

### Introduction

Linguistic validation (LV) aims to ensure well-comprehended, culturally relevant COA translations for use in global clinical trials.

An important role of LV is identifying solutions for difficult-to-understand or translate terminology.

The terms "ashamed", "self-conscious", and "embarrassed" often co-occur within COAs and even individual items (see Table 1).

Cognitive interview feedback suggests these terms overlap conceptually and in their translations, with potential implications for patient comprehension and data poolability.

Here we present an investigation of the conceptual structure and translatability of these three terms based on the results of a survey of professional LV translators.

**Table 1: Term Use in PRO context**

Multiple terms in one item	Over the last week, how embarrassed or self-conscious have you been because of your skin?
Multiple terms in one item	Considering your psoriatic arthritis overall, circle the number that best describes the level of embarrassment and/or shame due to your appearance experienced during the last week.
Terms split across several items	A. Over the past week, how often did you feel self-conscious about your hair loss? B. Over the past week, how often did you feel embarrassed about your hair loss?

Examples of items found in PROs that use the target terms in different ways (multiple in one item; separated across several items).

**Table 2: Translation Agreement between Linguists**

Language-Country	A	SC	E	Translators	Agreement x Language
1. Afrikaans-South Africa	100%	100%	0%	2	67%
2. Bengali-India	100%	100%	67%	3	89%
3. Dutch-Belgium	100%	75%	50%	4	75%
4. Dutch-the Netherlands	75%	50%	0%	4	42%
5. Finnish-Finland	100%	0%	67%	3	56%
6. French-Canada	100%	0%	0%	2	33%
7. French-France	100%	100%	50%	4	83%
8. German-Austria	100%	0%	0%	2	33%
9. German-Germany	0%	0%	0%	2	0%
10. Greek-Greece	0%	0%	0%	3	0%
11. Gujarati-India	0%	0%	0%	2	0%
12. Hebrew-Israel	100%	0%	100%	2	67%
13. Italian-Italy	0%	0%	100%	2	33%
14. Portuguese-Brazil	75%	50%	75%	4	67%
15. Romanian-Romania	100%	0%	100%	2	67%
16. Spanish-Argentina	100%	67%	0%	3	56%
17. Spanish-Spain	100%	100%	67%	3	89%
18. Swedish-Sweden	100%	100%	100%	2	100%
19. Turkish-Turkey	0%	0%	100%	2	33%
20. Ukrainian-Ukraine	0%	67%	0%	3	22%
Agreement x Term	69%	46%	43%		51%

**Table 7: Sample definitions**

Plain-language definitions of the three terms based on thematic analysis of linguists' responses are presented below. These can be considered for use in PROs as definitions or elaborations of the terms to aid uniformity of comprehension across languages and cultures:

Term	Plain-language definition
Ashamed (A)	Being ashamed means feeling bad about something you did, said, or even something about yourself, especially when you believe it was wrong or not acceptable. It often includes a mix of guilt, embarrassment, and regret, and can make you wish you had acted differently or could hide from the situation.
Self-conscious (SC)	Being self-conscious means you are very aware of yourself—especially how you look or act—and worried about what other people might think. It often makes you feel shy, nervous, or uncomfortable, like you're being watched or judged. This can cause you to hesitate or feel unsure of yourself in social situations.
Embarrassed (E)	Being embarrassed is when you feel uneasy, awkward, or flustered, especially in front of other people. It often comes from a small mistake, unexpected attention, or a situation that makes you feel out of place. The feeling is usually brief and may include blushing, shyness, or wanting to avoid the spotlight.

### Methods

Translators (n=83; 46 Female) representing 38 countries and 34 languages were surveyed on the terms "ashamed," "self-conscious," and "embarrassed."

Questions addressed each term's

- language specific meaning
- cultural relevance / difficulty of interpretation
- translations
- conceptual distinction from the other terms
- and difficulty of translation

Translators averaged 23.8 years of professional experience, and 89% held college or graduate degrees.

### Results

Linguists provided 51 unique primary translations for "ashamed", 59 for "self-conscious", and 65 for "embarrassed".

In cases where there were multiple linguists reporting for a language, they agreed on the primary translations 69% of the time for "ashamed", 46% of the time for "self-conscious", and 43% of the time for "embarrassed" (see Table 2).

Primary translations for the terms provided by linguists were identical in 13 cases for "ashamed" and "embarrassed", and 2 cases for "self-conscious" and "embarrassed" (see Table 3).

Linguists also provided secondary definitions for the terms: 27 for "ashamed", 39 for self-conscious, and 43 for "embarrassed". 32/59 linguists who provided these secondary definitions said that their use was contextually dependent, with the others being classified as less common but fully interchangeable variants.

**Table 3: Identical Translations for Different Terms**

Language-Country	Ashamed	SC	Embarrassed	A/SC	SC/E	A/E
1. Afrikaans-South Africa	skaam	-	skaam	-	-	1
2. Bengali-India	লজজতি	-	লজজতি	-	-	1
3. Catalan-Spain	avergonyit	-	avergonyit	-	-	1
4. Cebuano-Philippines	nauwaw	-	Nauwaw	-	-	1
5. Dutch-Belgium	beschaamd	-	beschaamd	-	-	1
6. Dutch-The Netherlands	Beschaamd, verlegen	-	Beschaamd, verlegen	-	-	1
7. French-France	-	géné	géné	-	1	-
8. Galician-Spain	avergoñado	-	avergoñado	-	-	1
9. Greek-Greece	-	αμήχανος	αμήχανος	-	1	-
10. Greek-Greece	Ντροπιασμένος	-	Ντροπιασμένος	-	-	1
11. Portuguese-Brazil	envergonhado	-	envergonhado	-	-	1
12. Portuguese-Brazil	envergonhado, constrangido	-	envergonhado, constrangido	-	-	1
13. Russian-Ukraine	мне стыдно	-	мне стыдно	-	-	1
14. Spanish-Argentina	avergonzado	-	avergonzado	-	-	1
15. Spanish-Spain	avergonzado	-	avergonzado	-	-	1
Totals				0	2	13

### Familiarity and Translatability

"Self-conscious" was rated by linguists as the most difficult concept to translate (30% endorsing "difficult" or "very difficult"), followed by "embarrassed" (13%) and "ashamed" (11% see Table 4).

89% and 83% of linguists indicated translations for "ashamed" and "embarrassed" respectively would be familiar to patients, falling to 60% for "self-conscious" (see Table 5).

Free responses confirmed "self-conscious" as the most difficult term conceptually and for translation (N=15), and emphasized context dependence of meanings / translations and need for elaboration of all terms (N=10).

Linguists were also asked about the extent to which the terms were conceptually overlapping and interchangeable; responses confirmed both a high degree of overlap within languages, and varying but high degrees of interchangeability of use contexts for the terms – see Figures 1 & 2.

**Table 4: Difficulty of Translation**

Difficulty Level	Ashamed	Self-conscious	Embarrassed
Not at all difficult	70% (56)	34% (27)	60% (48)
A little difficult	19% (15)	36% (29)	28% (22)
Difficult	10% (8)	16% (13)	9% (7)
Very difficult	1% (1)	14% (11)	4% (3)

The difficulty-of-translation table highlights that ashamed was considered the least difficult term to translate, with 56 respondents rating it "Not at all difficult." Conversely, self-conscious was deemed the most difficult concept to translate (30% endorsing "difficult" or "very difficult"), followed by embarrassed (13%) and ashamed (11%).

**Table 5: Linguist's Perception of Familiarity of Concepts / Translations to Patients**

Familiarity Level	Ashamed	Self-conscious	Embarrassed
Very familiar	89% (71)	60% (48)	80% (64)
Familiar	10% (8)	23% (18)	18% (14)
A little familiar	1% (1)	13% (10)	3% (2)
Not at all familiar	0	5% (4)	0

### Thematic Analysis of Linguist Provided Definitions

Linguists were asked to provide their own definitions of the three terms. Thematic analysis (TA) of linguist-provided definitions revealed 6 dominant themes for each term (see Table 6). TA results of linguist-provided definitions were used to generate optimized plain-language definitions of the terms for use as PRO elaborations (see Table 7).

### Localization and Context

Across many comments, linguists emphasized:

- Correct translation is highly context dependent. In questionnaires where context is minimal, ambiguity increases. Many cultures treat "shame" and "embarrassment" as different degrees of the same construct.

Linguists stated that many languages (N=15) do not have a direct equivalent for "self-conscious", even noting that it is borrowed from English in some locales (e.g., Dutch, Cebuano), or requires descriptive phrasing for accurate translation of the concept.

**Table 6: Thematic Analysis of Three Terms**

Self-conscious			Ashamed			Embarrassed		
Thematic Category	Description	Count (n)	Thematic Category	Description	Count (n)	Thematic Category	Description	Count (n)
Heightened Self-Awareness	Excessive or intensified awareness of oneself; hyper-focus on the self	41	Moral Self-Evaluation / Wrongdoing	Shame framed as moral failure, wrongdoing, violation of conscience, ethical lapse	47	Social Awkwardness, Exposure, Awkward Affect	Embarrassment arising in social situations, being seen or noticed by others; blushing, sheepishness, shyness	63
Social Evaluation & Being Observed	Concern about others' judgments, being watched, evaluated, or perceived	38	Shame-Guilt Overlap	Explicit linking or conflation of shame with guilt, remorse, contrition	39	Temporary / Situational Nature	Short-lived, momentary, context-specific emotion	36
Discomfort, Nervousness & Unease	Feeling ill at ease, uncomfortable, nervous, not relaxed	34	Threat to Self-Image / Identity	Shame as damage to self-orth, identity, or ideal self; self-condemnation	28	Minor Norm Violations & Faux Pas	Triggered by small mistakes, slips, inappropriate or unexpected acts	33
Insecurity, Low Confidence & Shyness	Lack of confidence, uncertainty, timidity, trait-like shyness	29	Social Judgment & Norm Violation	Shame arising from social exposure, judgment, breaking norms, being seen by others	24	Mild Negative Affect (Less Than Shame)	Explicitly described as lighter, softer, or weaker than shame	28
Appearance & Behavior Monitoring	Preoccupation with looks, body features, actions, perceived flaws	24	Embarrassment / Situational Discomfort	Lighter shame experiences: awkwardness, blushing, shyness, unease	22	Discomfort & Ill Ease	Feeling uneasy, uncomfortable, not at ease	26
Inhibition & Holding Back	Reduced spontaneity, hesitation, restraint, behavioral withdrawal	17	Internal Emotional Pain	Shame described as deep, lingering, painful, emotionally distressing	18	Concern About Others' Opinions	Fear of being laughed at, judged, or thought less of	24

### Conclusions

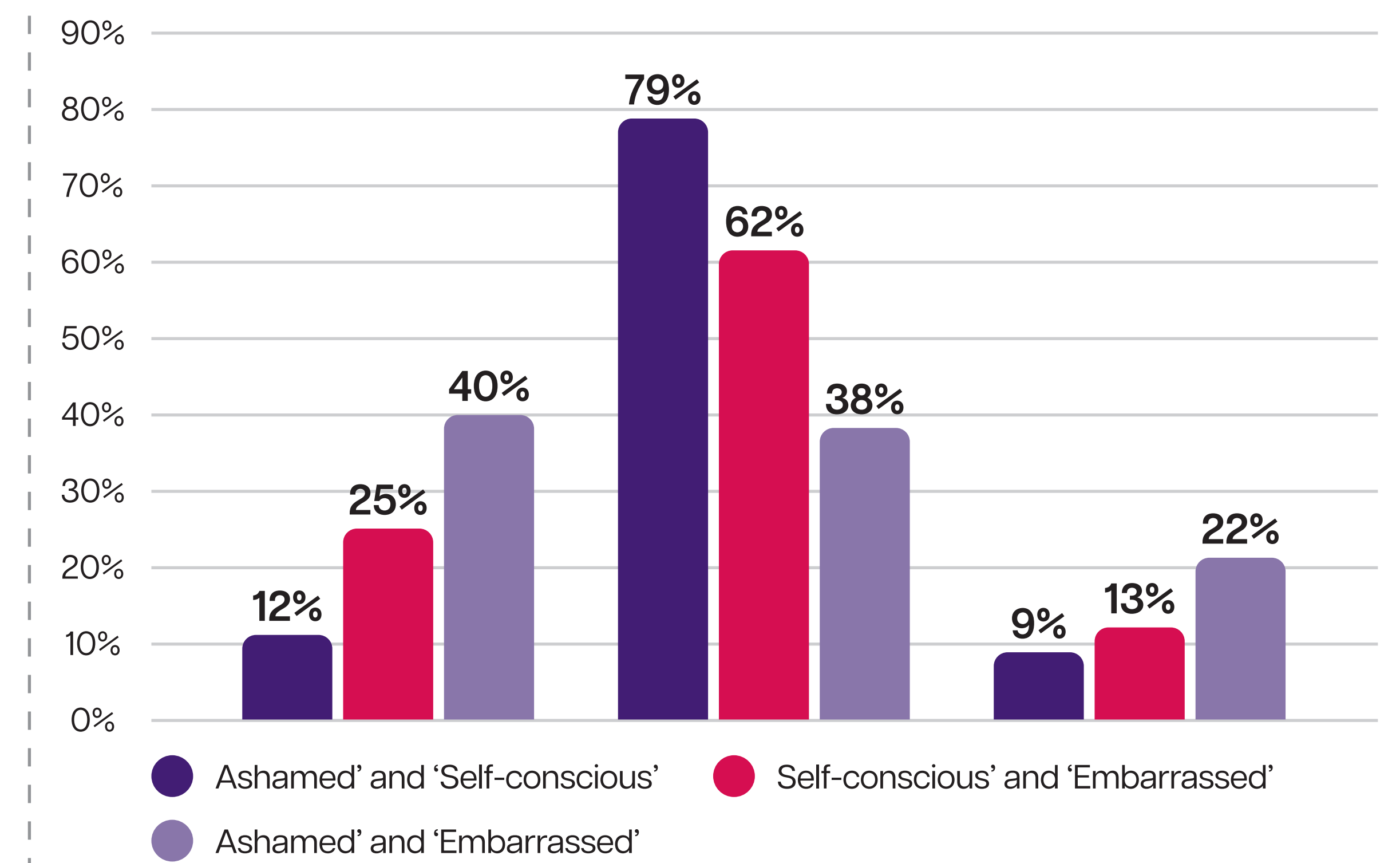
Survey results reveal significant conceptual overlap between the target terms and high levels of interchangeability in use, along with variation in perceived familiarity to patients and translatability.

Linguists provided a wealth of primary translations for the terms, as well as many distinct secondary translations, whose use is furthermore frequently contextually dependent.

These data necessitate careful consideration of these terms' use contexts within PROs, and, ideally, elaboration and separation of the concepts (i.e., across multiple items) to avoid data validity issues.

As a starting point, we provide plain-language and distinct definitions for each term for use in PROs to promote uniformity of interpretation by patients and standardization of how these terms are used.

**Figure 1: Interchangeability of Terms**



According to linguists, the terms "ashamed" and "embarrassed" were the most likely to be used interchangeably, with "ashamed" and "self-conscious" being the least interchangeable. These results align with other feedback indicating the greatest conceptual overlap / likelihood of identical translations to be found for "ashamed" and "embarrassed".

**Figure 2: "Are the translations for "ashamed", "self-conscious", "embarrassed" conceptually distinct in your language?"**

