

The relevance of Gilbert's three affect regulation systems,  
in particular the soother system, among immigrants with  
persistent physical symptoms  
in the Netherlands

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Şeyma Evran

Student number: 0809262

Supervisor: Prof. Dr. Rinie Geenen

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**Universiteit Utrecht**

## **Abstract**

This study investigated the relevance of Gilbert's three affect regulation systems and tried to uncover relevant soothers for the immigrant (non-Dutch) patients with persistent physical symptoms in the Netherlands. The affect regulation systems are the (1) threat - may include emotions such as anger and anxiety, (2) drive - is the successful seeking of resources that might incite excitement, for example, and the (3) soother - which, for instance, aids rest or the process of contentment. The soother system balances the arousal from threats and drives. Nevertheless, when one of the systems is off balance, it can lead to stress and mental health issues. Patients with physical symptoms feel chronic symptoms, such as pain, fatigue, dizziness and so on, and over utilize medical health care. In total, 722 Dutch and 54 non-Dutch (36 Western immigrants and 18 non-Western) completed this questionnaire on threats, drives, soothers and the PHQ-15, which measures the severity of physical symptoms. Data were analyzed with repeated measures analysis of variance (Anova), the post-hoc-test with Bonferroni correction, principal axis factoring with oblimin rotation, multiple regression analysis and Pearson's correlation coefficient. The PHQ-15 indicated more severe physical symptoms for the non-Dutch in comparison to the Dutch. The soother questionnaire uncovered five dimensions: comforting environment, self-care, enjoying activity and condition, support measures and positivity in life. Perceived as the most important was the support measure and least the positivity in life dimension. No association could be found between the severity of physical symptoms, the soother dimensions, age and education. Likewise, there was no significant difference between the perceived strengths of threats, drives and soothers among the Dutch and non-Dutch. Furthermore, both the Western and non-Western immigrants with physical symptoms showed an association between the perceived threats and the severity of physical symptoms. This first study of the topic did not yield evidence that integrating the three affect regulation systems, in particular the soother system, into clinical treatment of persistent physical symptoms for minority populations in the Netherlands can make treatment easier and lead to better outcomes.

**Keywords** Affect regulation systems, immigration, persistent physical symptoms, soothers, Netherlands

## Introduction

Immigration is a current and global phenomenon; a process that may induce stressful life events and that has the capacity to increase the risk for a broad range of mental health problems (Carta et al., 2005). Research has shown that persistent physical symptoms among diverse immigrant groups are frequent all over the world (Lanzara et al., 2019). Being an immigrant may be a risk factor for severe persistent physical symptoms (Lanzara et al., 2019), therefore, this paper investigates inter alia the difference in severity of physical symptoms between Dutch and non-Dutch. Patients with persistent physical symptoms feel pain, fatigue, dizziness, bowel or sensorimotor dysfunctions, or combinations of these, and over-use medical health care. The symptoms are chronic, burdening physical symptoms that exist for more than 6 months (Henningsen et al., 2018).

Gilbert's theory of affect regulation (Gilbert, 2015) may be of relevance to understand the etiology, maintenance and coping with persistent physical symptoms. This theory specifies three systems which indicate different physiological underpinnings and emotions but interact with each other and form patterns. First, the *threat* detection and defensive action; threats might include emotions such as anger, anxiety and disgust, for instance the stimulation of threat system can be through the threat to or loss of people we care about. Second, the *drive* system; successfully seeking resources is likely to incite excitement and joyfulness, for example sources can be relationships, which create joy, pleasure and encouragement. Third, the *soother* system; this has the task of rest, digest and allowing processes of calming, settling, contentment, feeling safe, and physiological generation. This system regulates and balances after the arousal from threats and drives (Gilbert, 2015). Consequently, the imbalance of the three affect regulation systems leads to stress and mental health issues.

In conclusion of Gilbert's theory, when the emotional regulation systems are out of balance, an individual becomes stressed. Stupar et al. (2014) examined the interethnic similarities and differences in emotion regulation strategies and how these strategies might predict the emotional valence and intensity between the general Dutch and immigrant population. The Turkish and Moroccan immigrants scored lower on emotional valence in comparison to the Dutch. However, the Dutch population scored lower on reappraisal than the non-Western, as well as lower on suppression than the Turkish and Moroccan immigrants. A difference between regulation strategies might be possible.

According to Gilbert, the arousal from threats and drives are balanced through the soother system. Notably, a comparative study after a disaster has shown that immigrant groups who were affected received less emotional support than the Dutch population. They lacked various kinds of perceived support. However, significant differences in support between affected immigrants and non-affected immigrants couldn't be found (Drogendijk et al., 2011).

An empirical finding for Gilbert's affect regulation system on fibromyalgia was suggested by Pinto et al. (2020b). Early stressful experiences, biological and psychological predisposing factors and repeated negative life events can lead to disturbances. These disturbances are caused by a hyperactive threat system and a hypoactive soothing system in combination with an imbalance of the drive system followed by changes of hyper and hypoactivation. These causes enhance a threat focused processing which might lead to a negative affective perception, where various stimuli can be perceived as a threat and the soothing system is missed out. Acceptance, compassion, mindfulness, optimism, valued living and, particularly, social support and connectedness, are possible soothers and are sensitive to improvement through psychosocial interventions (Pinto et al., 2020b). Primarily, according to Pinto et al. (2020b), the soother clusters social support and connectedness are expected to be possible soothers for the non-Dutch. This is because Sanchez et al. (2019) revealed that social support was protective against immigration stress and mindfulness meditation decreased the severity of depressive symptoms in Spanish immigrant patients in the US (Lopez-Maya et al., 2019).

In particular, immigrants are affected with stressful experiences and negative life events due to migration- and acculturation-associated stressors, as well as to traumatic experiences due to the immigration process (Aragona et al., 2010) therefore it is probable that an imbalance among those systems might be expected. The imbalance between the three affect regulation systems among immigrants with persistent physical symptoms cannot only be expected because of those findings but research has also stated that the higher prevalence and symptomology of persistent physical symptoms can be caused by migration-and acculturation-associated stressors, for instance, of Turkish immigrants in Germany (Aragona et al., 2010; Morawa et al., 2017). In addition, migrants with persistent physical symptoms demonstrated more psychological distress and claimed greater post-migration living difficulties than those without persistent physical symptoms (Lanzara et al., 2019).

The clinical-psychological assessment and treatment of persistent physical symptoms is challenging, notably in a multicultural context (Carta et al., 2005). In addition, immigrants to Western countries such as the United States and Europe are a population at risk of receiving less care in mental health than the general population and the care is poorly adapted to their needs (Derr, 2016; Lindert et al., 2008) so the more it is relevant for an appropriate adaptation in clinical treatment to identify the differences in the affect regulation systems between Dutch and non-Dutch. In particular, looking at the differences in threats and soothers, the Netherlands had the international image of being peaceful, efficient, socially tolerant and supportive towards immigrants. However, within the last 10-15 years anti-immigrant, anti-Muslim stances have increased and spread through the general Dutch population (Laban & van Dijk, 2013). According to Mewes et al. (2015), a significant effect of active harm and perceived discrimination in everyday situations on persistent physical and depressive symptoms, among Turkish immigrants in Germany, is revealed. As a result, this study anticipates a higher perception of threats and lower perceived soothers in the non-Dutch population.

In addition, lower perceived soothers between the non-Dutch in comparison to the Dutch are expected. Research demonstrates a stronger tendency for persistent physical symptoms in Vietnamese (Dreher et al., 2017), Turkish (Morawa et al., 2017; Sariaslan et al., 2014) and Jewish (from the post-Soviet-Union) (Ullmann et al., 2013) immigrants in comparison with the German general population. Similarly, Ritsner et al. (2000) indicate that Russian-born Jews who immigrated to Israel have an increased rate of persistent physical symptoms. Comparing the prevalence of mental health symptoms among Russian, Somali and Kurdish immigrants in Finland, Rask et al. (2015) ascertained the following prevalence for persistent physical symptoms: 14.8% for Russian, 12.9% for Somalians and 28.9% for Kurds, which are indeed higher than the general population.

Other facts are the sociodemographic and cultural predictors of persistent physical symptoms among immigrants. Some of these significant and common predictors between immigrants can be being female (Bragazzi et al., 2014; Mak & Zane, 2004; Morawa et al., 2017; Rask et al., 2015), having a low language proficiency (Dreher et al., 2017; Morawa et al., 2017), living in poor social conditions (Aragona et al., 2010), the educational level of the father (Darwish et al., 2003) and being divorced or widowed (Ritsner et al., 2000).

Beyond that, differences between the non-Dutch and Dutch population with mental health issues can be seen. In a longitudinal study, which compared mental health problems among adolescent and adults in Turkish-immigrants and Dutch. It shows that the Turkish participants

reported more internalizing and externalizing problems than the Dutch participants (Van Oort et al., 2007). Moreover, positive associations between depressed patients, psychological distress and a broad range of persistent physical complaints were found in two studies (Borra, 2011; Heredia Montesinos et al., 2012).

Interventions in clinical treatment for immigrants are poorly adapted, both in the European and American context (Derr, 2016; Linder et al., 2008), hence the treatment is presumed to be more complex and the outcomes less beneficial than in the general populations (Schraufnagel et al., 2006), specifically the treatment of persistent physical symptoms in a multicultural context is very challenging (Carta et al., 2005). To design well adapted psychotherapeutic treatment for immigrants, identifying the differences of the three affect regulation systems is necessary. In other words, it is relevant to examine the threats, soothers and drives in order to comprehend the needs of the non-Dutch in the Netherlands. In particular, increasing the soothing abilities of the non-Dutch patients might lead to better outcomes than the current outcomes, and could lead to a better adaptation of the psychotherapeutic treatments among non-Dutch in the Netherlands. Perhaps identifying specific threats might lead to helping patients to overcome their specific problems and even rethink the spread of anti-immigrant stances.

Overall, this study is to examine whether Gilbert's affect-regulation theory (Gilbert, 2015) might be of relevance in understanding the higher prevalence of persistent physical symptoms in immigrants and revealing relevant soothers for them.

The questions that therefore arise are the following:

1. Do the non-Dutch have more severe persistent physical symptoms than the Dutch?
2. What kind of relevant soothers do the non-Dutch have and how are these soothers structured and clustered?
  - 2.1 Which soothers are the most and least important for the non-Dutch?
  - 2.2 Are the soother dimensions associated with the severity of physical symptoms among the non-Dutch?
3. Is there a difference between the severity of threats, the strength of the soothers and drives between non-Dutch and Dutch?
4. Is there a correlation between immigration, physical symptoms and threats?

Hypothesis 1: Non-Dutch have more severe persistent physical symptoms than the Dutch (Dreher et al., 2017; Morawa et al., 2017; Rask et al., 2015; Ritsner, 2000; Sariaslan et al., 2014).

Hypothesis 2: This question is explorative, designed to find any soothers, which are relevant for the non-Dutch; to test which are the more and less important dimensions within the soothers; to examine that all categories of soothers are assumed to be associated with the severity of somatic symptoms, there is no expectation to find soothers which are associated with physical symptom severity.

Hypothesis 3: Non-Dutch feel more severe threats than the Dutch. Additionally, the non-Dutch perceive lower soothers than the Dutch and non-Dutch differ in the strength of drives than the Dutch.

Hypothesis 4: The severity of threats has a positive association with the severity of physical symptoms among immigrants (Borra, 2011; Heredia Montesinos et al., 2012).

## **Methods**

### *Design and participants*

The approval by the Ethics Committee of the Faculty of Social and Behavioural Sciences of Utrecht University regarding the online survey (20-0295) was granted. Concerning the procedure and purpose of the questionnaires, informed consent was required before completing them. Conducted as an online survey, this study mainly recruited through social media like Facebook (Appendix A) and a total of 776 test subjects with persistent physical symptoms from the Netherlands took part. The recruitment was from 11<sup>th</sup> of November 2020 until the 10<sup>th</sup> of December 2020. The test subjects with physical symptoms consisted of 726 female, 49 male, and 1 diverse. Under these participants, 722 Dutch and 54 non-Dutch joined this research. Non-Dutch means that either the grandparents, the parents or the test subject self was born in a foreign country. The questionnaire survey comprised five aspects: Sociodemographic, threats, soothers, drives and physical symptom severity, the test subjects rated the severity of their physical symptoms through the PHQ-15. The questionnaires consisted exclusively of closed questions and last around 25-40 minutes. There was no gratification for participation.

### *Measures*

During developing this survey to identify three possible relevant influences on physical symptoms, this survey contained closed questions. These questions identify threats (Appendix B), soothers (Table 2) and drives (Appendix C). (1) Threats, which create an experience of danger, harm, damage or insecurity, (2) soothers, a comforting factor that may create a feeling of calmness, well-being, safety or social connectedness (3) drives, which are an urge, desire, ambition or motivation that stimulates to pursue an activity or reach a goal. Before the participants chose one of the ratings (Appendix D) ‘none’, ‘a little’, ‘moderate’ or ‘a lot’ for the possible influences on physical symptoms, threats, soothers and drives were explained and the participants could choose which following threats indicate the impact on their life. For example, they could choose ‘time pressure’, ‘memory of a negative past event’ or ‘an argument’ for threats; ‘mindfulness’, ‘leisure activity’ or ‘nice weather’ for soothers; ‘to be loved’, ‘traveling to beautiful or interesting places’ or ‘live in harmony with my disease’ and so on for drives. For every affect regulation system 40 questions could be rated.

To measure physical symptom severity, the self-administrated Patient Health Questionnaire 15 (PHQ-15) was utilized. It is used for the diagnosis of physical (somatic) symptoms and includes 15 of those symptoms that represent 90% of the common physical complaints except for upper respiratory tract symptoms (Kroenke et al., 2002). After the statement “During the *past 4 weeks*, how much have you been bothered by any of the following problems”, patients could rate one of the items ‘stomach pain’, ‘dizziness’, ‘trouble sleeping’ and so on. Rating each of the symptoms from 0 to 2 according to its severity, where 0 is the lowest figure ‘not bothered at all’, 1 the mean figure ‘bothered a little’ and 2 the highest figure ‘bothered a lot’, a range from 0-30 can be scored. The cut-off value for the classification of the severity of symptoms are 5, 10, 15 and represent low, medium, and high somatic symptom severity. The PHQ-15 has a high internal reliability with a Cronbach’s  $\alpha$  of  $> .80$  (Kroenke et al., 2002).

### *Data analysis*

The evaluation of the statistical measures was carried out with *IBM-Statistics version 24*. In this study a  $p$  value  $< .05$  was considered significant for all tests. Firstly, to examine whether the non-Dutch have more severe persistent physical symptoms than the Dutch, the participants were divided into three groups using country categories. The first group was the Dutch, the second the Western-immigrants and the third the non-Western immigrants. To compare if the mean of the total score of the PHQ-15 between the groups was significantly different a One-



way analysis of variance (Anova) was used, and subsequently, the Post-Hoc-Test was used to check the exact differences among the groups.

Secondly, to derive the relevant items of the threats, soothers and drives, in the first stage, the principal axis factoring with oblimin rotation was used to obtain the dimensions of the threats, soothers and drives. Determining through using the number of factors of the eigenvalue criterion  $> 1$ , the screeplot of eigenvalues, and the pattern of factor loadings (Field, 2009; Van Leeuwen et al., 2016). The excluding criteria for an item was a factor loading  $< .40$  on all the factors (Peterson, 2000). To test the internal consistency of the final dimensions of the soothers the Cronbach's coefficient was calculated (Bland & Altman, 1977). Pairwise comparisons were calculated, which involved a post hoc analysis with a Bonferroni correction, to examine the most and least important soother dimension. Last, to test the association between the severity of somatic symptoms and soothers, a multiple regression analysis was performed.

Thirdly, to examine if the non-Dutch, both the Western and non-Western, felt severe threats, perceived lower soothers, differed in the strength of drives than the Dutch, the One-way analysis of variance (Anova) with Post-Hoc-Test were computed. At last, the question of the statistical correlation between threats and physical symptoms among immigrants was examined with the Pearson's correlation coefficient (Cohen J., 1988). Both the Western and non-Western groups were tested.

## Results

### *Demographics*

**Table 1** shows the demographic data of the participants with physical symptoms. For both the sample with the immigrants and the Dutch, only around 7 % male participated in this study; the vast majority were female (93 %). The immigrants consisted of following: 36 were Western-immigrants, 34 females and 2 males, and 18 were non-Western-immigrants, all of them female. The Western immigrants are comprised of 1 American, 1 Austrian, 5 Belgian, 1 Danish, 18 German, 1 Greek, 3 Pole, 1 Italian, 1 Irish, 1 Russian and 1 Spanish. The non-Western immigrants are 1 Chinese, 1 Ghanaian, 1 Iraqi, 2 Indonesian, 2 Indian, 4 Surinamese, 3 Turkish, 1 Ukrainian and 3 Moroccans. The most reported age group for the Western (33.3%) and non-Western immigrants (41.7%) with physical symptoms was younger with 41 - 50 years (37.5%), than the Dutch with 51 - 60 years (38%). More immigrant participants (83%) were married or in a partnership than the Dutch (61%). Further, education is equally allocated among

the Western immigrants - 50% had lower and middle education and 50 % had higher education. A slightly lower education level can be seen for the Dutch group - 60 % had lower and middle education, to compare with the non-Western group where 56 % had a lower and middle education. It is notable that the immigrants with persistent physical symptoms are only first-generation-ones.

First, using the Oneway-Anova and Post-Hoc-test with Bonferroni correction different variances among the Dutch, Western-immigrants and non-Western immigrants according to the severity of physical symptoms in comparison to the Dutch could be assumed,  $F(2, 695) = 6.2, p < .002$ . The Western and non-Western immigrants differed, in terms of having more severe persistent physical symptoms, when compared to the Dutch population,  $p < .002$ . The standardized *mean* score for the Dutch population was  $-.044 (SD = .975)$ , for the Western immigrants  $mean = .43 (SD = .99)$  and for the non-Western immigrants  $mean = .53 (SD = 1.53)$ . Moreover, the Post-Hoc test showed that the differences of the Dutch and Western-immigrants were significant, according to the severity of symptoms this reflects a *mean* score of  $0.48 (SD = .17)$  above the Dutch population,  $p < .017$ . But the non-Western immigrants ( $mean = .57, SD = .25$ ) did not differ significantly according to the severity of symptoms,  $p = .068$ .

Second, factor analysis of the 40 items was performed in the patient group with the immigrants to find relevant soothers in this specific group. **Table 2** shows the results of the principal axis factoring for both the non-Western and Western-immigrant group. The scree plot of eigenvalues and the pattern of factor loadings after rotation implied five factors, which were labeled comforting environment, enjoying activity and condition, self-care, support measures and positivity in life. Out of the 40 items, four were deleted: those items had only factor-loadings  $< .40$  (Peterson, 2000). For the label *comforting environment* seven items were included, which provide the immigrants external save feelings, for instance 'secure and trusted environment' or 'calm surrounding'. The second factor was labeled *self-care* with its eight items assessing activities that are supposed to be soothers for the participants, for example 'relaxation or breathing exercise' or 'to take a rest or a break'. Thirdly the factor was labeled *enjoying activity and condition*, with its nine items, in order to describe the joyful activities and circumstances such as 'leisure activities' or 'good mood'. The fourth factor was labeled *support measures* and includes eight items which describe social encounters and supportive tools relieving the immigrant participants' physical symptoms, such as 'good or positive conversation' or 'aids'. For the label *positivity in life* four items were included which represent

**Table 1** Demographic characteristics of patients with persistent physical symptom in the Netherland (N = 766) inter alia immigrants (n = 54) and Dutch participants with persistent physical symptom (n = 722)

Characteristics	Sample with immigrants (n = 54)		Sample with the Dutch (n = 722)
	Western-immigrants	Non-Western-immigrants	Control group
Gender, n (%)			
Female	34 (94.4)	18 (100)	674 (93.4)
Male	2 (5.6)	0 (0)	47 (6.5)
Other	0 (0)	0 (0)	1 (0.1)
Age category reported most, (min.-max.)	41 - 50 (21 - 70)	41 - 50 (21 - 70)	51 - 60 (18 - 81)
n (%)	(33.3)	(41.7)	(38)
Civil Status, n (%)			
Married or partnership	28 (82.4)	15 (83.3)	499 (69.1)
Single	5 (14.7)	2 (11.1)	121 (16.8)
Divorced	1 (3)	0 (0)	44 (6.1)
Other	0 (0)	1 (5.6)	58 (8.0)
Education, n (%) <sup>a</sup>			
Lower and middle education	18 (50)	10 (55.6)	431 (59.7)
Higher education	18 (50)	8 (44.4)	291 (40.3)
Immigrant generation			---
First generation	36	18	
Second or third generation	0	0	

<sup>a</sup> Education level: 'Lower and middle education' are primary school, lower vocational secondary education, middle intermediate general secondary education or intermediate vocational education and 'Higher education' higher general secondary education, higher vocational education, or university education

**Table 2** Factor loadings of the original 40 items of the soother and internal consistency coefficients (Cronbach's  $\alpha$ ) of the final items in immigrant patients with persistent physical symptoms ( $n = 54$ )

Items	Factor loadings				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
<b>Factor 1:</b>					
<b>Comforting environment</b>	<b>.639</b>	.037	.086	.168	.018
09) Consistency and structure					
20) People in my environment are happy and healthy	<b>.637</b>	.008	.188	.298	.133
04) Doing a fun thing with family or friends	<b>.602</b>	-.099	.099	.074	-.120
15) Calm surrounding	<b>.539</b>	.387	.022	.015	-.265
33) Secure and trusted environment	<b>.525</b>	.094	.112	.299	-.231
40) Spiritual or religious activity	<b>.507</b>	.183	-.170	-.207	.161
08) Having the freedom to do something in the way I want to do it myself	<b>.477</b>	.258	.135	.001	-.415
*24) Having a positive mindset	.390	-.210	.196	.325	-.330
<b>Factor 2:</b>					
<b>Self-care</b>					
21) Relaxation or breathing exercise	.020	<b>.794</b>	.123	-.141	-.127
01) Mindfulness	.138	<b>.742</b>	.117	-.273	-.120
19) Alternative medicine	-.208	<b>.705</b>	-.148	.416	.055
13) Getting a massage	-.127	<b>.653</b>	.066	.268	-.114
29) Professional help	.148	<b>.557</b>	.190	.204	.063

18) Healthy or good nutrition	.202	<b>.508</b>	.040	-.035	-.271
22) To take a rest or a break	.241	<b>.456</b>	.340	-.047	.009
10) Something cooling	.115	<b>.434</b>	.038	.138	.194
<b>Factor 3:</b>					
<b>Enjoying activity and condition</b>					
05) Leisure activity	.150	.151	<b>.797</b>	-.102	.147
06) Surrounded by lovely people	.066	-.146	<b>.718</b>	.160	-.166
39) Activity in water	-.121	.301	<b>.678</b>	.017	.030
38) Yummy beverage, eating a treat or smoking a cigarette	.361	-.175	<b>.535</b>	.213	.291
16) Good balance between activities and relaxation	.080	.164	<b>.505</b>	.119	-.218
14) Supplements	.342	.486	<b>-.490</b>	.181	-.199
31) Good mood	.126	.014	<b>.484</b>	.187	-.253
07) Warm temperature	-.184	.265	<b>.463</b>	.129	-.305
12) Understanding my disease	.166	.295	<b>.419</b>	.085	-.069
<b>Factor 4:</b>					
<b>Support measures</b>					
36) Sleeping	.110	-.143	-.112	<b>.809</b>	-.123
02) Aids	-.160	.213	-.103	<b>.727</b>	.151
37) Feeling recognized, understood, respected, loved, liked or important	.167	-.018	.100	<b>.707</b>	-.085
26) Receiving physical affection	-.062	-.043	.201	<b>.686</b>	-.284
17) Good or positive conversation	.169	.136	.338	<b>.570</b>	.230
30) Comfortable posture	.139	.013	.299	<b>.550</b>	-.112
11) Help from other people	-.032	.363	.307	<b>.507</b>	.106

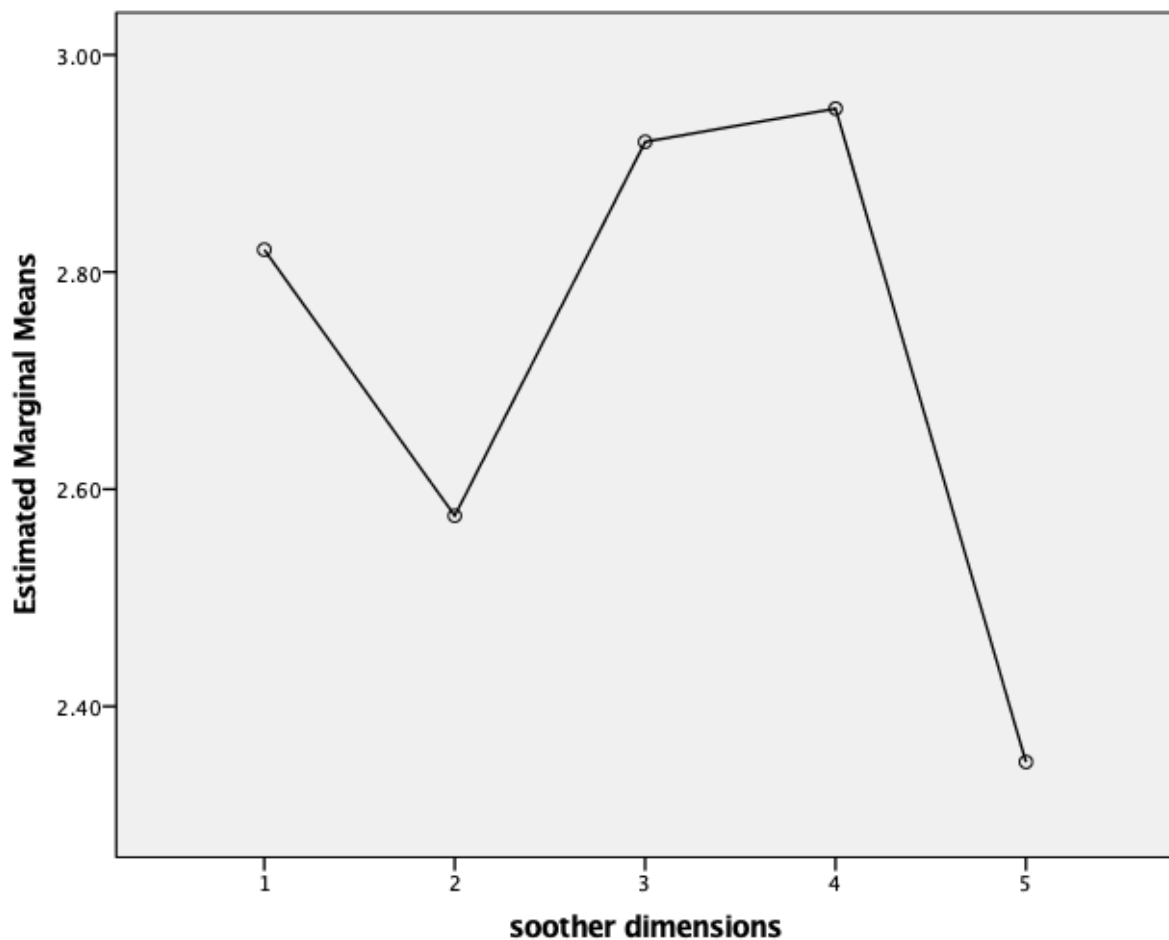
34) My limits or boundaries	.284	.042	.023	<b>.498</b>	-.396
*28) Expressing myself to others and knowing that I'm not alone in all of this	.290	.299	.099	.394	-.241
*25) Sharing experiences with fellow sufferers	.363	.246	.172	.382	.168
<b>Factor 5:</b>					
<b>Positivity in life</b>					
32) Physical activity	.132	.198	.176	-.029	<b>-.651</b>
23) Intimacy	.255	-.117	.002	.363	<b>-.558</b>
27) Pets	-.237	.175	.221	.025	<b>-.471</b>
35) Nice weather	.272	.075	.324	.026	<b>-.464</b>
*03) Medication reducing symptoms	.055	.012	.152	-.003	.312
Statistics final questionnaire					
Eigenvalue	14.75	2.95	2.2	1.99	1.87
% explained variance	36.8	7.4	5.5	5.0	4.7
Cronbach's $\alpha$	.85	.86	.82	.90	.72

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*Note.* Included in the dimension were items with bold factor loadings \*Items deleted in the final version of the soother inventory because of a too low factor loading or too high cross loading.

different parts of the life of the immigrants with physical symptoms, such as 'intimacy' or 'pets'. The Cronbach's  $\alpha$  coefficient for four dimensions 'comforting environment', 'enjoying activities and conditions', 'self-care' and 'support measures' dimensions were  $> .80$ , which is considered good (Bland & Altman, 1977). Only the dimension 'positivity in life' had a Cronbach's  $\alpha$  of  $.72$ , which is adequate (Bland & Altman, 1977).

**Figure 1** Profile plot showing the mean importance of soothers as perceived by participants.



According to the importance of the soother for the immigrant population, there was a significant main effect for the difference in each soother category,  $F(1, 42) = 982.159, p < .00$ , with a Partial Eta Squared of  $\eta^2p = .959$  which means a large effect size (Cohen, 1988). **Figure 1** indicates that the most important was factor 4 the *support measures* dimension (mean = 2.95;  $SD = .72$ ); factor 3, *enjoying activity and condition* (mean = 2.9;  $SD = .66$ ) was second in importance; *comforting environment* (mean = 2.8;  $SD = .72$ ) was the third important among the clusters, factor 2 while *self-care* (mean = 2.6;  $SD = .75$ ) and factor 5 *positivity in life* (mean = 2.4;  $SD = .59$ ) were the least important. Considerable individual differences in the perceived importance of the dimensions were observed as shown by the standard deviations. The **table 3** reveals that there was no association between the soothers and severity of physical symptoms (PHQ-15). As well, the multiple regression analysis showed that neither age nor education level had a significant association with the PHQ-15 scores. As a conclusion, the higher score of

soother dimensions and the two sociodemographic did not have an association with the severity of physical symptoms.

**Table 3.** Regression analyses testing associations between the severity of physical symptoms and soothers and sociodemographic variables for the immigrant population.

	Severity of physical symptoms (PHQ-15) <sup>a</sup>				
	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i> Value
Soother dimensions					
Comforting environment	1.772	5.755	.257	1.079	.288
Self-care	1.978	1.643	.299	1.465	.152
Enjoying activity /condition	-.144	1.350	-.019	-.072	.943
Social support	-1.463	2.002	-.216	-.857	.397
Positivity in life	-1.084	1.706	-.128	-.646	.522
Sociodemographic					
Age	-1.397	.760	-.306	-1.838	.075
Education	-.359	.730	-.087	-.488	.629

<sup>a</sup> PHQ-15 =Patient Health Questionnaire \*  $p < .05$

Next, the results for the One-Way Anova with the Post-Hoc test revealed that equal variances for the three affect regulation systems between the Dutch and non-Dutch could be assumed. Neither the Western nor non-Western immigrants felt more severe threats ( $F(2, 660) = .8, p = .45$ ), perceived lower soothers ( $F(2, 626) = .08, p = .93$ ) or differed in the strength of drives ( $F(2, 578) = .26, p = .78$ ) as compared to the general population, the Dutch. Finally, there was a moderate significant positive correlation for the Western-immigrants between the threat factors and the PHQ-15 total score,  $r = .453, p < .008$ . Furthermore, there was a strong significant positive correlation for the non-Western-immigrants between the threat factors and the PHQ-15 total score,  $r = .662, p < .014$ . So, the more threats the immigrant population feel, the more severe persistent physical symptoms they could have.



## Discussion

In this study, more severe persistent physical symptoms among both immigrant groups in comparison to the Dutch general population were found. The five relevant soother dimensions for the immigrant population were 'comforting environment', 'self-care', 'support measures', 'enjoying activity and condition' and 'positivity in life' encompassed physical activity, intimacy, pets and nice weather. The 'support measures' cluster was perceived as the most important and the 'positivity in life' as the least important. Consequently, the soother dimensions were distinctly ranked. Individual differences in what immigrants with physical symptoms considered to be a soother could be seen. There was no significant association between the severity of physical symptoms and soother dimensions, education or age. Neither the Western nor the non-Western immigrants perceived more severe threats, lower soother or differed in the strength of the drives as compared to the control group. The perceived threats among immigrants had a positive association with the severity of physical symptoms.

The hypothesis 1, that the non-Dutch have more severe persistent physical symptoms than the Dutch, is indicated within the results. Only the non-Western-immigrants did not show a significant difference according to the severity of physical symptoms, probably, it is due to the small sample size of 18. A great number of studies revealed that specific immigrant groups have a higher prevalence of severe symptoms than the general population (Dreher et al., 2017; Morawa et al., 2017; Rask et al., 2015; Ritsner et al., 2000; Sariaslan et al., 2014). The current study indicated that this also holds for people with persistent physical symptoms. There is still a need to examine the causes of the higher prevalence and severity of symptoms on mental health issues among the non-Dutch in the Netherlands. Randomly only first-generation immigrants participated in this study and Morawa et al. (2017) revealed that first generation immigrants had higher number of (severe) physical symptoms than the second generation. Besides that, research indicated that lower numbers of diagnosed physical illnesses and better language proficiency was associated with lower severity on physical symptoms (Morawa et al. 2017). Including a comparison within the generations of immigrants and testing the association between gender, the participants physical illnesses and language-proficiency on physical symptoms in the Netherland is desired in further future research.

Five soother clusters for the immigrant population were found. 'comforting environment', 'self-care', 'support measures' 'enjoying activity and condition' and 'positivity in life' were the five dimensions of the essential thirty-five items. Social support and mindfulness were

expected to be one of the crucial soother clusters and indeed ‘support measures’ was revealed to be the most important, which is quite close to social support and includes many of its items. Research among Australian migrants revealed a significance association between all sources of support and mental health (Du Plooy et al., 2018). These authors imply that increasing awareness of where migrants from different cultures get their support from can help to enhance health and well-being for policy makers and support workers. A starting point for increasing awareness could be emotional, social and overall loneliness, which is higher among first-generation migrants in the Netherlands; even though they have similar contact frequency, like the Dutch population, they feel both socially and emotionally lonelier and are less satisfied with their relationships (Ten Kate et al., 2020).

However, mindfulness might be put on a level with the cluster self-care and turned out to be only the *fourth* most important one: Interventions which can be constructed from this cluster like relaxation, mindfulness or health and physical activities improve the mental health state of the immigrants significantly. Relaxation response-based group intervention for depressed Chinese immigrants in the US showed positive outcomes for the patients (Yeung et al. 2014). Mindfulness meditation decreased the severity of depressive symptoms in Spanish immigrant patients in the US (Lopez-Maya et al., 2019). Health and physical activities which were offered to elderly Turkish immigrants in the Netherlands provided enhancement in mental health (Reijneveld et al., 2003). These soothing interventions could also be integrated adequately in treatment of physical symptoms among immigrants.

The second most important cluster emerged as the enjoying activity and condition for the non-Dutch, which include social activities, contrarily to the study of ten Kate et al. (2019) which showed that (elderly) immigrants in the Netherlands engage less in social activities, yet again it seems to be a good cluster for the clinical context. Ranked in third place for importance is the comforting environment; spiritual or religious activity is one of the items and engagement in private religious activities was associated with higher wellbeing among immigrants (Klokgieters et al., 2018). Additionally, older Turks and Moroccans were more resilient towards post migration stress when they were able to accept the conditions, which cannot be changed (Klokgieters et al., 2018). Probably due to the different distributions among the item topics, the least important is the positivity in life cluster, for instance ‘intimacy’ and ‘nice weather’ are two of the discordant items. Carta et al. (2005) recommended the integration of immigrants into a developed network of psychiatric system as a strategy for the challenge of

treating persistent physical symptoms in a multicultural context. This integration might be possible, after revealing the five relevant soother dimensions for immigrants in the Netherlands, increasing the relevant soothing abilities of non-Dutch patients during psychotherapeutic treatment might lead to better adaptation of the treatment.

Next, hypothesis 3, that the Western and the non-Western immigrants would perceive more severe threats, lower soother or differed in the strength of the drives, was rejected. Hypothesis 3 was constructed due to the following background: immigration can be a stressful life event and is associated with migration- and acculturation stressors and traumatic experiences (Aragona et al., 2010). This can lead to a disturbance caused by a hyperactive threat system and a hypoactive soothing system in combination with an imbalance of the drive system followed by changes of hyper and hypoactivation. Therefore, various stimuli can be perceived as a threat and the soothing system is missed out (Pinto et al., 2020b) which might be the cause for severe physical symptoms. The reason that this hypothesis was rejected may be attributed to a methodological reason, namely the threat, soother and drive were measured by a questionnaire which is still in a development phase. A repetition of this test should be done with the final questionnaire for the affect regulation theory in respect to physical symptoms among immigrants. On the other side, that the systems did not differ can be an indication that the questionnaire is a universal one for both the non-Dutch and Dutch population, which would be in favor of the general project.

The final hypothesis that the severity of threats has a positive association between the severity of physical symptoms among immigrants was proved. Interesting results were found in a cross-sectional study with South-Asian Surinamese, African Surinamese, Turkish or Moroccan ethnicities with depression in the Netherlands, which tested the association between social condition, constructed from socioeconomic position (educational level, occupational level, employment status), perceived ethnic discrimination and sociocultural integration, against the prevalence of depression. (Low) Socio-economic position and discrimination had an association with the prevalence of depressed mood (Stronks et al., 2020). Relating that to this research topic, both indicators might be possible perceived threats for the non-Dutch. Another study, according to the National Integration policies in Europe, disclosed that perceived group discrimination was associated with health outcomes for only the first-generation immigrants; for instance discrimination was associated with depression in men and women (Borrell et al., 2015). Once more this result indicates that there might be different results for the second or

third generation immigrants, which were not available in this study and should be observed in future studies. Ultimately, the proof of this hypothesis also advises that the anti-immigrant attitudes ought to be reconsidered.

One of the strengths of this study is that despite difficulties in collecting immigrant participants, a certain amount of migrants in the Netherlands were recruited in an online survey. Not only were they recruited but also this research is the first to investigate the association between immigrants with physical symptoms and the three affect regulation systems and, therefore, closes a research gap. What is special for this study is that it is also the first which found relevant soother cluster for the immigrant participants which can be of relevance in clinical context.

However, there are also limitations. One of these is the too small sample size of the non-Dutch. Further, it would be better to focus only on one or two specific ethnic groups, such as the Moroccan or Turkish to get more representative results for one specific group. In order to have a better distinction between the immigrants in some specific questions the researcher divided them in two groups, the Western and non-Western immigrants. Even though they were divided they had similar results, which might indicate that immigration is a stressing life event no matter if the previous country has similar culture to the current country. A balance between the genders is desired for future studies as only two men out of fifty-four non-Dutch joined this study. This study included only people with persistent physical symptoms, who all have to deal with adversities in life including invalidation regarding their illness for a significant number of the patients (Kool et al., 2010). Perhaps several hypotheses were not confirmed because also having physical symptoms may increase invalidation experiences.

Indeed, these results indicate that the immigrant population has more severe physical symptoms in comparison to the general Dutch population. With the aim of reducing the challenge of treating them and increasing the success of clinical outcomes for patients with physical symptoms and migration background, the three affect regulation systems of Gilbert's theory could be integrated in treatment facilities. Future research might consider, along with the soother, the relevant threats and drives for the immigrant population in the Netherlands. Further special attention should be paid to the ethnic minority population with persistent physical symptoms in clinical context.

## References

- Aragona, M., Catino, E., Pucci, D., Carrer, S., Colosimo, F., Lafuente, M., Mazzetti, M., Maisano, B., & Geraci, S. (2010). The relationship between somatization and posttraumatic symptoms among immigrants receiving primary care services. *Journal of Traumatic Stress, 23*(5), 615-22. <https://doi.org/10.1002/jts.20571>
- Bland, J. M., & Altman, D. G. (1997). Cronbach's alpha. *British Medical Journal, 314*(7080), 572. <https://doi.org/10.1136/bmj.314.7080.572>
- Borra, R. (2011). Depressive disorder among Turkish women in the Netherlands: a qualitative study of idioms of distress. *Transcultural Psychiatry, 48*(5):660-74. <https://doi.org/10.1177/1363461511418395>
- Borrell, C., Palència, L., Bartoll, X., Ikram, U., & Malmusi, D. (2015). Perceived discrimination and health among immigrants in Europe according to national integration policies. *International Journal of Environmental Research and Public Health, 12*(9), 10687–10699. <https://doi.org/10.3390/ijerph120910687>
- Bragazzi, N. L., Del Puente, G., & Natta, W. M. (2014). Somatic perception, cultural differences and immigration: results from administration of the Modified Somatic Perception Questionnaire (MSPQ) to a sample of immigrants. *Psychology Research Behavior Management, 7*, 161–166. <https://doi.org/10.2147/PRBM.S55393>
- Carta, M., Bernal, M., Hardoy, M., & Haro-Abad, J. (2005). Clinical practice and epidemiology in mental health. *Clinical Practice and Epidemiology in Mental Health*. <http://www.cpementalhealth.com/content/1/1/13>

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed). Erlbaum Associates.
- Darwish, M. S., Joung, I. M., van Lenthe, F. J., Bengi-Arslan, L., & Crijnen, A. A. (2003). Predictors of self-reported problem behaviours in Turkish immigrant and Dutch adolescents in the Netherlands. *Journal of Child Psychology and Psychiatry*, 44(3):412-23. <https://doi.org/10.1111/1469-7610.00131>
- Derr, A. S. (2016). Mental health service use among immigrants in the United States: A systematic review. *Psychiatric Services*, 67(3), 265-74. <https://doi.org/10.1176/appi.ps.201500004>
- Dreher, A., Hahn, E., Diefenbacher, A., Nguyen, M. H., Böge, K., Burian, H., Dettling, M., & Burian, R. (2017). Cultural differences in symptom representation for depression and somatization measured by the PHQ between Vietnamese and German psychiatric outpatients. *Journal of Psychosomatic Research*, 102, 71-77. <https://doi.org/10.1016/j.jpsychores.2017.09.010>
- Drogendijk, A. N., van der Velden, P. G., Gersons, B. P., & Kleber, R. J. (2011). Lack of perceived social support among immigrants after a disaster: comparative study. *British Journal of Psychiatry*, 198(4), 317-22. <https://doi.org/10.1192/bjp.bp.110.077644>
- Du Plooy, D. R., Lyons, A., & Kashima, E. S (2018). The effect of social support on psychological flourishing and distress among migrants in Australia. *Journal of Immigrant and Minor Health*, 21(2), 278-289. <https://doi.org/10.1007/s10903-018-0745-2>

- Field, A. (2009). Exploratory factor analysis. *Discovering statistics using SPSS* (3rd ed., pp. 627–685). SAGE Publications Ltd.
- Gilbert, P. (2015). An evolutionary approach to emotion in mental health with a focus on affiliative emotions. *Emotion Review*, 7(3), 230–237.  
<https://doi.org/10.1177/1754073915576552>
- Henningsen, P., Zipfel, S., Sattel, H., & Creed, F. (2018). Management of functional somatic syndromes and bodily distress. *Psychotherapy and Psychosomatics*, 87(1), 12–31. <https://doi.org/10.1159/000484413>
- Heredia Montesinos, A., Rapp, M. A., Temur-Erman, S., Heinz, A., Hegerl, U., & Schouler-Ocak, M. (2012). The influence of stigma on depression, overall psychological distress, and somatization among female Turkish migrants. *European Psychiatry*, Supplement 2(0), S22-S26. [https://doi.org/10.1016/S0924-9338\(12\)75704-8](https://doi.org/10.1016/S0924-9338(12)75704-8)
- Klokgieters, S. S., van Tilburg, T. G., Deeg, D. J. H., & Huisman, M. (2018). Do religious activities among young–old immigrants act as a buffer against the effect of a lack of resources on well-being? *Aging & Mental Health*, 23(5), 625-632.  
<https://doi.org/10.1080/13607863.2018.1430739>
- Kool, M. B., van Middendorp, H., Lumley, M. A., Schenk, Y., Jacobs, J. W., Bijlsma, J. W., & Geenen, R. (2010). Lack of understanding in fibromyalgia and rheumatoid arthritis: the Illness Invalidation Inventory (3\*I). *Annals of the Rheumatic Diseases*, 69(11), 1990-5. <https://doi.org/10.1136/ard.2009.123224>

- Kroenke, K., Spitzer, R. L., & Williams, J. B (2002). The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. *Psychosomatic Medicine*, 64(2):258-66. <https://doi.org/10.1097/00006842-200203000-00008>
- Laban, C. J., & van Dijk, R. (2013). Main topics in transcultural psychiatric research in the Netherlands during the past decade. *Transcultural Psychiatry*, 50(6):792-816. <https://doi.org/10.1177/1363461513503379>.
- Lanzara, R., Scipioni, M., & Conti, C. (2019). A clinical-psychological perspective on somatization among immigrants: A systematic review. *Frontiers in Psychology*, 9, Article 2792. <https://doi.org/10.3389/fpsyg.2018.02792>
- Lindert, J., Schouler-Ocak, M., Heinz, A., & Priebe, S. (2008). Mental health, health care utilisation of migrants in Europe. *European Psychiatry* 23, Supplement 1(0)), 14–20. [https://doi.org/10.1016/s0924-9338\(08\)70057-9](https://doi.org/10.1016/s0924-9338(08)70057-9)
- Lopez-Maya, E., Olmstead, R., & Irwin, M. R. (2019). Mindfulness meditation and improvement in depressive symptoms among Spanish- and English speaking adults: A randomized, controlled, comparative efficacy trial. *PLOS ONE*, 14(7):e0219425. <https://doi.org/10.1371/journal.pone.0219425>.
- Mak, W.W. S., & Zane, N.W.S. (2004). The phenomenon of somatization among community Chinese Americans. *Social Psychiatry Psychiatric Epidemiology*, 39(12), 967–974. <https://doi.org/10.1007/s00127-004-0827-4>
- Mewes, R., Asbrock, F., & Laskawi, J. (2015). Perceived discrimination and impaired mental health in Turkish immigrants and their descendents in Germany. *Comprehensive Psychiatry*, 62:42-50. <https://doi.org/10.1016/j.comppsy.2015.06.009>



- Morawa, E., Dragano, N., Jöckel, K. H., Moebus, S., Brand, T., & Erim, Y. (2017). Somatization among persons with Turkish origin: Results of the pretest of the German National Cohort Study. *Journal of Psychosomatic Research*, 96:1-9.  
<https://doi.org/10.1016/j.jpsychores.2017.02.014>
- Peterson, R. A. (2000). A meta-analysis of variance accounted for and factor loadings in exploratory factor analysis. *Marketing Letters*, 11(3), 261–275.  
<https://doi.org/10.1023/a:1008191211004>
- Pinto, A. M., Geenen, R., Palavra, F., Lumley, M. A., Ablin, J. N., Amris, K., Branco, J., Buskila, D., Castelo-Branco, M., Crofford, L. J., Fitzcharles, M., Luís M., Reis Marques, T., Rhudy, J. L., Uddin, L. Q., Castilho, P., Jacobs, J. W. G., & Da Silva J. A. P. (2020b). An updated overview of the neurophysiological and psychosocial dimensions of Fibromyalgia – a call for an integrative model. *Preprints*, 2020070224.  
<https://www.preprints.org/manuscript/202007.0224/v1>
- Rask, S., Castaneda, A. E., Koponen, P., Sainio, P., Stenholm, S., Suvisaari, J., Juntunen, T., Halla, T., Härkänen, T., & Koskinen, S. (2015). The association between mental health symptoms and mobility limitation among Russian, Somali and Kurdish migrants: a population based study. *BMC Public Health*, 15(275), 275-288.  
<https://doi.org/10.1186/s12889-015-1629-1>
- Reijneveld, S. A., Westhoff, M. H., & Hopman-Rock, M. (2003). Promotion of health and physical activity improves the mental health of elderly immigrants: results of a group randomised controlled trial among Turkish immigrants in the Netherlands aged 45 and over. *Journal of Epidemiology and Community Health*, 57(6), 405-11.  
<https://doi.org/10.1136/jech.57.6.405>

- Ritsner, M., Ponizovsky, A., Kurs, R., & Modai, I. (2000). Somatization in an immigrant population in Israel: a community survey of prevalence, risk factors, and help-seeking behavior. *American Journal of Psychiatry* 157(3), 385–392.  
<https://doi.org/10.1176/appi.ajp.157.3.385>
- Sanchez, M., Diez, S., Fava, N. M., Cyrus, E., Ravelo, G., Rojas, P., Li, T., Cano, M. A., & De La Rosa, M. (2019). Immigration stress among recent Latino immigrants: The protective role of social support and religious social capital. *Social Work in Public Health*, 34:4, 279-292. <https://doi.org/10.1080/19371918.2019.1606749>
- Sariaslan, S., Morawa, E., & Erim, Y. (2014). Mental distress in primary care patients: German patients compared with patients of Turkish origin. *Nervenarzt.*, 85(5), 589-95.  
<https://doi.org/10.1007/s00115-013-3767-y>.
- Schraufnagel, T. J., Wagner, A. W., Miranda, J., & Roy-Byrne, P. P. (2006). Treating minority patients with depression and anxiety: What does the evidence tell us? *General Hospital Psychiatry*, 28(1), 27–36. <https://doi.org/10.1016/j.genhosppsy.2005.07.002>
- Stronks, K., Şekercan, A., Snijder, M., Lok, A., Verhoeff, A. P., Kunst, A. E., & Galenkamp, H. (2020). Higher prevalence of depressed mood in immigrants' offspring reflects their social conditions in the host country: The HELIUS study. *PLOS ONE*, 15(6), e0234006. <https://doi.org/10.1371/journal.pone.0234006>
- Stupar, S., van de Vijver, F. J., & Fontaine, J. R. (2014). Emotional suppression and well-being in immigrants and majority group members in the Netherlands. *International Journal of Psychology: Journal International de Psychologie*, 49(6), 503-507.  
<https://doi.org/10.1002/ijop.12040>

- Ten Kate, R. L. F., Bilecen, B., & Steverink, N. (2020). A closer look at loneliness: Why do first-generation migrants feel more lonely than their native Dutch counterparts? *The Gerontologist*, 60(2), 291-301. <https://doi.org/10.1093/geront/gnz192>
- Ullmann, E., Barthel, A., Licinio, J., Petrowski, K., Bornstein, S. R., & Strauß, B. (2013). Increased rate of depression and psychosomatic symptoms in Jewish migrants from the post-Soviet-Union to Germany in the 3rd generation after the Shoa. *Translational Psychiatry*, 3(3):e241. <https://doi.org/10.1038/tp.2013.17>.
- Van Leeuwen, N., Bossema, E. R., Vermeer, R. R., Kruize, A. A., Bootsma, H., Vingerhoets, A. J. J. M., Bijlsma, J. W. J., & Geenen, R. (2015). Crying without tears: Dimensions of crying and relations with ocular dryness and mental well-being in patients with Sjögren's syndrome. *Journal of Clinical Psychology in Medical Settings*, 23(1), 77–87. <https://doi.org/10.1007/s10880-015-9432-9>
- Van Oort, F. V., Joung, I. M., Mackenbach, J. P., Verhulst, F. C., Bengi-Arslan, L., Crijnen, A. A., & van der Ende, J. (2007). Development of ethnic disparities in internalizing and externalizing problems from adolescence into young adulthood. *Journal of Child Psychology and Psychiatry*, 48(2), 176–184. <https://doi.org/10.1111/j.1469-7610.2006.01706.x>
- Yeung, A., Slipp, L., Niles, H., Jacquart, J., Chow, C. L., Fawa, M., Denninger, J. W., Benson, H., & Fricchione, G. H. (2014). Effectiveness of the relaxation response-based group intervention for treating depressed Chinese American immigrants: A pilot study. *International Journal of Environmental Research and Public Health*, 11(9), 9186–9201. <https://doi.org/10.3390/ijerph11090918>

## Appendix

### Appendix A

*Following Facebook pages were used to recruit patients with persistent physical symptoms in the Netherland*

Facebook pagina Rinie 11 november geplaatst (op 13 november 29 keer gedeeld vanaf mijn site en waarschijnlijk ook weer vanaf andere sites)

Huub's fibromyalgiesite 11 november geplaatst

Huub Fest facebook pagina 11 november geplaatst

Prikkelbare darm syndroom belangenvereniging (PDSB) 12 november ingediend (inmiddels gehoord dat men het zal plaatsen)

ReumaNederland 12 november geplaatst

ReumaZorgNederland (RZN) 12 november geplaatst

Nederlandse Vereniging Sjögrenpatiënten (NVSP) 12 november ingediend en geplaatst

Nationale Vereniging voor lupus, APS, sclerodermie en MCTD, 12 november ingediend, op 13 november bericht gehad dat het doorgeschoven is naar de sociale media afdeling.

ME/CVS stichting Nederland, 12 november ingediend.

<https://www.facebook.com/chronischevermoeidheid>

#### [Vermoeidheid - Home | Facebook](#)

Vermoeidheid, Amsterdam. 771 likes · 11 talking about this.

Platform voor mensen met chronische vermoeidheid die zoeken naar een balans tussen hoe ze hun leven willen inrichten en wat het moe zijn...

[www.facebook.com](http://www.facebook.com)

. Zelf geplaatst op 12 november.

ReumaNederland persoonlijk benaderd om het bericht op de Facebook site te zetten: 13 november 2020.

Op persoonlijke site van LinkedIn gezet. 13 november

FES (landelijke fibromyalgievereniging) verzoek ingediend op 13 november

Stichting axiale SpA Nederland, zelf op facebook site gezet, 13 november

Facebook site: Jong en Reuma Youth-R-Well.com, 13 november geplaatst

Facebook site: ME/CVS lotgenoten, 13 november geplaatst

Facebook site: Vermoeidheid @chronischevermoeidheid · Community, zelf geplaatst op 13 november

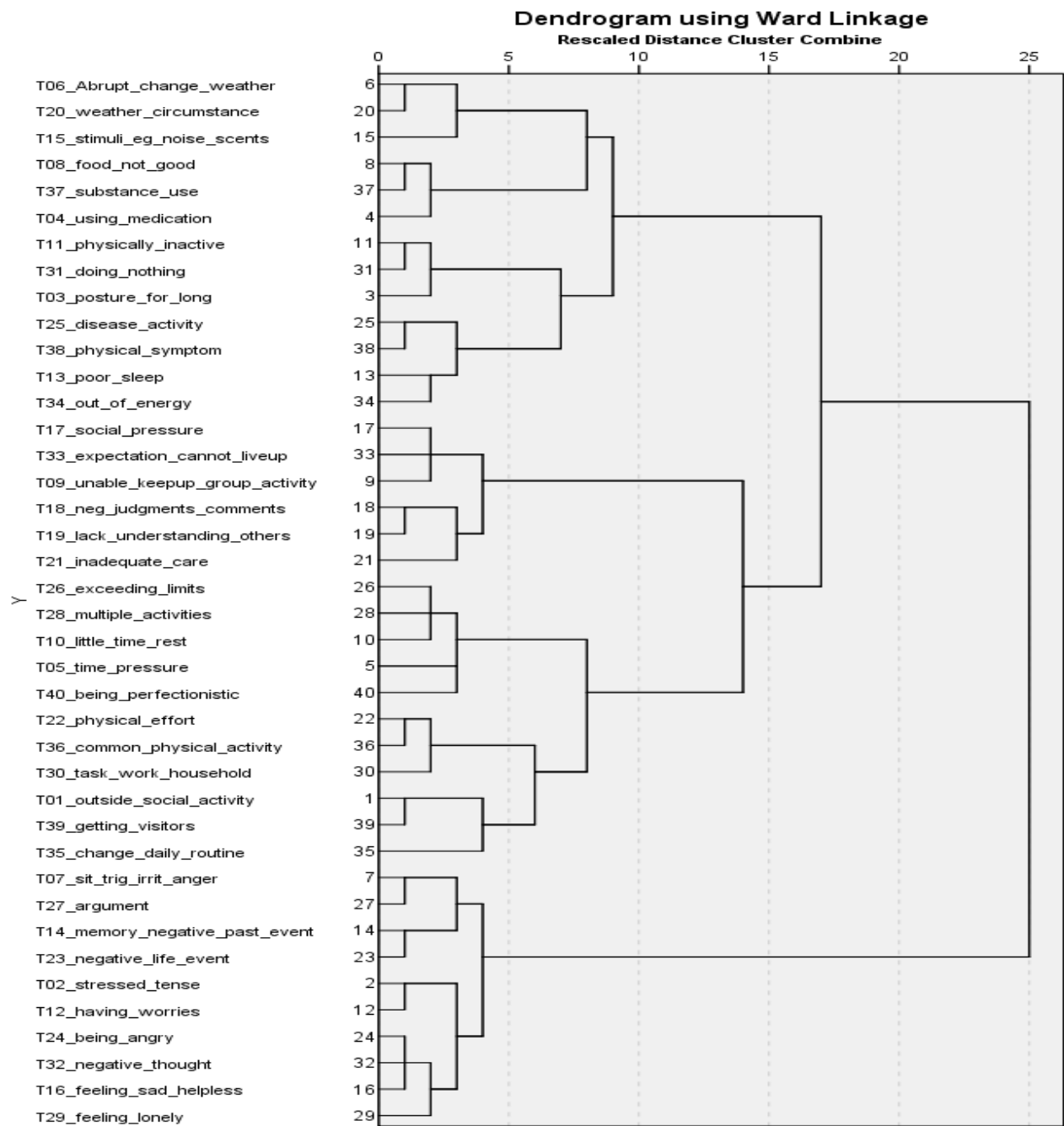
Facebook site: Chronisch vermoeidheidssyndroom

Groep (Privé), , 13 november geplaatst

Facebook: Artritis Psoriatica @ArtritisPsoriatica · Community, 13 november geplaatst

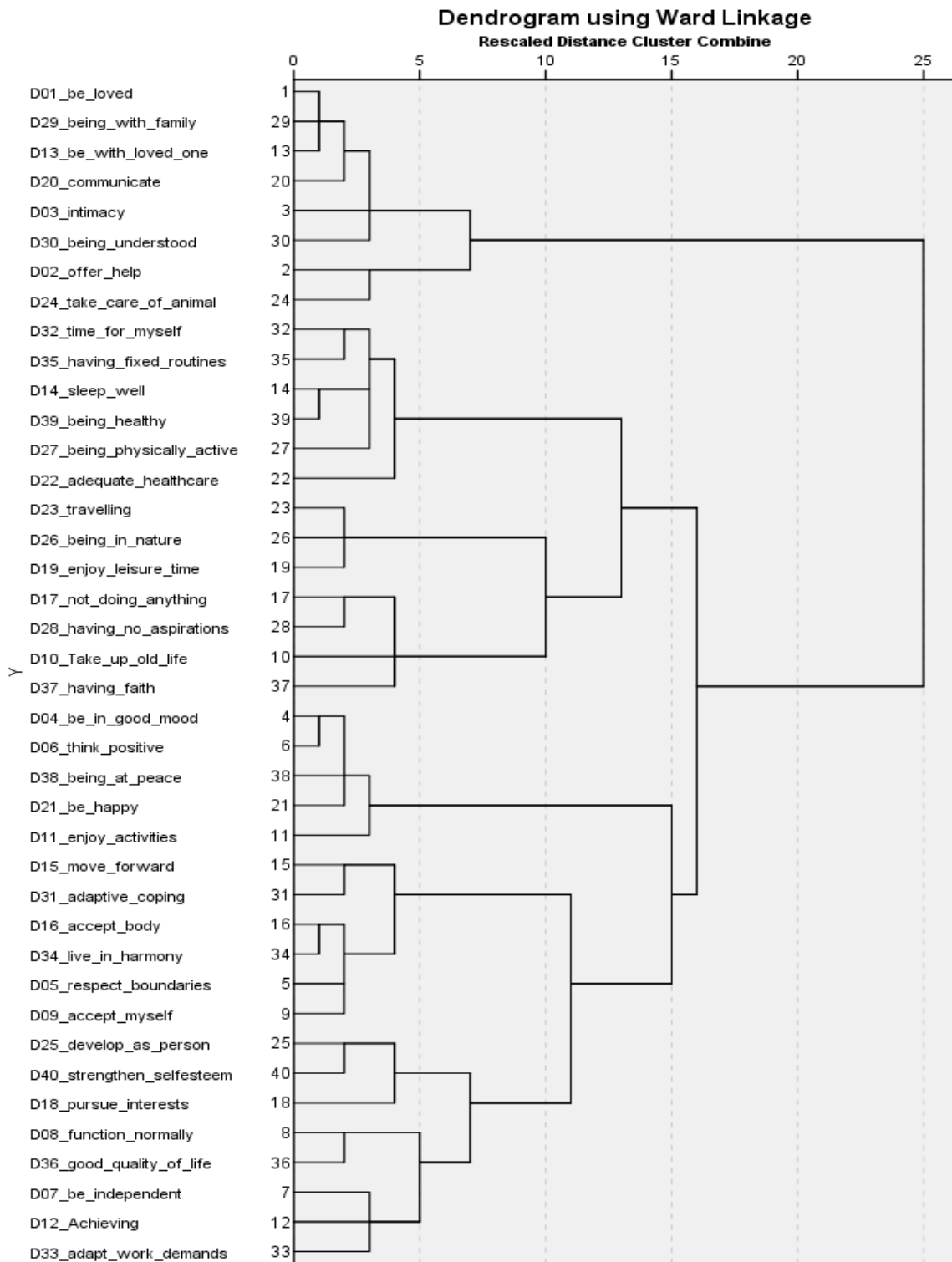
## Appendix B

*Dendrogram of the threats- including the 40 items*



## Appendix C

### *Dendrogram of the drives- including the 40 items*



## Appendix D

### *Questionnaire rating description in Dutch and English*

#### THREATS

Dit deel van de vragenlijst gaat over ‘bedreigingen’ die uw symptomen en problemen kunnen verergeren. Ze brengen ervaringen van gevaar, onheil, schade of onveiligheid teweeg.

Geef aan hoezeer de volgende bedreigingen uw leven beïnvloeden.

1. Geen
2. Een beetje
3. Middelmatig
4. Veel

This part of the questionnaire is about ‘threats’ that may worsen your symptoms and problems. ‘Threats’ create an experience of danger, harm, damage or unsafety.

Indicate the impact of the following threats on your life

1. None
2. A little
3. Moderate
4. A lot

#### SOOTHERS

Dit deel van de vragenlijst gaat over ‘kalmerende invloeden’ die uw symptomen of problemen kunnen verlichten. Ze brengen gevoelens van kalmte, welzijn, veiligheid of sociale verbondenheid teweeg.

Geef aan hoe kalmerend de volgende gebeurtenissen in uw leven zijn,

1. Niet
2. Een beetje
3. Middelmatig
4. Veel

This part of the questionnaire is about ‘soothers’ that may reduce your symptoms and problems. A soother is a comforting factor that may create a feeling of calmness, well-being, safety or social connectedness.

Indicate how comforting the following circumstances are in your life.

1. Not
2. A little
3. Moderate
4. A lot

#### DRIVES

Dit deel van de vragenlijst gaat over ‘drijfveren’ die een negatieve of positieve invloed op uw symptomen of problemen kunnen hebben. Een ‘drijfveer’ is een drift, verlangen, ambitie of motivatie die iemand stimuleert om een specifieke activiteit na te streven of een doel te bereiken.

Geef aan in welke mate de volgende drijfveren u stimuleren om iets te doen of een doel te bereiken.

1. Niet
2. Een beetje
3. Middelmatig
4. Veel

This part of the questionnaire is about ‘soothers’ that may have a negative or positive impact on your symptoms and problems. A drive is an urge, desire, ambition or motivation that stimulates to pursue an activity or reach a goal.

Indicate to what extent the following drives stimulate you to do something or pursue a goal.

1. Not
2. A little
3. Moderate