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Clinical Staging for Personality Disorders in Older Adults

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Abstract

Objective: This scientific research aimed to investigate the feasibility of implementing a clinical staging (CS) model for personality disorders (PDs) in older adults. The CS model could provide valuable insights into the life course of personality pathology, prognosis, and treatment decisions for PDs in older adults. **Methods/Design:** The study employed an international Delphi methodology with three rounds and involved 21 experts. **Results:** Consensus was achieved on 12 out of 17 statements, confirming the viability of a CS model for PDs in older adults. The proposed model incorporates the Alternative Model for PDs, criterion A, and integrates life course information, distinguishing between chronic PD, re-emergent PD, late-onset PD, and past PD. **Conclusion:** The findings suggest that international experts support the implementation of a CS model for PDs in older adults, considering both the severity of personality functioning and the retrospective life course of PD expression.

Keywords

personality disorders, clinical staging, older adults, Delphi study, life course

Introduction

Personality disorders (PDs) are among the most common disorders addressed by mental health practitioners.[1] According to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition Text revision (DSM-5-TR),[2] they are defined by a permanent, pervasive, and inflexible pattern of thoughts, emotions and behaviours that cause severe suffering or impairment.[2] The diagnosis of PDs is associated with a shorter life expectancy,[3] poor social adjustment,[4] a high disease burden, and substantial quality of life impairment comparable to that of severe somatic disorders.[5] In addition, PDs have a high rate of comorbidity with other mental disorders, which influences the length, recurrence, and treatment response for those disorders (e.g., mood, anxiety, alcohol, substance abuse and eating disorders).[6]

Other research has extended what is known about the course of personality pathology across the lifespan and into later life.[7,8] Several studies reported a prevalence of PDs in community-dwelling older adults ranging from 7% to 14.5%,[9-12] to 22,5% in nursing home–residing older adults[13] and up to 80.0% in older adults in residential mental healthcare facilities.[14] Some studies [15-19] suggested that PDs seem to follow a dynamic course where one can distinguish 4 variants. These are: Chronic PD, Re-emergent PD, Late-onset PD and Past PD (see Figure 1). The studies

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that have been conducted on the life course progression of PDs, were both cross-sectional and longitudinal, which both have their specific drawbacks for making empirically substantiated claims about the progression.[20,21] The literature review of Debast et al[20] showed an increase in schizoid and obsessive-compulsive PDs and a decrease in Cluster B PDs (borderline, narcissistic and histrionic PD) in cross-sectional studies. The longitudinal studies that reviewed mainly borderline PD and antisocial PD, found a decrease of the prevalence of these PDs in later life (past PD).[20] The same tendencies for varying life course progressions of PDs were found in the review of Penders et al.[8] Of special interest, the Delphi study of Rosowsky et al[18] supported a late-onset PD variant, wherein personality disfunction exceeds the threshold for a first PD diagnosis in old age. Similar results were found in a recent 5-year follow-up study.[22] A re-emergent PD is conceptualized as a PD being clinically present in early adulthood, being subclinical present in middle adulthood and then re-emerging to a clinical level later in life, in response to psychosocial circumstances.[23] This has also been observed in the Collaborative Longitudinal Personality Disorders Study (CLPS),[24] where avoidant personality disorder had the highest relapse rates.[25] A chronic PD is regarded as a PD that is clinically present throughout the whole life course, in line with the concept of enduring, inflexible, and pervasive pattern of personality pathology.

Following the research on life course variants of PDs in older adults, some studies have been conducted on the level of treatment in this cohort,[26-28] suggesting that matched to certain life course variants, there are (psychotherapeutic) treatments that are more feasible than others. However promising and important, this field of research needs some additional attention to become more specific.

Most of the epidemiological studies on PDs are based on the DSM-5 criteria.[29] It is generally regarded that the DSM-5 criteria for determining PDs insufficiently take into account the context of older adults, resulting in significant over- and underdiagnosis.[30-33]

The Alternative Model for Personality disorders (AMPD), DSM-5-TR, part III[2] offers a dimensional and hybrid approach to diagnose PDs, incorporating both the level of personality dysfunction (severity measure), pathological personality traits (specific personality characteristics) and 6 PD types. Based on findings of previous studies, this approach is more age neutral and thus more applicable for the diagnosis of PDs in older adults and is likely to reduce the underdiagnosis in older adults.[16,34-36] The level of personality functioning combined with the maladaptive traits might also be more clinically useful for case conceptualisation and treatment planning for instance, as personality traits appear more stable over time than PDs.[37-39] However, it is unknown whether the AMPD leads to more adequate information for treatment selection and prognosis of PDs in older adults, which has been suggested for PDs in adults and adolescents.[40-42] A recent meta-analytic review indicated that the AMPD is more useful for treatment planning, but this is only from a clinicians point of view and is not substantiated with patient outcome data.[37,43] Moreover, there is no information on the effect of the AMPD with regard to the treatment selection for PDs in older adults. Furthermore, the AMPD insufficiently takes into account the different course patterns of PDs in older adults related to the treatment selection for this cohort.[32]

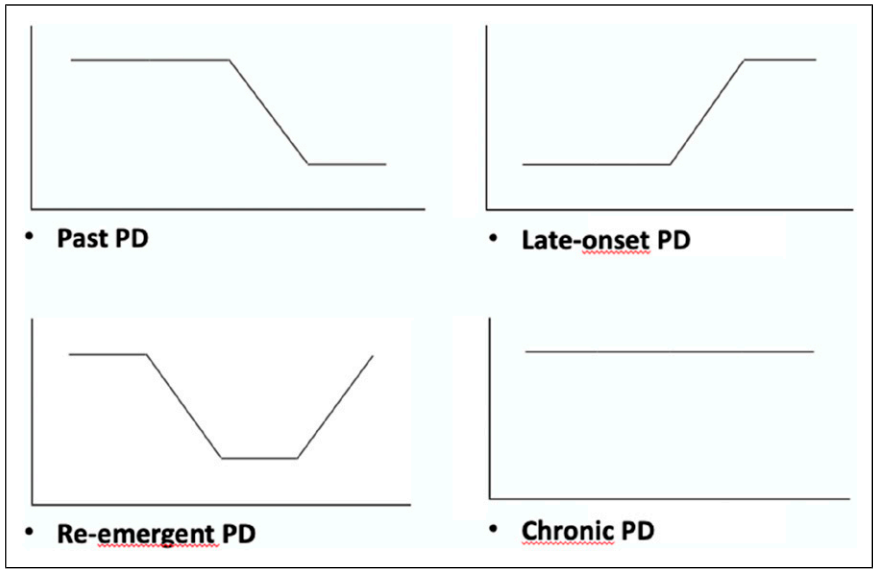

Figure 1. Variants of life course perspectives on PDs.

A possible remedy to the issues of diagnosis and treatment selection is the use of a clinical staging (CS) model for PDs; a model commonly used in many different areas of somatic healthcare.[44-46] A CS model distinguishes stages that each reflect a specific level of the disease, thus aiding the assessment of both current status and progression or regression. The pathology of a disease is assigned to a certain stage according to either their risk profile or phenotypical expression. The main advantage of such a model is that it facilitates a differentiation between initial or mild clinical phenomena and more severe illness, its severity, chronicity and prognosis.[47] Furthermore, the CS model facilitates the selection of relevant treatment specific to that stage of disease. This could first of all ensure more attention to early detection of disease, since prodromal profilers are used more often to prevent progression of diseases.[48,49] Second it can enhance the prevention of disease progression, the selection of less invasive and cost-effective interventions, and thus increase the prognostic estimates of the treatment.[32,50] Another advantage is that a CS model changes the dichotomic perspective of disease with arbitrary class distinctions (either you have it, or you don't) to a more dimensional perspective which mainly generates more useful information for the severity of diseases and treatment selection.[51,52]

In recent years a similar concept to the CS model for somatic disorders was proposed and conceptually validated as a suitable model for mental disorders including psychosis,[53,54] schizophrenia,[55-57] anxiety disorders[58] and bipolar disorders.[59-61] It has also been proposed as a model for PDs.[32,62]

The main scope of this study is to research if there is support for a framework of a CS model in older adults diagnosed with PDs based on different course variants (chronic PD, re-emergent PD, late-onset PD and past PD) as well as the AMPD criteria, as the current models for PDs have focused mainly on early detection in adolescents.[63,64] It is intended that a CS model for PDs encompasses both information about the severity of personality dysfunction and the life course expression of personality pathology. Furthermore, we want to explore some initial suggestions for the level of treatment related to the clinical stage. Because CS models for PDs are relatively novel and empirical research is lacking an expert opinion study may serve as a starting point.

Methods

Design

The methodology of the Delphi study was chosen because this has proven to be a suitable method, a starting point for an inquiry where little prior empirical knowledge is available.[65] To explore whether consensus can be reached between international experts in this field on a framework for a CS model for older adults with PDs and enhance our understanding of possible age-specific profilers of progression. The Delphi technique is a series of consecutive questionnaires or rounds, combined with semi-structured feedback that serves to find the most reliable consensus of opinion in a group of experts.[66] During the several rounds, there is no contact between the experts, to ensure objectivity. The obtained feedback is summarized anonymously after each round and distributed to the experts serving as input for the following round. The technique is iterative as the inquiries are repeated until consensus (in our case defined as a 67% of agreement) is met. Agreement, for our purpose, was taken to mean that at least two-thirds of the respondents (≥67%) "agreed" or "fully agreed" with a statement, which is a common definition of consensus.[18,27,67,68]

Participants

We conducted the Delphi study among international experts in the field of PDs in older adults or experts in the field of CS models for PDs. These 24 individuals established the expert panel. They were recruited from the fields of geriatric psychiatry, psychogeriatrics and/or personality pathology by the authors of this paper and intermediaries. In order to qualify as being an expert they needed at least 5 years of experience working in these fields and/or have conducted research (on a Doctoral level) within these fields. The focus on a specific level of expertise of the participants is important to ensure reliability of the eventual results.[69,70]

The invitation process consisted of 6 steps. First respondents were suggested through the network of 2 members of our research group (SvA and AV) and the Expert panel Personality & Older adults (EPO) and these respondents were asked to participate. Next the respondents (or intermediaries) were invited to put forward names of respondents who they believed met the aforementioned criteria. These intermediaries were considered the forerunners in their fields of expertise, because of their relevant publications and participation in (inter-)national boards. And finally, the experts that were suggested by the intermediaries were screened if they met the inclusion criteria. Eventually, 24 experts responded as willing to participate (see Figure 2).

The demographics of the respondents can be seen in Table 1. The mean years of experience with either older adults with PDs or CS was 26 years (SD 9.7 years, range 6-45 years). They had a mean age of 58 years (SD 9.5 years, range 46-77). The gender distribution was approximately equal with 10 female respondents and 11 male respondents.

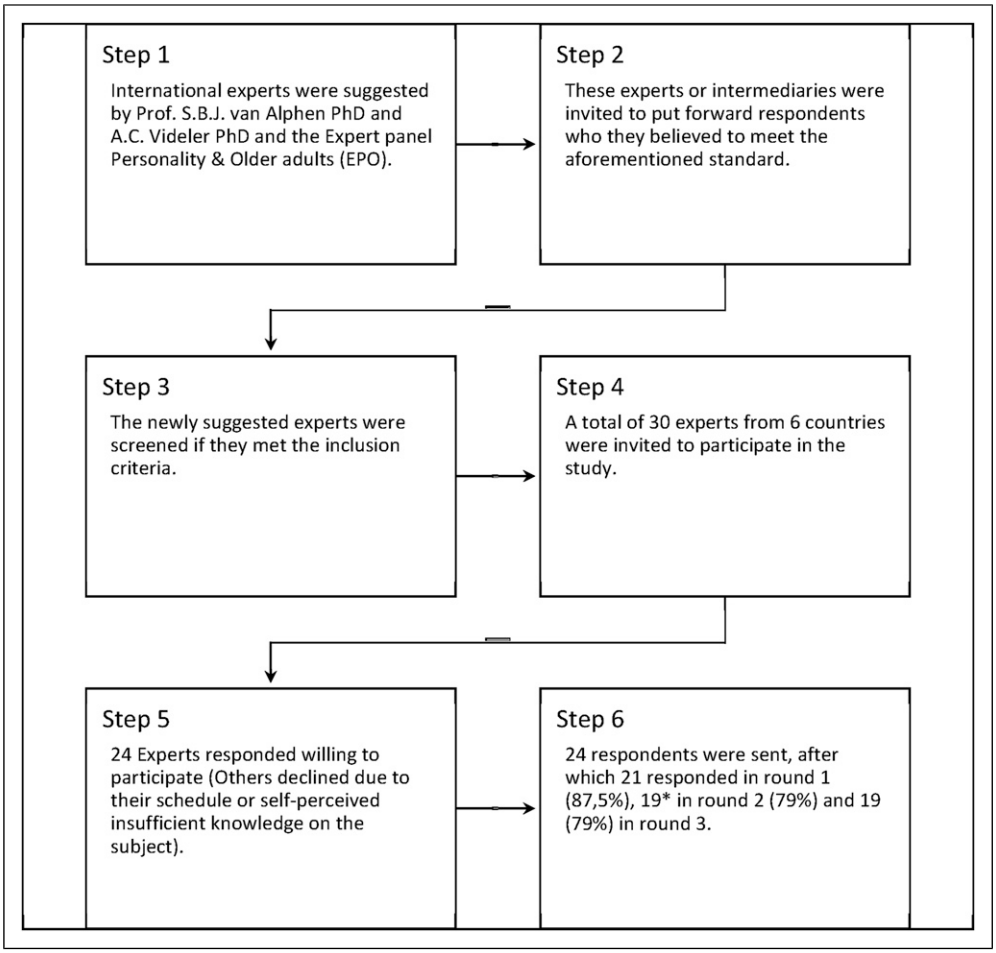

Figure 2. Flowchart of the expert inclusion process. *1 respondent submitted after the deadline.

Table 1. Participant Demographics.

	N	%
Professional categories*		
Psychiatrists	10	47
Psychologists/Psychotherapists	9	43
Scientists	6	29
Countries of origin		
The Netherlands	5	23.8
Belgium	3	14.3
Australia	6	28.6
USA	7	33.3
Field of expertise*		
PD	17	81
Psychogeriatrics	8	38
Geriatric psychiatry	6	28.5
Clinical staging	4	19

* More Than One Answer Possible.

Procedure

A Delphi study of multiple rounds of statements was projected. On top of the iterative nature of the Delphi study, specific themes were added for each round. The first round aimed at reaching consensus for the applicability of the CS model for PDs in older adults. Round 2 focused mainly on how this model may be conceptualized and round 3 explored the possibilities of future research into the model and matching treatment levels with the proposed stages.

The 17 statements divided over 3 rounds (5 in round 1, 8 in round 2 and 4 in round 3), were presented to the participants using a web-based questionnaire tool (Webropol 3.0). The respondents were asked to rate each statement on a 5-points Likert scale in terms of agreement with that specific statement. The possible responses were: "fully disagree", "disagree", "neutral", "agree", "fully agree" and "I do not have sufficient expertise to answer this question". The average score serves as a measure of the level of agreement, i.e., consensus.[71]

With each statement there was a possibility to add remarks or clarify the rating. Statements that did not meet consensus were than reformulated in the next round, using the feedback from the respondents, hence conserving the iterative nature of a Delphi study.

The statements were based on both existing CS literature on PDs and formulated by the research team (JC, SvA, AV, RS). The first round of Delphi statements was concerning the drawbacks of the current diagnostic system for PDs in older adults and the possible additional value of a clinical staging model for PDs in older adults. The statements of the second round were statements of the first round, reformulated based on the feedback of the experts and providing a possible first framework for a CS model for PDs in older adults, based on previous studies.[32,62,72] The last round of Delphi statements were intended to explore the possible interventions for each stage of the CS model based on existing literature.[26,63,73]

Because the knowledge concerning the AMPD/ICD-11 model for PDs could be unequally distributed throughout the respondents, the first round of statements was preceded by general information regarding these models and clinical staging.

Data Analysis

The data was exported from Webropol to IBM SPSS (version 25) for cross-tabulation analysis. There were no missing values. The responses that indicated the respondent had insufficient knowledge to answer the specific question were excluded from the analyses.

Descriptive analyses were used to calculate the percentage of agreement/disagreement. Optional feedback to the statements was collected as supplementary data that was clustered based on the main tenor of the feedback and reported back to the respondents as information for the reiterated statements.

Results

Of the 24 experts that agreed to participate, 21 (87.5%) responded to the first round of the questionnaire. In the second and third round 19 (79%) experts responded, 1 respondent dropped out after the first round and 1 respondent submitted the results after the deadline of round 2 and didn't submit a response for round 3.

Viability and Advantages of a CS Model for PDs in Older Adults

The main purpose of the *first round* of the Delphi was to assess consensus regarding the current system for PDs in older adults and hereafter assess the possible advantages of a CS model (see Table 2). Overall, there was consensus that the current classification systems (DSM-5, AMPD/ICD-11) lack information on the life course of PDs and on the advantages of a CS model in early intervention and treatment selection for PDs in older adults. The statement that CS models offer useful information for better outcome prediction only just failed to meet consensus. The main objection from the Expert Panel was that more data was needed to support the statement about a CS model offering useful information for outcome prediction before the respondents could agree.

Table 2. Overview of Respondent Consensus per Statement for Round 1.

	Statement	% in Agreement	# N*i*	N
1	The current systems for the classification of personality disorders (DSM-5, AMPD/ICD-11) lack information on life course related biopsychosocial factors.	95%*	1	20
2	A clinical staging model enables us to differentiate between multiple markers that indicate both the stage of disease progression and severity of PDs.	62%	0	21
3a	A clinical staging model can offer useful information for early intervention of PDs in later life.	80%*	1	20
3b	A clinical staging model can offer useful information for Improved treatment selection for PDs in later life.	85%*	1	20
3c	A clinical staging model can offer useful information for better outcome prediction regarding treatment of PDs in older adults.	65%	1	20
4	A clinical staging model for PDs in older adults offers additional information to an adolescent/adult clinical staging model, because it incorporates information from the life course from a retrospective point of view.	65%	1	20
5	A clinical staging model for PDs in older adults subsequently offers additional information to an adolescent/adult clinical staging model in regard to different psychological, social and biological markers.	45%	1	20

*These figures meet the required value for consensus (<33% or >67%); n = the response to each statement.
#N*i* = number of respondents answering they have insufficient knowledge to answer the question.

The statement regarding how a CS model helps differentiating between markers that indicate disease progression (life course) and severity, did not reach consensus. Respondents that did not agree provided the feedback that either the concept of "markers" needed to be specified or that it is not obvious that PDs are progressive.

The last 2 statements that focussed on the benefits of a CS model in older adults as compared to a CS model for adolescents/adults providing more information from a life course perspective and additional biopsychosocial markers failed to meet consensus. The main feedback here was that the CS model should not be age specific, but that age and life course information should be incorporated as a profiler for the stages.

Conceptualisation of a CS Model for PDs in Older Adults

Using the feedback mentioned above, we informed the respondents and reformulated the statements of the first round that did not meet full consensus (as can be seen in Table 3). As suggested by the respondents, the term marker was altered into profiler, as this would define the concept more clearly. In this *second round*, the 4 reformulated statements all reached consensus. The 3 newly added statements regarding life course perspective and severity of personality disfunction (using criterion A of the AMPD or the severity index of the ICD-11) as assignment criteria for the clinical stages achieved consensus.

Table 3. Overview of Respondent Consensus per Statement for Round 2.

	Statement	% in Agreement	#N*i*	N
1	A clinical staging model enables us to differentiate between stage of disease progression and severity of PDs.	68%*	4	15
2	A clinical staging model can offer useful information for better outcome prediction regarding treatment of PDs in older adults	82%*	2	17
3	The life course of the personality functioning, seen retrospectively from an older age, serves as a profiler for assignment of a PD to a certain stage.	68%*	0	19
4	A clinical staging model for PDs in older adults offers additional information to an adolescent/adult clinical staging model for psychological, social and biological profilers.	68%*	0	19
5	The life course perspective of the personality pathology in older adults is useful as a profiler in a clinical staging model for PDs in older adults.	84%*	0	19
6	Severity of personality pathology is a useful profiler in a clinical staging model for PDs in older adults.	84%*	0	19
7	Criterion A of the AMPD (DSM-5) and the severity index of the ICD-11 model for PDs are appropriate measures for the severity of impairment of personality functioning.	85%*	6	13
8	The assignment criteria as proposed in Table 4 are a suitable way to differentiate between stages.	50%	1	18

*These figures meet the required value for consensus (<33% or >67%); n = the response to each statement.
#N*i* = number of respondents answering they have insufficient knowledge to answer the question.

Table 4. Model of Clinical Stages for Personality Disorders.

Stage	Stage description	Assignment criteria *Severity of impairment in personality functioning and life course*
0	Nonspecific problems or at-risk groups, severity is low.	No or mild impairment No prior personality pathology
I	Subthreshold impairments regarding personality functioning.	Some impairment Past personality pathology
II	(First) PD diagnosis with moderate impairments in personality functioning and problems in multiple areas.	Moderate impairment Late-onset personality pathology
III	Prolonged impairment of personality functioning or recurring episodes of (partial) remission and relapse or severe personality functioning.	Severe impairment Re-emergent personality pathology
IV	Chronic full PD, with very severe impairments of personality functioning and dysfunctioning in all areas of life.	Extreme impairment Chronic personality pathology

Note. PD is Personality Disorder.

The final statement of this round was regarding the proposed CS model for older adults (see Table 4). Consensus on the statement of a proposed CS model for older adults was not achieved although only 2 respondents disagreed with the statement. Seven respondents remained neutral, with the main feedback being that they questioned if the model reflected the complex nature of PDs and specific stage definitions. Nine respondents agreed or fully agreed with the statement. A few respondents objected to the proposed link between severity and life course, debating that for instance chronic PD does not necessarily imply severe personality disfunction.

Intervention Integration in the CS Model for Older Adults

For the third and final round of the study, we adapted the CS model to also incorporate the proposed intervention tailored to that clinical stage of PDs in older adults. The model that was suggested to the respondents can be seen in Table 5.

We found consensus on the interventions proposed for stage 1 and 4 but not for stage 2 and 3 (see Table 6). The most prominent objection was that the distinction between stage 2 and 3 should be more differentiated and that in some cases patients in stage 2 may also profit from personality changing therapies.

Discussion

This Delphi study was undertaken as a first step toward constructing a framework of a CS model for older adults with PDs. The framework that consists of both disease progression (e.g., life course) and severity of the level of personality dysfunctioning (using criterion A of the AMPD or the severity index of the ICD-11), was regarded as establishing valid criteria for a CS model for older adults. One might argue that this model does not fully grasp the complex nature of PDs, but the aim was to present a model that might have clinical utility for prognosis and treatment planning.

Table 5. Proposed Clinical Staging Model Including Proposed Interventions for Older Adults.

Stage	Stage description	Assignment criteria *Severity of impairment in personality functioning and life course*	Intervention
0	Nonspecific problems or at-risk groups, severity is low.	No or mild impairment No prior personality pathology	Broad spectrum prevention
I	Subthreshold impairments regarding personality functioning.	Some impairment Past personality pathology	Targeted prevention, detection, psychoeducation and coaching of patient systems.
II	(First) PD diagnosis with moderate impairments in personality functioning and problems in multiple areas.	Moderate impairment Late-onset personality pathology	Adaption enhancing treatment
III	Prolonged impairment of personality functioning or recurring episodes of (partial) remission and relapse or severe personality functioning.	Severe impairment Re-emergent personality pathology	Personality changing therapies
IV	Chronic full PD, with very severe impairments of personality functioning and dysfunctioning in all areas of life.	Extreme impairment Chronic personality pathology	Supportive and structured interventions and behavioral management.

Table 6. Overview of Respondent Consensus per Statement for Round 3.

	Statement	% in agreement	#N*i*	N
1	The proposed intervention for stage I as mentioned in Table 5 is suitable for this specific stage.	84%*	0	19
2	The proposed intervention for stage II as mentioned in Table 5 is suitable for this specific stage.	63%	0	19
3	The proposed intervention for stage III as mentioned in Table 5 is suitable for this specific stage.	52%	0	19
4	The proposed intervention for stage IV as mentioned in Table 5 is suitable for this specific stage.	74%*	0	19

*These figures meet the required value for consensus (<33% or >67%); *n* = the response to each statement.
#N*i* = number of respondents answering they have insufficient knowledge to answer the question.

The results from this study support that there is a need to look beyond the current diagnostic systems for diagnosis and treatment selection for PDs in older adults. The respondents agreed that the CS model has face value and incorporates important information that the current diagnostic systems lack. Also, the CS framework is considered an accessible and straightforward tool, well-suited to clinical practice by providing a useful basic categorization for decision making and not a substitute for the existing diagnostical systems. However, the link between life course and severity of personality dysfunctioning was met with skepticism by some respondents, who suggested there is no such link, and that chronic PD does not necessarily imply severe personality disfunction. The AMPD already made a shift from this proposition, stating a relative stability of personality functioning over time.[2] However, research shows that there are several variants of life course PD presentations over time,[20] as is also seen in clinical practice.

Another topic from the feedback of the respondents is the differentiation of interventions for stage II and stage III, i.e. adaptation-enhancing treatment for late onset PDs, and personality changing treatment for re-emergent PDs. Previous expert opinion and case studies regarding treatment for PDs in older adults have indicated that the proposed interventions seem suitable for these stages.[26-28] Whether this is empirically substantiated should be examined in future research.

The current CS model for older adults (see Table 5) is to the utmost extent comparable to the CS models for PDs as described Hutsebaut et al,[32] only differing in the extra life course information that is available for older adults. It builds on the CS model of Chanen et al,[62] however is less segmented for practical usability. The CS model for older adults differs to some extent from other CS models in mental health care[47,59,74] as it leans less on biological information and offers no direct pharmacological treatment options. This differs from CS models used in medicine. For example, in oncology, where CS models originated, there are clear biomarkers available to differentiate stage status/progression (cancer type/severity, presence in lymph node and widespread metastases). In most mental disorders these biomarkers are lacking or only partially explanatory,[60,61,75] especially in PDs.[76] Therefore, we used severity, comorbidity and social decay as factors, which gives the model a different customized design. Whether this alteration is valid, should be examined in future research.

The current study has a few limitations. First, the empirical value of a Delphi study can be debated[66]; however, it is suggested that it scores highly on content, face and concurrent validity.[71] Furthermore, it has proven to be a valid research design to test an explorative hypothesis on a given theoretical concept, when empirical evidence is lacking.[65,77] This research design has already been implemented in similar explorative studies.[18,27,78,79]

Second, the sample size is relatively small (N = 21), and the respondents were from a narrow range of countries (N = 4), which makes it less able to generalize the results. This reflects the scarceness of experts in this novel field. Research showed that previous Delphi studies incorporated between 15[80] and 60[81] participants. Most methodological studies on the Delphi method are advised to include at least 15-20 participants or respondents,[82,83] which makes our number of respondents within an acceptable range. The way we operationalized the Delphi technique ensures that there is no effect of influence between the respondents, so that they are able to independently form their judgement about the statements. Moreover, we used very strict inclusion criteria and a very specific level of expertise.

Third, we slightly deviated from the strict iterative character of a Delphi study by adding new statements in the subsequent rounds. This however was deliberately chosen to collect as much information as possible from this inquiry. In response to 2 statements (see Table 3), several respondents replied they thought they had insufficient knowledge on the subject, which decreases the validity of the response to these statements. These statements regarded stage differentiation in the CS model and using criteria A of the AMPD or the severity index of the ICD-11 for differentiation. This is a consideration for future research, to incorporate this knowledge as an inclusion criterion or provide enough information to ensure the respondents have sufficient knowledge to participate. For this study it complicates the interpretation of the findings, whether it represents consensus on the AMPD specifically or the concept of a severity index as a profiler in a clinical staging model.

As mentioned above, statement 8 of round 2 failed to meet consensus. We provided the respondents with more information leading up to the third round of the Delphi, based on the feedback of the respondents and added the proposed interventions per stage, focusing on usability in clinical practice. We therefore made a deliberate choice not to reiterate this statement on its own in round 3. It is notable that we detected a discrepancy between the reaction to the separate statements, where we found consensus on both life course and severity as profilers, but not for the statement of the model as a whole. This finding requires further investigation, for which a cross-validation study is needed. Furthermore, validation is required to see if the 2 profilers mentioned are sufficient to differentiate the stage of disease progression in clinical staging.

One of the most prominent points of feedback received in this Delphi study was that there is a need for more data to substantiate the statements. The intention of this Delphi study was to see if the CS framework for older adults was seen as viable. The next step should be to replicate this study taking into account the limitations mentioned above.

Thereafter the following step would be to verify the validity and reliability, and to investigate the psychometric quality and clinical utility of the model in an empirically prospective study using case vignettes, which is currently in preparation.[84] Following this, the reliability and usability should be examined, preferably in longitudinal or cohort studies. A first step in examining the clinical utility is also in preparation.[85]

Overall, this study provides solid support for empirical research on a clinical staging model for personality disorders. Examination of these disorders from a life course perspective, together with factors of severity, co-morbidity and social decay can serve to offer important guidance in terms of the timing of interventions and selection of treatments in clinical practice.

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