Integration of Migrants: Annotated Analysis

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Abstract

Abstract goes here.

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Word count: 3

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Data Preparation

Import Data

In a first step we import the raw data of the review from the shared coding Google Sheet. We, primarily, import the database of the scale validations and the review of the empirical papers. Beyond that we also import the separate lists of codes used.

Prepare Data Frames

We then go on to clean the data sets in order to use them in later analyses and keep track of exclusion filters.

Analysis

Scale Validations

The first data set we assess is a database of scale validations. We bring together the scales suggested in previous reviews as well as validation studies we identified in our own review. Throughout our literature review we found five major reviews that reviewed the measurement of acculturation (Celenk & Van de Vijver, 2011; Maestas, 2000; Matsudaira, 2006; Wallace et al., 2010; Zane & Mak, 2004).

Exclusions

Taken together these five reviews collected a total of 197 scales, of which 75 were duplicates. From our own review we added 25 additional validation studies. After removing duplicates this meant that we considered a total of 122 unique scales for our

coding. Of these scales we ultimately had to exclude 41, because they were either not accessible or did not fit the the topic of our review (see Table 1).

The remaining 87 scales are listed in the HTML version as well as on OSF (table too large for PDF).

Interest over time

Of the scale we included we also plotted the publication years of the scale validations in order to gain an understanding of the interest in scale development over time.

Sample

The study sample a scale is validated in can be fairly important if one plans to use a scale for a context-specific phenomenon such as a cultural adaptation of two specific cultures. We, therefore, coded the type of sample the original authors used in their validation studies (see Figure 2).

Dimensions

One major focus of our coding efforts was put on identifying the phenomenological dimensions that were assessed by each individual scale. Based the ABCD framework of human experiences, we independently distinguished between emotional (affect), behavioral, cognitive, and need-based measurements of of acculturation. Examples of concepts that fell into the individual dimensions are shown in Table 2:

Note that this also means that we do not include scales that measure aspects of acculturation that do can be measured without consideration of the individual's experiences, such as physical changes, cultural changes, or societal changes.

Figure 3 shows how often each of the dimensions was coded.

We also plot how often each of the dimensions were measured together. A bar graph of the compound frequencies is shown Figure 4 and a network graph of frequencies and co-occurrences is shown in Figure **??**.

Software Information

For our analyses we used R [Version 4.0.3; @] and the R-packages *}base* [@}R-base], *bookdown* [Version 0.21; Xie (2016)], *citr* [Version 0.3.2; Aust (2019)], *data.table* [Version 1.13.0; Dowle and Srinivasan (2020)], *dplyr* [Version 1.0.2; Wickham et al. (2020)], *ellipse* [Version 0.4.2; Murdoch and Chow (2020)], *forcats* [Version 0.5.0; Wickham (2020a)], *Formula* [Version 1.2.3; Zeileis and Croissant (2010)], *GGally* [Version 2.0.0; Schloerke et al. (2020)], *ggplot2* [Version 3.3.2; Wickham (2016)], *ggspatial* [Version 1.1.4; Dunnington (2020)], *ggstatsplot* [Version 0.6.5; Patil (2018)], *ggthemes* [Version 4.2.0; Arnold (2019)], *ggwordcloud* [Version 0.5.0; Le Pennec and Slowikowski (2019)], *gsheet* [Version 0.4.5; Conway (2020)], *gsubfn* [Version 0.7; G. Grothendieck (2018)], *haven* [Version 2.3.1; Wickham and Miller (2020)], *Hmisc* [Version 4.4.1; Harrell Jr et al. (2020)], *hrbrthemes* [Version 0.8.0; Rudis (2020)], *ISOcodes* [Version 2020.3.16; Buchta and Hornik (2020)], *kableExtra* [Version 1.2.1.9000; Zhu (2020)], *knitr* [Version 1.30; Xie (2015)], *lattice* [Version 0.20.41; Sarkar (2008)], *lubridate* [Version 1.7.9; Grolemund and Wickham (2011)], *mada* [Version 0.5.10; Doebler (2020)], *matrixStats* [Version 0.57.0; Bengtsson (2020)], *mvmeta* [Version 1.0.3; Gasparrini et al. (2012)], *mvtnorm* [Version 1.1.1; Genz and Bretz (2009)], *naniar* [Version 0.6.0; Tierney et al. (2020)], *networkD3* [Version 0.4; Allaire et al. (2017)], *pander* [Version 0.6.3; Daróczi and Tsegelskyi (2018)], *papaja* [Version 0.1.0.9997; Aust and Barth (2020)], *plotly* [Version 4.9.2.1; Sievert (2020)], *proto* [Version 1.0.0; Gabor Grothendieck et al. (2016)], *psych* [Version 2.0.9; Revelle (2020)], *RColorBrewer* [Version 1.1.2; Neuwirth (2014)], *readxl* [Version 1.3.1; Wickham and Bryan (2019)], *remedy* [Version 0.1.1; Fay et al. (2020)], *reshape2* [Version 1.4.3; Wickham (2007)], *rgeos* [Version 0.5.5; Bivand and Rundel (2020)], *rmarkdown* [Version 2.6; Xie et al. (2018); Xie et al. (2020)],

rmdfiltr [Version 0.1.3; Aust (2020)], *rnaturalearth* [Version 0.1.0; South (2017a); South (2017b)], *rnaturalearthdata* [Version 0.1.0; South (2017b)], *RSQLite* [Version 2.2.1; Müller et al. (2020)], *rworldmap* [Version 1.3.6; South (2011)], *sp* [Version 1.4.4; Dunnington (2020); Patil (2018); Pebesma and Bivand (2005)], *sqldf* [Version 0.4.11; G. Grothendieck (2017)], *stringi* [Version 1.5.3; Gagolewski (2020)], *stringr* [Version 1.4.0; Wickham (2019)], *survival* [Version 3.1.12; Terry M. Therneau and Patricia M. Grambsch (2000)], *tibble* [Version 3.0.4; Müller and Wickham (2020)], *tidyr* [Version 1.1.2; Wickham (2020b)], *tinylabels* [Version 0.1.0; Barth (2020)], *visNetwork* [Version 2.0.9; Almende B.V. et al. (2019)], and *wordcloud* [Version 2.6; Le Pennec and Slowikowski (2019); Fellows (2018)].

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Table 1

Reasons for Exclusion

Exclusion Reason	Frequency
not migration	14
items not included	8
search pending	5
not accessible	4
not found	3
not acculturation	2
majority focussed	1
not found probably the same as Tsai et al. 2000	1
only language (no scale)	1
same as S-029	1
uses other scale	1

Table 2

Examples for Dimensions of Acculturation Measurements.

Dimension	Concept	Wording
Affect	belonging, loneliness, satisfaction	"I feel . . . ,"
Behavior	language learning, media consumption, voting	"I do . . . ," "I speak . . . ," "I meet . . . "
Cognition	cultural identification, cultural values, attitude towards majority	"I prefer . . . ," "I think . . . ," "I identify as . . . "
Desire	needs, goals, wants	"I want . . . ," "I would like to . . . ," "I need . . . "

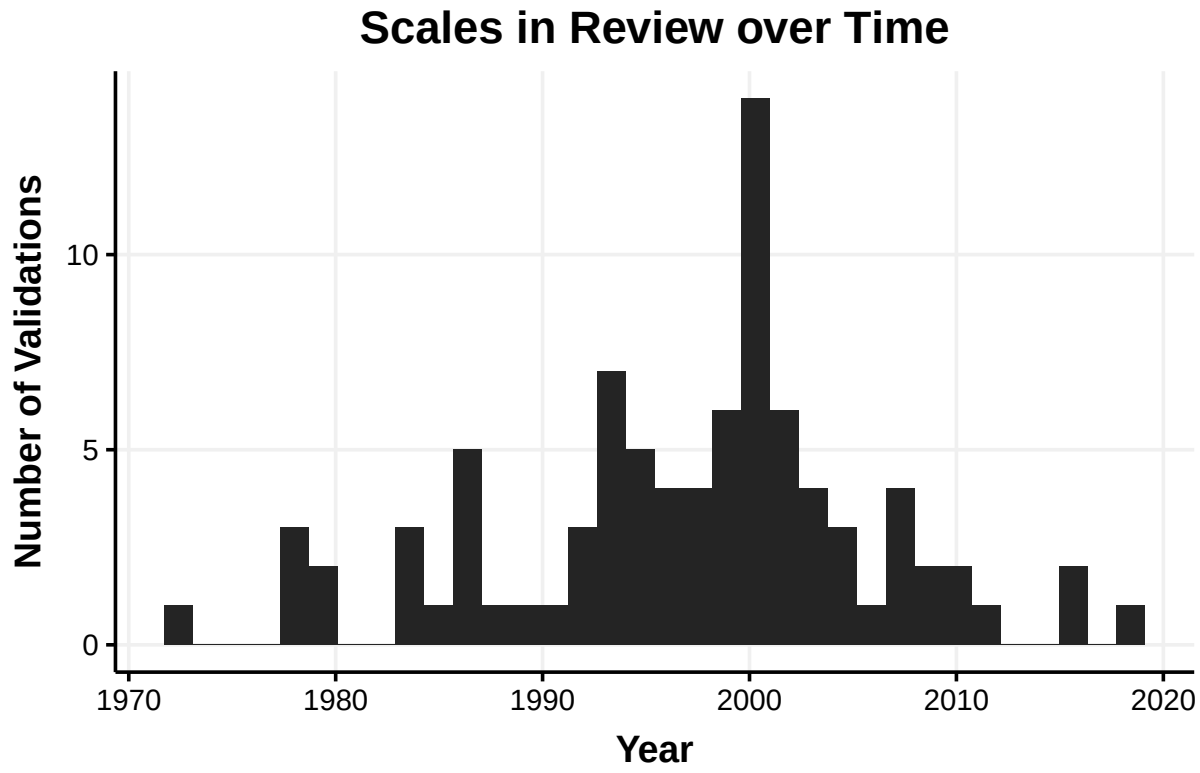

Figure 1

Histogram of Scale Validations over Time.

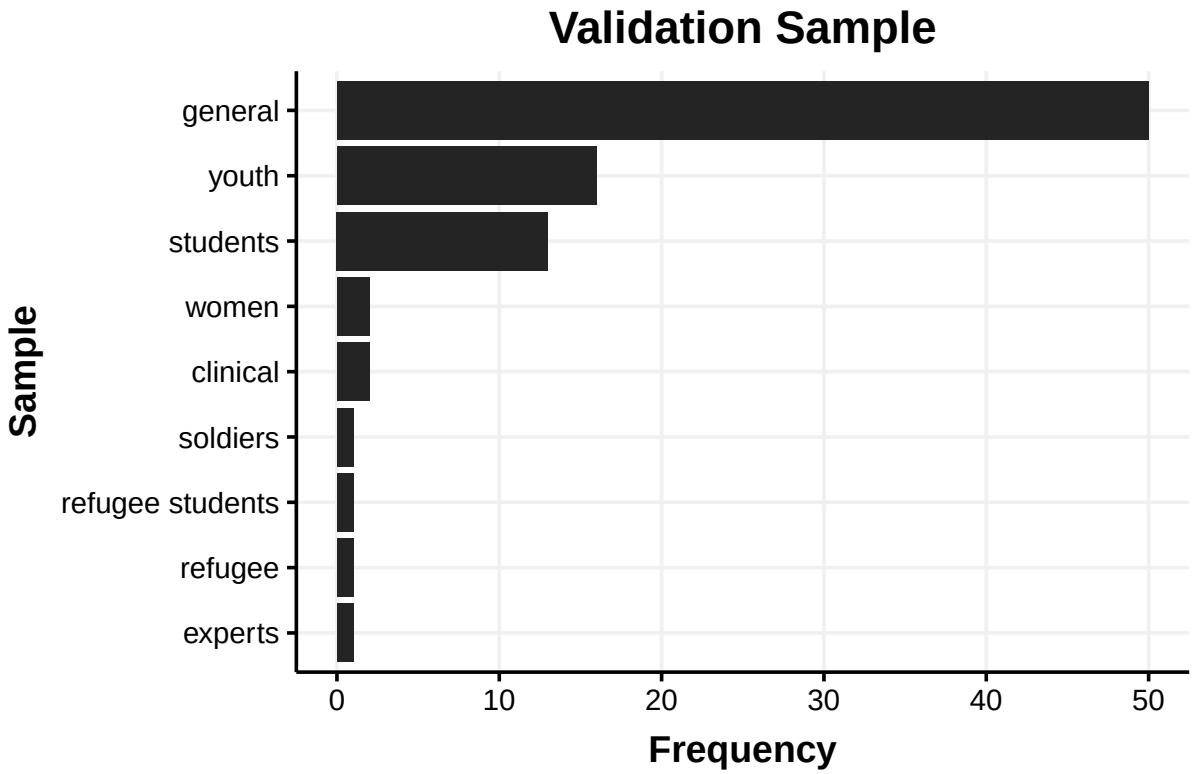

Figure 2

Bar graph of the study samples used in the original validation studies.

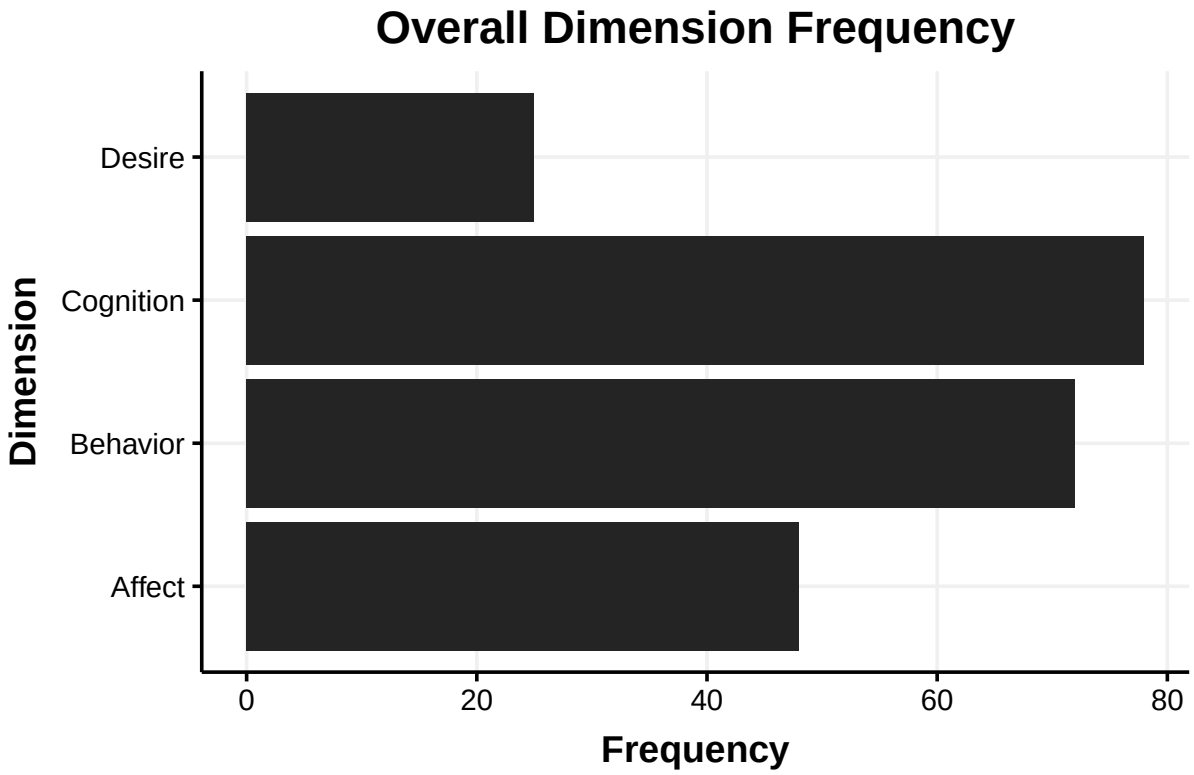

Figure 3

Bar graph of the counts for each of the dimensions.

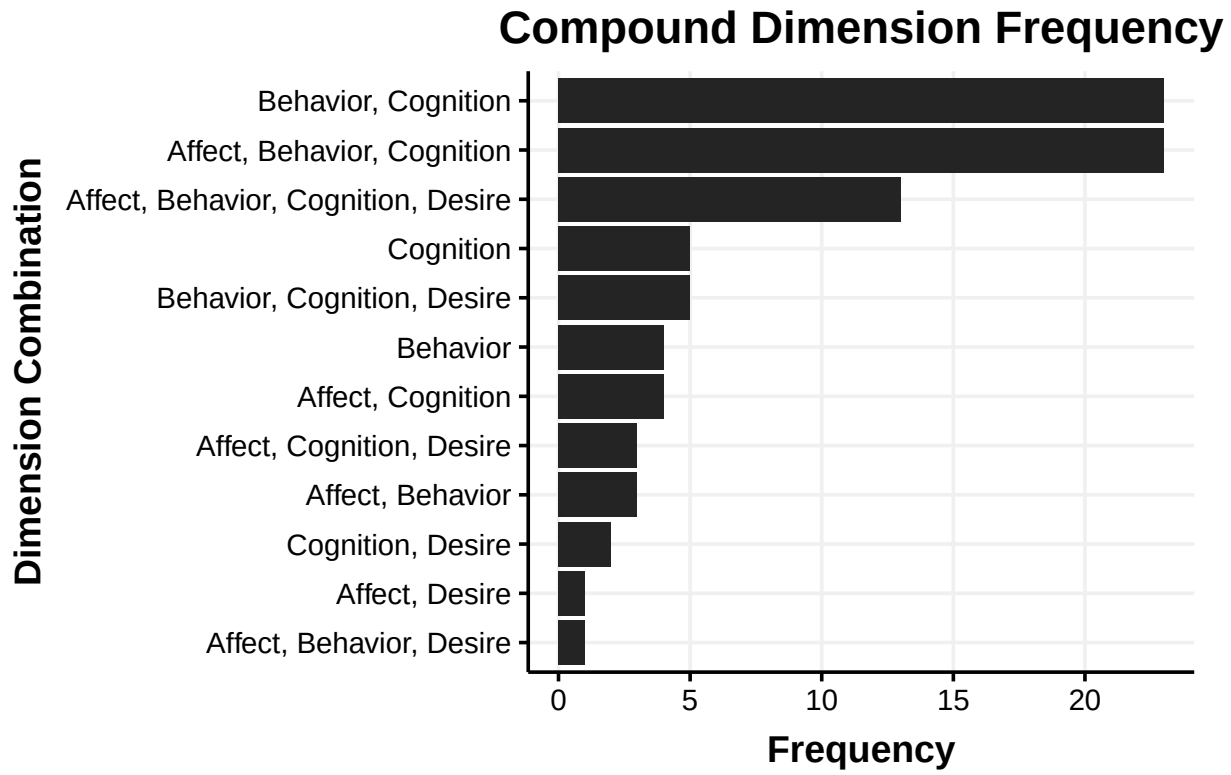

Figure 4

Bar graph of the counts for each of the dimension combinations.