Patient-Generated Subjective Global Assessment – Innovation from Paper to Digital App

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BACKGROUND

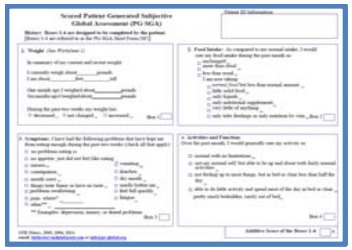
The Patient-Generated Subjective Global Assessment (PG-SGA), including the PG-SGA Short Form (SF, aka 'abridged'), was originally developed in the mid 1990's as a scored, patient (pt) self-reported, paper-based instrument and has been widely validated.

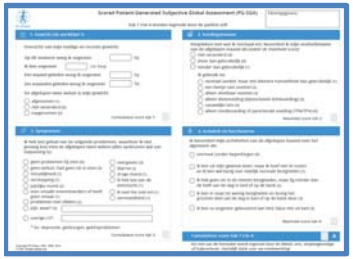
The PG-SGA has been used for screening, assessment and monitoring of malnutrition, triaging for multimodal intervention and for evaluation of clinical and health economic outcomes.

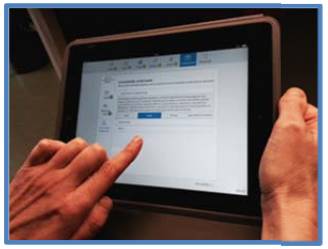
There have been ad hoc translations, often with permission of the originator (Ottery) but broad international use requires consistent, medically accurate, and certified translations.

The PG-SGA (or PG-SGA SF) is known to be quick and easy. Current advances in technology could further improve and facilitate use of this global patient screening and assessment tool based on standardized scoring algorithms, with limitation of inter-observer variability and facilitation of international collaboration and communication.

We aimed to develop a user friendly, cross-culturally validated, multilingual digital app and resources to support the clinical and research applications of the PG-SGA (SF) and Pt-Global app in the context of a global centralized database and research consortium.







www.pt-global.org or info@pt-global.org

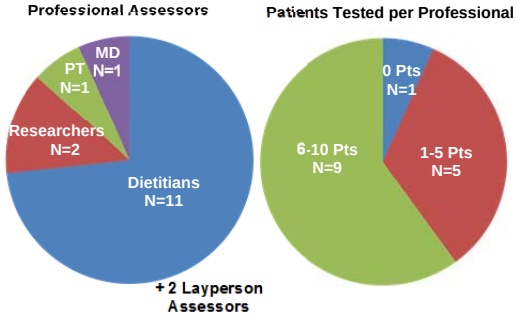
METHODS

After completion of a Dutch PG-SGA cross-cultural adaptation project, a digital app based on the English and Dutch PG-SGA was developed.

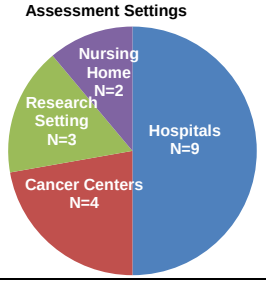
Steps included:

1. Development and testing of standardized scoring and decision-making algorithms based on the validated PG-SGA scoring system
2. Compatibility with iOS, Android and WindowsPhone platforms
3. Development and pilot testing of prototype by an international test panel (n=17; professionals testing the app on patients as part of routine care process, researchers, and lay persons) from Australia, Belgium, Canada, Norway, Sweden, The Netherlands and USA regarding:
   a. Evaluation of the prototype on lay-out, user friendliness, relevance and time of completion
   b. Improvement of prototype based on input by panel and release of PT-Global app v1.0
4. Launch of app and supportive website at www.pt-global.org on 12 June 2014, including complimentary introductory use
5. International education activities
6. Digital presence through Twitter, Facebook, LinkedIn and YouTube
7. Launch of web-based version of the app on 15 September 2014.

RESULTS: Assessors, Numbers Assessed, Settings



53% and 47% of professional assessors were PG-SGA experienced and naïve, respectively.



RESULTS: Ratings, Completion Time

Patient Section

- 88% rated the app's layout as very good or good with feedback: calm, professional, clear, intuitive, easy
- 88% rated the app's "user friendliness" as good
- 75% rated app's flow/user interface as (very) good
- 88% of the assessors completed the screens for the patients BUT patients when allowed, started completing the app spontaneously
- Feedback on layout
  - Font size too small on tablet → to be enlarged by spreading fingers
  - Difficult to see on smaller smart phone → designed for tablet or large screen smart phone
- Assessors estimated time to complete patient screens:

Estimated Time	Percentage (n)
0-<5 minutes	67% (10)
5-10 minutes	27% (4)
>10 minutes	6% (1)

Professional Section

- 88% completed the professional section in <10 minutes
- 80% rated easiness of complete professional section as (very) easy

RESULTS: Feedback

User-friendliness

- Easy to understand, works naturally
- Lost connection one time; had to fill in all items again
- No clear patient part; subtabs in Professional screen not clearly visible
- Help function / explanatory pictures/ missing graphics
- Need for instruction prior to use – in app; pictures or cartoons
- Training necessary for physical exam

Patient Screens

- Patients started completing spontaneously
- Assumption that Results screen was to be shown to patient independently
- Language too difficult for patient
- Difficulty with touch screen
- Questions about content

Results Screen

Professional Rating	Percentage (n)
(Very) useful	80% (12)
(Very) relevant	80% (12)
Clear	47% (7)

- Design: 100% liked the design although layout issues with email identified.

Use: *Clinical practice*: 80% would consider the app appropriate for use in clinical practice if suggestions were addressed. *Research*: 43% considered the app appropriate for research; 43% maybe.

CONCLUSIONS

- Layout, user-friendliness, relevance and appropriateness of the digital application of the PG-SGA were rated as (very) good.
- The majority of professionals, researchers, and laypersons consider the app appropriate for use in clinical practice and research.

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Disclosures: No author has relevant disclosures, with the exception of Dr. Ottery who is financially supporting the PG-SGA/Pt-global Platform at this time but is also co-owner.