Published in final edited form as:

Psychosis. 2020 ; 12(1): 45–56. doi:10.1080/17522439.2019.1652843.

The psychometric properties of the DAIMON Scale, a translation from Spanish to English: An instrument to measure the relationship with and between voices

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1. Introduction

Auditory verbal hallucinations (AVHs) occur in the absence of external stimulation and are considered one of the primary symptoms of psychosis yet also exist in the general non-clinical population at a prevalence rate of 15% (Beavan, Read, & Cartwright, 2011; de Leede-Smith & Barkus, 2013; McGrath et al 2015). Voices are transdiagnostic and range from transient to persistent experiences (Baumeister, Sedgwick, Howes, & Peters, 2017; Longden, Moskowitz, Dorahy & Perona-Garcelán, 2018; Maijer, Begemann, Palmen, Leucht, & Sommer, 2018;). AVHs are complex, heterogeneous, and often multisensory perceptual experiences (McCarthy-Jones et al., 2014; Piekos et al., 2019). Given this complexity, the underlying mechanism of AVHs may be just as heterogeneous as the AVHs themselves (Humpston et al., 2019; Waters & Fernyhough, 2019).

Within a clinical population, the subjective phenomenological experience of the voice(s) has been described as characterological entities that are separate and distinct from self. They are often attributed to external sources, including G-d, telepathic communication, or alien sources, resulting in varying degrees of distress (Rosen et al., 2016). Clinical interventions have shifted away from the amelioration of AVHs to decreasing the experienced distress, often through changing the relationship between the hearer and their voice(s). Clinical interventions include Acceptance and commitment therapy (Johns et al., 2016), the Maastricht approach to working with voices (Corstens, Escher, & Romme, 2008; Corstens, Longden, McCarthy-Jones, Waddingham, & Thomas, 2014), Relating therapy (Hayward & Fuller 2010; Hayward, Jones, Bogen-Johnston, Thomas, & Strauss, 2017), Compassion focused therapy (Heriot-Maitland, McCarthy-Jones, Longden, & Gilbert, 2019), Voice Dialogue (Corstens, Longden, & May, 2012; Steel et al., 2019), Mindfulness based interventions (Louise, Fitzpatrick, Strauss, Rossell, & Thomas, 2018; Strauss, Thomas, &

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The DAIMON Scale English and/or Spanish version is available from Dr. Salvador Perona-Garcelán upon request.

Hayward, 2015), Avatar therapy (Craig et al., 2018; Leff, Williams, Huckvale, Arbuthnot, & Leff, 2013), and internet based interventions (Thomas et al., 2019).

With recent emphasis on altering the relationship between the hearer and their voice(s), there is an increased need for psychological measures that specifically characterize this relationship. Currently measures are limited to The Voice and You (VAY) (Hayward, Denney, Vaughan, & Fowler, 2008) and the DAIMON Spanish Version (Perona-Garcelán et al., 2015). The DAIMON is the only self-administered measure that evaluates the dialogical aspects of the relationship of person to voice, voice to person, the emotional salience of this relationship, and the experience of the relationship between voice(s). The DAIMON measure elucidates several novel aspects of the experience: the hearers' understanding of the voice(s) relationship to the person and the hearers' understanding and experience of the voice to voice relationship. The DAIMON English Version (DAIMON-EV) has been used to examine the relationship between inner-speech and voice(s) (Rosen et al., 2018) and as a secondary measure to evaluate treatment effect of the Maastricht approach (Steel et al., 2019). Thus, the purpose of this study was to translate and adapt the DAIMON Scale from Spanish to English and measure its psychometric properties for future use in a clinical population.

2. Methods

2.1 Participants

The study was approved by the University of Illinois at Chicago Internal Review Board (IRB2012-0113) and was conducted in accordance with the latest version of the Declaration of Helsinki (General Assembly of the World Medical Association, 2014). All participants gave signed written consent prior to the initiation of research procedures.

As part of a larger study, the clinical sample was randomly selected from a large urban university medical center that included referrals from community treatment facilities in response to approved flyers and e-mail study information materials. Diagnoses were determined using the SCID administered by a research clinician MD or PhD and available collateral information from the medical record and/or reports from treatment providers (First, Spritzer, Gibbon & Williams, 2002).

A total of 44 persons with present state psychosis and currently experiencing AVHs within the past week participated in the study, 36 of whom were diagnosed with schizophrenia and eight with bipolar disorder with psychosis. Demographic characteristics were obtained at study evaluation per self-report. All participants were between the ages of 21-60. Exclusion criteria included current substance dependence, seizure disorders, neurological conditions and pregnancy.

2.2 Procedure

Permission for the translation and adaptation of this scale was obtained from the first author of the Spanish Version (Dr. Salvador Perona-Garcelán). The DAIMON Spanish Version was translated to English by two independent bilingual professionals and compared for differences of translation. The measure was also translated using Google translate, which has

shown to be a reliable translation tool used previously in research (Aiken, Ghosh, Wee, & Vanjani, 2009). Upon completion of translation, a third bilingual professional, blind to the original survey, back translated the English survey into Spanish. Adjudication of the final version was obtained by consensus of translators and clinical researchers (Guillemin, Bombardier, & Beaton, 1993; Harkness, Pennell, & Schoua-Glusberg, 2004).

To examine the concurrent validity, Pearson's correlation coefficient for the relationship between the DAIMON-EV subscales with the Psychotic Symptom Rating Scales (PSYRATS); Voices and You (VAY); and Revised Beliefs about Voices Questionnaire (BAVQ-R) subscales was obtained. Positive and Negative Syndrome Scale (PANSS) was also administered during the initial clinical interview and PANSS (P3) item score was used as a measure of hallucination severity providing a comparative clinical descriptive of the Spanish and English sample (Gisselgard et al., 2014; Jenkins, Bodapati, Sharma & Rosen, 2018; Kay, Fiszbein & Opler, 1987; Perona-Garcelán et al., 2015).

2.3 Measures

2.3.1 DAIMON Scale (Perona-Garcelán et al., 2015).—The DAIMON Scale is a 28-item questionnaire designed to measure the dialogical characteristics of the relationship between the hearer and their voice(s) within the past week. Each item is scored on a six-point Likert scale from 0 (“I have not talked to my voice(s)”) to 5 (“I have always talked to my voice(s)”). DAIMON Scale has four subscales that measures the contextual structure of the dialogical relationship between hearer and their voice(s). The relationship of the person with the voice(s) subscale (**Dp-v**) consists of 8-items and measures the relationship from the perspective of the hearer, for example: “When I converse with the voice(s), I ask questions about me, about them or about things that happen in general.” The relationship of the voice(s) with the person (**Dv-p**) consists of 6-items, and measures the hearers’ understanding and experience of the relationship from the perspective of the voice(s), for example: “When I converse with the voice(s), he/she/they give me information about the things that happen in my life/environment.” The emotional reactivity subscale (**Dem**) consists of 7-items and measures the emotional salience of the experience, for example: “When I converse with the voice(s), I get very worried.” The relationship between the voices (**Dv-v**) consists of 7-items and measures the context in which voices engage in dialogue amongst themselves as the hearer observes, for example: “The voices talk to each other and I want to know what they are talking about.”

2.3.2 Psychotic Symptom Rating Scales (PSYRATS; Haddock, McCarron, Tarrier, & Faragher, 1999)—The PSYRATS is the most widely used validated scale to measure the specific symptoms of auditory hallucinations and delusions. The PSYRATS consists of two main subscales that examine auditory verbal hallucinations (AVHs) and delusions, experienced within the past week. For this study, the PSYRATS-AVHs subscale was used in the analysis. The PSYRATS-AVHs measures eleven characteristics of AVHs; frequency, duration, location, loudness, beliefs regarding origin of voice(s), controllability, disruption, negative content (amount and intensity) and distress (amount and intensity). Each dimension of these scales is scored on a 4-point Likert scale with increased symptom expression ranging from 0 (asymptomatic) to 4 (very symptomatic). PSYRATS-AVH

consists of 3 subscales that measure physical characteristics (PSYRATS_{physical}, 3-items; frequency, duration, loudness); emotional characteristics (PSYRATS_{emotional}, 4-items; negative content (amount and intensity) and distress (amount and intensity)); and cognitive interpretation (PSYRATS_{interpretation}, 4-items; location, beliefs regarding origin of voice(s), disruption to life caused by voice(s), and controllability of voice(s)) (Woodward et al., 2014).

2.3.3 Voices and You (VAY; Hayward, Denney, Vaughan, & Fowler, 2008)—The VAY questionnaire measures the interpersonal relationship between the hearer and the predominate voice. VAY consists of 29-items, rated on a 4-point Likert scale ranging from rarely true (0) to nearly always true (3). VAY consists of three subscales, voice dominance (VAY_{dominance}, 7-items; “my voice wants things done his/her way”); voice intrusiveness (VAY_{intrusiveness}, 5-items; “my voice does not let me have time to myself”); hearer dependence (VAY_{dependence}, 9-items; “my voice helps me make up my mind”); and hearer distance (VAY_{distance}, 7-items; “I prefer to keep my voice at a safe distance”).

2.3.4 The revised Beliefs about Voices Questionnaire (BAVQ-R Chadwick, Lees, & Birchwood, 2000)—The BAVQ-R questionnaire measures the emotional and behavioral reaction to AVHs. The measure consists of 36-items rated on a 4-point Likert scale ranging from disagree (0) to agree strongly (3). BAVQ-R consists of five subscales: malevolence subscale (BAVQ-R_{malevolence}, 6-items; “my voice wants me to do bad things”); benevolence subscale (BAVQ-R_{benevolence}, 6-items; “my voice is helping me to achieve my goal in life”); and omnipotence subscale (BAVQ-R_{omnipotence}, 6-items; “my voice seems to know everything about me”). The resistance subscale (BAVQ-R_{resistance}) consist of a total of 9-items, 4-items that measure the emotional component of resistance (“my voice makes me feel down”) and five items that measure the behavioral component of resistance (“I do things to prevent it from talking”). Lastly, the engagement subscale (BAVQ-R_{engagement}) consists of a total of 8-items; 4-items related to the emotional component of engagement (“my voice makes me feel calm”) and 4-items related to the behavioral component of engagement (“I have done things to contact my voice”).

2.4 Data Analysis

Statistical analyses were conducted using SPSS version 24.0 and LISREL to calculate ordinal alphas of the four DAIMON-EV subscales. Demographics and clinical characteristics are presented in *n*'s, percentages, means, and standard deviations. Both the Ordinal α and Cronbach's α were used to analyze internal consistency of the DAIMON-EV. Pearson's bivariate correlations with bootstrapping at 1000 iterations were conducted to determine the concurrent validity of the DAIMON-EV subscales using the PSYRATS, VAY, and BAVQ-R subscales.

3. Results

3.1. Descriptive characteristics

The sample ($n=44$) consisted of persons with present state psychosis and AVHs within the past week (Table 1). The mean age of onset of illness was 20 years, mean duration of

untreated psychosis was 7.48 years and the mean duration of illness was 27 years. The PANSS hallucinations severity mean score (Mean $5.11 \pm SD1.15$) showed a moderate-severe level of symptomatology which is a comparative clinical description of the DAIMON Spanish sample (Mean $5.00 \pm SD0.91$) (Perona-Garcelán et al, 2015).

The post hoc statistical power was calculated with a sample of 44 subjects and a significance level of 0.05; the statistical power ($1-\beta$) was 0.64. Additionally, given the small sample size it was deemed more important to minimize Type II than Type I statistical errors, as we were concerned not to miss associations worthy of further study. As such, no corrections to significance levels were to be made. Thus, our results were to be interpreted with caution and viewed as hypotheses for further investigation (Armstrong, 2014).

3.2 DAIMON Scale English Version

The Dp-v subscale mean was $12.34 \pm SD7.98$; Dv-p mean was $12.61 \pm SD7.98$; Dem subscale mean was $14.39 \pm SD7.45$; and Dv-v subscale mean was $14.07 \pm SD8.03$. Skewness statistics for Dp-v subscale was $0.96 \pm SE0.36$; Dv-p subscale $0.16 \pm SE0.36$; Dem subscale was $-0.10 \pm SE0.36$; and lastly Dv-v subscale skewness score was $0.06 \pm SE0.36$. The Dp-v subscale ordinal α was 0.89; Dv-p ordinal α was 0.94; DEM ordinal α was 0.90; Dv-v ordinal α was 0.92. Cronbach's α for both English and Spanish version are also reported in Table 2 as a comparison. We further examined internal consistency of DAIMON-EV scale using Cronbach's α , with a criterion of 0.3 threshold of elimination based on item-total correlation. All individual items were below threshold except for item #20 (0.36) and item #21 (0.39). However, if either one was eliminated, Cronbach's α only slightly increased to 0.86, thus neither item was eliminated from the DAIMON-EV scale.

3.3 Concurrent validity of the DAIMON Scale English Version and PSYRATS

The concurrent validity of the DAIMON-EV subscales with PSYRATS subscales are reported in Table 3. There were positive correlations between Dp-v, all three PSYRATS subscales and PSYRATS-AVHs subscale total score. There was a positive relationship between Dv-p and PSYRATS_{physical} subscale, and no correlation with PSYRATS_{emotional}, PSYRATS_{interpretation}, or PSYRATS-AVHs total score. In terms of measuring emotional reactivity of conversing with voice(s), there was a positive correlation between Dem and PSYRATS_{emotional}, and a trending positive correlation with PSYRATS_{physical}, and PSYRATS-AVHs total score, but no correlation with PSYRATS_{interpretation}. There was a positive correlation between Dv-v and PSYRATS_{physical} and PSYRATS-AVHs total score, but not with PSYRATS_{emotional} or PSYRATS_{interpretation}.

3.4 Concurrent validity between the DAIMON Scale English Version and VAY

We utilized the VAY subscales to examine concurrent validity of DAIMON-EV subscales (Table 4). There was a positive correlation only between Dp-v and VAY_{dependence}. There was also positive relationship between Dv-p and VAY_{dominance} and VAY_{distance}, but not with VAY_{intrusiveness} or VAY_{dependence}. Dem was significantly associated with VAY_{dominance}, VAY_{intrusiveness} and VAY_{distance}, but not VAY_{dependence}. Lastly, there was a positive relationship between Dv-v and both VAY_{dominance} and VAY_{intrusiveness} but no relationship with VAY_{dependence} or VAY_{distance}.

3.5 Concurrent validity between the DAIMON Scale English Version and BAVQ-R

We utilized BAVQ-R subscales to examine concurrent validity of the DAIMON-EV subscales (Table 5). There was a positive correlation between Dp-v and BAVQ-R_{omnipotence} but no relationship with BAVQ-R_{malevolence}, BAVQ-R_{benevolence}, BAVQ-R_{resistance} or BAVQ-R_{engagement}. There was a positive correlation between Dv-p and BAVQ-R_{malevolence}, and BAVQ-R_{omnipotence}, a negative correlation with BAVQ-R_{benevolence}, and no association with BAVQ-R_{resistance} or BAVQ-R_{engagement}. Dem subscale was positively correlated with BAVQ-R_{malevolence}, BAVQ-R_{omnipotence} and BAVQ-R_{resistance}, negatively correlated with BAVQ-R_{benevolence}, and not correlated with BAVQ-R_{engagement}. There was a positive relationship between Dv-v and BAVQ-R_{malevolence} and BAVQ-R_{omnipotence}, a negative correlation with BAVQ-R_{benevolence}, and no association with BAVQ-R_{resistance} or BAVQ-R_{engagement}. There was no significant relationship between BAVQ-R_{engagement} and any of DAIMON-EV subscales.

4. Discussion

The English Version of the DAIMON (DAIMON-EV), originally designed by Perona-Garcelán et al. (2015), demonstrated acceptable reliability and validity indices, through examining concurrent validity with the internal constructs of the PSYRATS-AVHs, VAY and the BAVQ-R. Integrity of the measure was maintained, and all items were found to be reliable and valid to the assigned construct. DAIMON-EV scale (Table 6) is a 28 item, six-point Likert-scale, comprised of four subscales that measure characteristics of the relationship between hearer and their voice(s). These subscales consist of a measure of the relationship of person to voices; hearers' understanding of the voice(s) relationship to the person; emotional reaction to the relationship; and the hearers' understanding and experience of the voice to voice relationship. Psychometric properties of the DAIMON-EV were found to be positive, with overall internal consistency of the measure and all subscales.

The Dp-v subscale measures aspects of the interaction initiated by the hearer, through directly conversing with the voice(s) to elicit the opinion of the voice(s) and/or by defining the parameters of the voice(s). Dp-v correlated with all three PSYRATS subscales, and PSYRATS total score. This is in keeping with current understanding of the subjective experience of voice hearing, in which voice(s) are experienced as being separate from self with distinct personality characteristics with whom they have a personal relationship in which at times can be distressing (Rosen et al., 2015, 2016). Upon further examination of PSYRATS subscales, we found that Dp-v subscale was associated with PSYRATS_{physical} subscale suggesting that the hearer was more likely to engage in dialogical practice with the voice(s) when voice(s) were more frequent, lasted for a longer duration and were louder in volume. In terms of Dp-v and PSYRATS_{emotional} domain, findings suggests that increased negative emotional reactivity was associated with increased amount of negative voice content. Dp-v and PSYRATS_{interpretation} were associated when voice(s) were experienced as being external and when the hearer experienced less control over when voice(s) occurred. Dp-v was also associated with VAY_{dependence}, suggesting that this association was related to increased interest in relating and dependence on the voice(s), regardless of content. Lastly, Dp-v was significantly correlated with BAVQ-R_{omnipotence}, suggesting that the hearer

engaged more often when voice(s) were perceived as powerful, all knowing and/or in control.

Dv-p subscale was designed to measure aspects of the relationship that are initiated by the voice(s), such as giving directions. Dv-p significantly correlated with PSYRATS_{physical} characteristics suggesting that when the voice(s) initiates dialogue it is experienced as loud in volume. Dv-p subscale was also associated with VAY_{dominance}, and VAY_{distance}, suggesting that when the voice(s) initiate the dialogue and are experienced as dominate, the hearer often distance themselves from the voice(s). Dv-p subscale was also found to be positively associated with BAVQ-R_{malevolence} and BAVQ-R_{omnipotence} suggesting that when the voice(s) initiates dialogue they can be experienced as powerful and malevolent. The significant associations between DAIMON-EV and all three measures align with previous research showing that malevolent voice appraisal is related to the level of distress (Chadwick & Birchwood, 1994).

Dem subscale was designed to measure the hearers' emotional reaction and behavior during the interaction with or between the voice(s). Dem was associated with increased emotional salience (PSYRATS_{emotional}) when the hearer initiated the dialogue with the voice(s). Supporting the validity of this subscale, PSYRATS_{emotional} was positively correlated with Dem. Dem subscale was also correlated with VAY_{dominance}, VAY_{intrusiveness} and VAY_{distance} suggesting that the hearer experienced increased emotional reactivity when the voice(s) were experienced as dominate and intrusive. This association also suggests that within the dialogic relationship, the hearer may be more likely to distant themselves from the relationship with the voice(s) with increased negative emotional salience. Dem was also associated with increased malevolence, omnipotence and less benevolence, which in turn, suggests an increased resistance and negative emotional reaction to the voice(s).

Dv-v subscale measured the relationships between the voices while the hearer listens as an observer. Our previous research has shown that the voices have relationships that are unique and distinct from the relationship between the hearer and their voices (Rosen et al., 2015). The Dv-v interaction was correlated with PSYRATS_{physical} characteristics specifically related to the loudness of the voices. Additionally, the individual PSYRATS items also suggests that the hearer was more likely to attribute their experience of hearing voice to voice dialogue to external sources with increased convictions that the interactions were not self-generated. Associations between Dv-v subscale and VAY_{dominance} and VAY_{intrusiveness} suggests that the hearer experienced the voice to voice dialogue as dominant and intrusive. These findings are consistent with the association between Dv-v and BAVQ-R_{malevolence}, and BAVQ-R_{omnipotence}, and the negative correlated with BAVQ-R_{benevolence}.

There are several clinical interventions mentioned in the introduction that are effective in reducing the level of distress by focusing on the relationship between the hearer and the voice(s). Each of the domains of DAIMON scale measure a specific construct of this relationship thus the scale can reliably be used to measure the outcome of such a targeted intervention. Applying this scale may also contribute to a better standardization of the characterization of AVH as the individual items provide a window into the content of the dialogue, dynamics at the interface of self, voices, and environment and the emotional

reactivity of the experiences. DAIMON scores at baseline and changes following a treatment intervention designed to reduce the level of distress will uniquely contribute to the nuanced differences in the relational framework of person to voice, voice to person, voice to voice, and the emotional salience of these dynamics. Additionally, to further build on these characteristics, future studies should include a qualitative component complementary to the DAIMON scale as it could enrich the characterization of the experience associated with voices, namely the aspects unique to each subject and their experience. Future studies using the DAIMON scale focusing specifically on race and sex differences would also contribute to the scientific knowledge of group differences in hallucination as an area that are critically under-studied.

There are multiple limitations to this current study. First, the results reported are of data from one time-point and thus can only establish correlational interpretations. Another limitation of this study is that the small sample size and better powered follow-up studies are needed. Lastly, although voice(s) are experienced transdiagnostically, the diagnostic heterogeneity of the current sample further limits the diagnostic sample size thus limits the findings based on diagnosis.

5. Conclusion

The findings of this study demonstrate that the DAIMON-EV is a reliable and valid measure of the dialogical relationship of person to voice; the hearers' understanding of the voice(s) relationship to the person; the emotional reaction to the relationship; and the hearers' understanding and experience of the voice to voice relationship. Additionally, this study further supports that the relationship between hearer and their voice(s) is dynamic and multifaceted, thus the DAIMON-EV provides a measure to evaluate this complex relationship. Lastly, given the clinical importance of treatment interventions targeting the relationship between the hearer and voice(s), our finding demonstrates that the DAIMON-EV, like the Spanish version, to be a reliable and valuable measure to evaluate the dialogical construct of this relationship.

Acknowledgement:

The authors are extremely grateful to all the individuals who participated in this study, as this work otherwise would not have been possible.

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Table 1:

Demographic and clinical characteristics

	Clinical Sample (n=44)	
Sex		
Male	20 (45%)	
Female	24 (55%)	
Race		
African American	35(79%)	
Caucasian	6 (14%)	
Hispanic	3 (7%)	
Marital status		
Single (not presently living conjugally)	30 (68%)	
Single (presently living conjugally)	6 (14%)	
Married	2 (4.5%)	
Legally divorced	4 (9%)	
Widowed	2 (4.5%)	
Employment status		
Disabled	35 (80%)	
Unemployed	3 (7%)	
Employed	5 (11%)	
Retired	1 (2%)	
Diagnosis		
Schizophrenia	36 (82%)	
Bipolar disorder with psychosis	8 (18%)	
Demographics (in years)		
	Mean	SD
Age	46.73	10.69
Age at onset of illness	20.05	7.78
Duration of untreated psychosis	7.48	10.24
Total number of psychiatric hospitalizations	6.67	7.52
Duration of illness	26.68	13.02
(PANSS) ~ Hallucinations		
PANSS hallucinations	5.11	1.15

SD=Standard deviation

Table 2.

DAIMON descriptive analysis comparison of Spanish Version and English Version.

	Dp-v		Dv-p		Dem		Dv-v	
	English	Spanish	English	Spanish	English	Spanish	English	Spanish
Number of items	8	8	6	6	7	7	7	7
Subscale mean score	12.34 SD=7.98	9.92 SD=8.72	12.61 SD=7.98	11.09 SD=8.14	14.39 SD=7.45	17.47 SD=9.5	14.07 SD=8.03	10.66 SD=8.53
Skewness	0.96 SE=0.36	1.33 SE=0.33	0.16 SE=0.36	0.30 SE=0.33	-0.10 SE=0.36	0.30 SE=0.33	-0.06 SE=0.36	0.45 SE=0.33
Range: corrected item-total correlation	0.43-0.74	0.35-0.74	0.60-0.90	0.47-0.734	0.36-0.77	0.34-0.78	0.50-0.79	0.50-0.73
Cronbach's α	0.85	0.80	0.92	0.82	0.84	0.84	0.90	0.83
Ordinal α	0.89		0.94		0.90		0.92	

Standard deviation=SD; Standard error=SE

Table 3.

Pearson's r correlations (95% confidence intervals) between DAIMON-EV and PSYRATS-AVHs subscale

DAIMON-EV subscale	PSYRATS _{physical}	PSYRATS _{emotional}	PSYRATS _{interpretation}	PSYRATS-AVHs total score
Dp-v	0.463 [0.265, 0.617] <i>p</i>=0.002	0.331 [0.004, 0.577] <i>p</i>=0.03	0.312 [-0.055, 0.544] <i>p</i>=0.04	0.463 [0.203, 0.635] <i>p</i>=0.002
Dv-p	0.331 [-0.026, 0.634] <i>p</i>=0.03	0.248 [-0.055, 0.555] <i>p</i> =0.10	-0.024 [-0.321, 0.294] <i>p</i> =0.88	0.260 [-0.082, 0.613] <i>p</i> =0.09
Dem	0.282 [-0.037, 0.570] <i>p</i> =0.06	0.317 [0.013, 0.642] <i>p</i>=0.04	0.005 [-0.247, 0.278] <i>p</i> =0.98	0.279 [-0.042, 0.670] <i>p</i> =0.07
Dv-v	0.325 [0.072, 0.579] <i>p</i>=0.03	0.239 [-0.04, 0.519] <i>p</i> =0.12	0.138 [-0.171, 0.428] <i>p</i> =0.37	0.303 [0.015, 0.598] <i>p</i>=0.05

Confidence intervals calculated using 1,000 bootstrapped samples. Statistically significant correlations are indicated in bold.

Table 4.

Pearson's r correlations (95% confidence intervals) between DAIMON-EV and VAY subscales

DAIMON-EV subscale	VAY _{dominance}	VAY _{intrusiveness}	VAY _{dependence}	VAY _{distance}
Dp-v	.270 [-0.112, 0.562] <i>p</i> =0.14	0.318 [-0.082, 0.606] <i>p</i> =0.08	0.436 [0.163, 0.664] <i>p</i>=0.01	.324 [0.005, 0.615] <i>p</i> =0.08
Dv-p	0.487 [0.119, 0.745] <i>p</i>=0.005	0.262 [-0.162, 0.622] <i>p</i> =0.16	0.108 [-0.286, 0.467] <i>p</i> =0.56	0.409 [0.037, 0.749] <i>p</i>=0.02
Dem	0.652 [0.379, 0.828] <i>p</i><0.001	0.428 [0.117, 0.669] <i>p</i>=0.02	0.289 [-0.037, 0.569] <i>p</i> =0.12	0.460 [0.220, 0.684] <i>p</i>=0.009
Dv-v	0.457 [0.082, 0.745] <i>p</i>=0.01	0.448 [0.067, 0.753] <i>p</i>=0.01	0.239 [-0.109, 0.550] <i>p</i> =0.20	0.345 [-0.010, 0.684] <i>p</i> =0.06

Confidence intervals calculated using 1,000 bootstrapped samples. Statistically significant correlations are indicated in bold.

Table 5.

Pearson's correlations (95% confidence intervals) between DAIMON-EV and BAVQ-R subscales

DAIMON-EV subscale	BAVQ-R _{malevolence}	BAVQ-R _{benevolence}	BAVQ-R _{omnipotence}	BAVQ-R _{resistance}	BAVQ-R _{engagement}
Dp-v	0.289 [0.001, 0.564] <i>p</i> =0.11	-0.118 [-0.426, 0.201] <i>p</i> =0.52	0.487 [0.199, 0.699] <i>p</i> = 0.005	0.206 [-0.204, 0.550] <i>p</i> =0.26	0.106 [-0.154, 0.425] <i>p</i> =0.56
Dv-p	0.462 [0.106, 0.744] <i>p</i> = 0.008	-0.478 [-0.698, -0.208] <i>p</i> = 0.006	0.462 [0.108, 0.734] <i>p</i> = 0.008	0.204 [-0.211, 0.648] <i>p</i> =0.26	-0.033 [-0.369, 0.287] <i>p</i> =0.86
Dem	0.669 [0.458, 0.846] <i>p</i> < 0.001	-0.412 [-0.626, -0.144] <i>p</i> = 0.02	0.598 [0.344, 0.769] <i>p</i> < 0.001	0.430 [0.140, 0.730] <i>p</i> = 0.01	0.061 [-0.270, 0.345] <i>p</i> =0.74
Dv-v	0.457 [-0.189, 0.696] <i>p</i> = 0.009	-0.448 [-0.690, -0.152] <i>p</i> = 0.01	0.450 [0.169, 0.711] <i>p</i> = 0.01	0.193 [-0.189, 0.607] <i>p</i> =0.29	-0.122 [-0.432, 0.180] <i>p</i> =0.51

Table 6.

DAIMON Scale ~ English Version

The following scale is designed to learn about your relationship with your voice(s) during the last week. Please, answer each of the statements below, based on how you relate to your voice(s), not based on what you think/believe about how it should be.

To answer, circle the number of the response that best suits your experience. If you are not sure, circle the response that is the closest estimation.

0. **I have not talked** to my voices during the last week.
1. **Sometimes** I have talked to my voices during the last week.
2. **Many times** I have talked to my voices during the last week.
3. **Frequently** I have talked to my voices during the last week.
4. **Almost always** I have talked to my voices during the last week.
5. **I have always** talked to my voices during the last week.

1.	When I speak or converse with the voice(s), I do so aloud.	0	1	2	3	4	5
2.	When I speak or converse with the voice(s), I ask my voice(s) to do things (I give my voice(s) orders).	0	1	2	3	4	5
3.	When I speak or converse with the voice(s), I forbid it to do things.	0	1	2	3	4	5
4.	When I speak or converse with the voice(s), I ask the voice(s) questions about me, about them or about things that happen in general.	0	1	2	3	4	5
5.	When I speak or converse with the voice(s), I give the voice(s) information about the things that happen to me or in my environment.	0	1	2	3	4	5
6.	When I speak or converse with the voice(s), I say nice things to my voice(s).	0	1	2	3	4	5
7.	When I speak or converse with the voice(s), I tell my voice(s) things that are amusing and funny.	0	1	2	3	4	5
8.	When I speak or converse with the voice(s), I give advice.	0	1	2	3	4	5
9.	When I speak or converse with the voice(s), the voice(s) gives me orders (get dressed, go outside) about what I can or cannot do.	0	1	2	3	4	5
10.	When I speak or converse with the voice(s), the voice(s) forbids me to do things (get dressed, go outside) that I may or may not follow.	0	1	2	3	4	5
11.	When I speak or converse with the voice(s), the voice(s) asks me questions about myself, or about the things that happen to me during the day.	0	1	2	3	4	5
12.	When I speak or converse with the voice(s), the voice(s) gives me information about the things that happen in my life or in my environment.	0	1	2	3	4	5
13.	When I speak or converse with the voice(s), the voice(s) tells me unpleasant things about me or about the people in my environment.	0	1	2	3	4	5
14.	When I speak or converse with the voice(s), it threatens to hurt me, or the people in my environment.	0	1	2	3	4	5

15.	When I speak or converse with the voice(s), I am very distressed, and I have a hard time.	0	1	2	3	4	5
16.	When I speak or converse with the voice(s), I feel that some of the voices are angry with me or hate me.	0	1	2	3	4	5
17.	When I speak or converse with the voice(s), I feel that it makes my life more miserable.	0	1	2	3	4	5
18.	When I talk or converse with the voice(s), I identify with the things my voice(s) say(s).	0	1	2	3	4	5
19.	When I speak or converse with the voice(s), I worry a lot.	0	1	2	3	4	5
20.	When I speak or converse with the voice(s), I need to be alone.	0	1	2	3	4	5
21.	When I am with friends or acquaintances, if the voice(s) appear, I feel isolated and become silent.	0	1	2	3	4	5
22.	The voice(s) talk among themselves, about me, or about things that happen in my environment.	0	1	2	3	4	5
23.	The voice(s) talk to each other and say nice things about me or the people in my environment.	0	1	2	3	4	5
24.	The voice(s) talk to each other and say unpleasant things about me or the people in my environment.	0	1	2	3	4	5
25.	The voice(s) speak among themselves, of topics that interest me and I want to be informed.	0	1	2	3	4	5
26.	The voice(s) speak among themselves, about funny subjects that make me laugh and amuse me.	0	1	2	3	4	5
27.	The voice(s) talk among themselves, about my thoughts or the things I do.	0	1	2	3	4	5
28.	The voice(s) are interspersed in the conversations I have with other people, commenting among themselves on what I say or the other person says.	0	1	2	3	4	5

DAIMON was a voice that accompanied the great philosopher Socrates all his life. He spoke with his voice and had a relationship with his voice. Therefore, we have named the scale DAIMON. The DAIMON Scale is designed to help us better understand the relationship you have with your voice(s) and the relationships your voices have with each other.

Thank you for completing this survey.