992). Concerns about their own knowledge and expertise in the field are commonly reported barriers in discussing these topics (Hordern & Street, 2007; Humphery & Nazareth, 2001), as was expressed in this study.

Although the professionals were preoccupied with violating the privacy of the patients and informants, as they expressed feeling some sort of barrier to asking the intimate questions on the GPS, the vast majority of both older adults and informants did not find the GPS items unpleasant to answer or confrontational. The fact that this questionnaire was only seen by themselves and the researcher as well as the fact that the items were verbally administered might have contributed to this, as research indicates that factors such as third-party presence (Tourangeau & Yan, 2007; Wood, Pill, Prior, & Lewis, 2002) and admitting to emotional problems (Wood et al., 2002) on paper instead of talking about them decrease the willingness to disclose sensitive topics. Furthermore, several studies note that patients are generally willing to answer psychiatric questionnaires in general practice settings (Dorwick et al., 2009; Wood et al., 2002).

The minority of older adults and informants who found the GPS to be unpleasant or confrontational were predominantly those who had not dealt with these subjects themselves. In addition, older adults and informants who had dealt with verbalized suicidal ideation or attempt or hyposexuality did not find the GPS to be confrontational or unpleasant. Thus, perhaps having no experience with these behaviors might have caused them to feel caught off guard and insulted if they were not appropriately informed about the type of questions prior their inquiry. This might be overcome by using specific communication techniques such as normalizing, transparency, and asking permission (McBride, 2010) when introducing the GPS.

The strengths of this study include examining both the feasibility and acceptability of the GPS from various perspectives. By taking into account the perceptions of older adults and informants in addition to those of professionals, the study is able to obtain a more complete and holistic picture of the factors that might play a role in the implementation of the GPS. Additionally, using both quantitative and qualitative data

Table 7. Association between unpleasantness or confronting of Gerontological Personality Disorders Scale (GPS) items and responses on sensitive GPS items.

	Items Unpleasant questions		Items Confronting questions	
	Yes	No	Yes	No
Response on GPS item BIO 2 (suicide ideation)				
All participants				
Confirmative response on GPS item	0	35	4	31
Negative response on GPS item	24	599	57	562
Fisher's exact test (two-tailed)	.63		.56	
Phi	−.05		.02	
Patients				
Confirmative response on GPS item	0	17	3	14
Negative response on GPS item	13	299	27	285
Fisher's exact test (two-tailed)	1.00		.19	
Phi	−.05		.07	
Informants				
Confirmative response on GPS item	0	18	1	17
Negative response on GPS item	11	300	30	281
Fisher's exact test (two-tailed)	1.00		1.00	
Phi	−.05		−.03	
Response on GPS item BIO 6 (suicide attempt)				
All participants				
Confirmative response on GPS item	1	16	2	15
Negative response on GPS item	23	618	59	578
Fisher's exact test (two-tailed)	.47		.67	
Phi	.02		.01	
Patients				
Confirmative response on GPS item	0	6	1	5
Negative response on GPS item	13	310	29	294
Fisher's exact test (two-tailed)	1.00		.44	
Phi	−.03		.04	
Informants				
Confirmative response on GPS item	1	10	1	10
Negative response on GPS item	10	308	30	288
Fisher's exact test (two-tailed)	.32		1.00	
Phi	.06		−.00	
Response on GPS item BIO 8 (hyposexuality)				
All participants				
Confirmative response on GPS item	5	83	8	80
Negative response on GPS item	19	547	53	513
Fisher's exact test (two-tailed)	.35		1.00	
Phi	.04		.00	
Patients				
Confirmative response on GPS item	3	46	5	44
Negative response on GPS item	10	269	25	254
Fisher's exact test (two-tailed)	.42		.79	
Phi	.05		.02	
Informants				
Confirmative response on GPS item	2	37	3	36
Negative response on GPS item	9	278	28	259
Fisher's exact test (two-tailed)	.63		1.00	
Phi	.04		−.02	

enables greater depth in the results and provides new insight into this complex phenomenon. Moreover, the variety of backgrounds of the authors (family medicine, psychology, physical therapy, social work, law) provides an innovative triangulation of perspectives when analyzing the data.

However, some limitations are worth noting. First, in the qualitative strand, GPs and NPs from four of the five practices were willing to participate. Although smaller sample sizes are common in qualitative research, we are not completely certain that we reached data saturation. Interviewing more professionals would have been preferable; however, because of time constraints, this was not possible. Nevertheless, it is reassuring that despite differences in ages, genders, professions, and years of work experience, their responses were very similar, and even more so within professions.

Second, it is possible that factors such as interest in PDs, gender, level of training and education, and years of work experience affected the current findings. Professionals (three GPs and two NPs) from three of the four practices expressed having great interest in PDs in older adults, and some of them were even initiating PD-related research or participating in refresher courses. However, their responses were similar to those who did not express a strong interest in PDs. Gender, level of education, and years of work experience (and inherent age) might also have affected the findings. Although they were nearly the same within professional disciplines, gender, level of education, and years of work experience greatly differed between GPs and NPs, which could have affected the results.

Third, the NPs in this study had somatic training instead of mental health training, which might explain why they were not

quite familiar with PDs. However, at the time the study occurred, the participating practices did not have NPs with a mental health background.

Fourth, as the aim was for professionals to gain experience with using the GPS in their daily practice, they were free to use the instrument in any manner they chose. It turned out that all the professionals used the GPS somewhat randomly and during appointments when there was remaining time to do so. Hence, they employed the GPS in ways other than that for which it is intended, namely to use it when the presence of PDs is suspected. It is therefore possible that their experience regarding its feasibility would have been different if they had used the GPS as intended.

Although the detection of PDs in general practice is important and should also be feasible in other countries, future research is suggested, including (larger sample) cross-validation studies of these findings across the Netherlands as well as in other countries and cultures because findings might differ. It is conceivable that in certain cultures, discussing sensitive topics in a direct manner, as is the case with the GPS, is not conventional or even appropriate, and therefore, professionals might respond differently to the feasibility and acceptability of the GPS. Larger samples could circumvent potential selection bias for reasons such as including only those professionals who have a clear interest in PDs, and they might also provide greater heterogeneity with respect to years of work experience.

It would also be worthwhile to include NPs with a mental health background, as these professionals (given their training and line of work) might encounter and address older adults with PDs more often than NPs with a somatic background. Moreover, in future research, it would be valuable to instruct the professionals on when to employ the GPS before gaining experience with the instrument. By providing these instructions, the feasibility and acceptability of the GPS can be assessed in situations that more closely resemble daily practice. Other suggestions for further work include the implementation of the GPS in general practice on a larger scale.

Another research topic is the influence of existing psychopathology on self- and informant ratings on the GPS. As PDs and other psychiatric and somatic disorders often cooccur and greatly affect one another reciprocally, understanding these mechanisms as well as their effect on the GPS is essential when assessing PDs in general practice.

To conclude, we are convinced that our findings have important implications. From this study, we have determined that the GPS can easily be incorporated in general practice, as professionals, older adults, and informants find it feasible and acceptable for use in this setting. However, it is recommended that as part of its implementation by professionals, especially NPs, they receive training concerning PDs (recognition and how to address them) as well as background information on the GPS and how to use it. Additionally, adequately informing older adults and informants about the GPS (e.g., type of questions, aim of questionnaire) when planning to use it might further lower the barrier to asking intimate questions. As GP[2] eloquently stated, "For every patient, I think the introduction is key to the instrument." Hence, in addition to its ability to assist in the detection of PDs in older adults (Penders et al., 2016), the GPS now also proves to be a feasible and acceptable tool for general practice. It could assist GPs and NPs in objectifying the presence of a PD and thereby enable them to adapt treatment to accommodate the specific needs of individual patients by taking their PDs into account. This might enhance the odds of a positive treatment response, avoid dropout, and possibly improve doctor–patient interactions. In addition, it could aid in their responsibility "to lead the way in destigmatizing" PDs (Horton, 2015).

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