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Development and Psychometric Properties of the Family Distress in Advanced Dementia Scale

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Abstract

Objective—The majority of scales to measure family member distress in dementia are designed for community settings and do not capture the unique burdens of the nursing home (NH) environment. We report the psychometric properties of a new Family Distress in Advanced Dementia Scale for use in the NH setting.

Design, Setting, Participants—Cross-sectional questionnaire of 130 family member health care proxies of NH residents with advanced dementia in 31 Boston-area NHs.

Methods—Thirty-one initial items were evaluated, measuring the frequency over the past 3 months of sources of distress. Exploratory factor analysis identified domains of distress; Cronbach's alpha was computed for each domain. Associations between the domains and other measures were evaluated using Pearson correlation coefficients, including measures of depression (PHQ-9), satisfaction with care (Satisfaction with Care at the End-of-Life in Dementia [SWC-EOLD]) and caregiver burden (Zarit Burden Interview short version).

Results—Factor analysis suggested three domains: Emotional Distress (9 items), Dementia Preparedness (5 items), and NH Relations (7 items). Cronbach's alpha coefficients were 0.82, 0.75

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CONFLICT OF INTEREST

There are no conflicts of interest.

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and 0.83 respectively. The PHQ-9 correlated most strongly with the Emotional Distress factor ($r = 0.34$), the SWC-EOWD correlated most strongly with the NH Relations factor ($r = 0.35$), as did the Zarit Burden Scale ($r = 0.50$).

Conclusions—The Family Distress in Advanced Dementia Scale encompasses three domains of distress. This scale represents a much needed tool to assess distress among family members of NH residents with advanced dementia and provides a metric to evaluate interventions in the population.

Keywords

caregiver burden; dementia; nursing home

INTRODUCTION

Family members provide the majority of care for persons with dementia.¹ A substantial body of research from community settings has demonstrated that family members of patients with dementia are at increased risk of mood disorders, physical ailments, reduced employment, as well as increased healthcare utilization and mortality.^{2,3,4,5,6,7,8} It is now also recognized that although many such family members experience relief upon institutionalization of their loved one, a substantial proportion remain at elevated risk of adverse outcomes due to the unique stresses of the nursing home (NH) environment.⁹ Given that up to 90% of patients with dementia will be cared for in a NH,¹⁰ and as many as 70% of Americans with dementia will die in this setting,¹¹ there is need for measures that capture the distress and burden of families of patients with dementia in this setting.¹²

Caregiver burden is a multidimensional concept, defined as “the physical, psychological or emotional, social and financial problems that can be experienced by family members.”¹³ Several measures of dementia caregiver burden exist.^{14,15,16,17,18} However, the vast majority of these are designed for use in community settings and focus on burdens specific to that environment. For example, representative items address the physical toll of performing daily patient care such as bathing, or of interrupted caregiver sleep due to needing to supervise the patient at night. Other items address social concerns such as needing to rely on others for assistance with caregiving tasks or the stress related to restricted social life due to caring for the patient in the home. As such, existing measures do not adequately assess the unique burdens of family members whose loved ones reside in the NH, which are distinct from the daily stressors associated with caring for a person with dementia in the home. There have been few new caregiver scales for this population, although there has been a recent addition to the literature of a scale developed to measure burden among family members of NH patients with dementia conducted in Japan.¹⁹ However, this may not reflect the experiences of families or NH residents in the US.

There are several potential sources of distress that are unique to families of NH residents with advanced dementia, including communication with NH staff, perceived need for vigilance to ensure adequate care, guilt over NH placement, quality of NH care, financial concerns, and the burdens of visitation and surrogate medical-decision making.^{9,20,21,22} Existing scales do not adequately address these concerns. For these reasons, we sought to

build on the available literature to develop a concise and easy to administer instrument that captures the unique distress of families of NH residents with advanced dementia, with the goal of identifying family members who might benefit from additional education or support.

METHODS

Participants

Participants were family member health care proxies (HCPs) of NH residents with advanced dementia, recruited from 31 NHs in the Boston area. As a first step in recruitment, trained research assistants contacted NHs in order to identify potentially eligible residents with advanced dementia based on the following criteria: 1. has dementia (any type) based on chart review; 2. Global Deterioration Scale²³ stage of 7 based on nurse interview, (cannot recognize family, minimal verbal communication, total functional dependence, incontinence of urine and stool, inability to ambulate independently); and 3. an English speaking HCP who was a family member of the resident (legal guardians and other non-relatives were excluded). As a second step in recruitment, HCPs of these residents were contacted by telephone to explain the study, solicit their participation, and obtain informed consent. All HCP responses were obtained during a telephone interview conducted by a trained research assistant. The Institutional Review Board at Hebrew SeniorLife approved the conduct of this study.

Scale Items

Areas of family member distress were identified *a priori* based on review of the literature,^{14,15,16,17,24,25} and a prior qualitative study of HCPs of NH residents with advanced dementia²² which identified particular areas of distress in this population, including inadequate resident personal care, need for family member vigilance, difficulty with communication with NH physicians, and challenges of surrogate decision making.

After consideration of the literature, four initial domains were identified: 1. Disease-specific issues related to the patient having advanced dementia; 2. Family member mental health; 3. Responsibilities of surrogate decision-making; and 4. NH quality of care. Preliminary items were created to reflect each domain and were reviewed by all authors to evaluate content validity and to refine wording. A total of 31 preliminary items were retained to reflect the domains. The advanced dementia domain (items 1–6, Table 2) contained items relating to knowledge of what to expect in advanced dementia, communication and sense of isolation from loved one, fear of what will happen at loved one's death, and loss of personhood. The family member mental health domain (items 7–13, Table 2) contained items related to fear, anxiety, depression, longing, emotional fatigue, and disbelief related to the resident's illness, as well as a sense that the resident had suffered enough. The surrogate decision making domain (items 14–21, Table 2) contained items describing knowledge of dementia, desire for more information, involvement and understanding of medical decision-making, support from the NH regarding medical decisions, and conflict with other family members regarding medical decisions. Finally, the NH domain (items 22–31) contained items relating to a sense of guilt, need for vigilance, concerns about finances, ability to visit, quality of medical and

basic care, respect shown the resident, the family member feeling welcome in the NH, as well as communication and relationships with NH staff.

All 31 items were designed to elicit responses on a common 5-point scale rating the frequency of a particular symptom or event over the past three months; as follows: 1= never, 2= rarely, 3=sometimes, 4=often, 5= always. Prior to administration, we evaluated item face validity, acceptability and comprehensibility of these items using cognitive interviewing techniques²⁶ among 8 family members of NH residents with advanced dementia who met eligibility criteria, but were not enrolled in the study sample. Participants provided feedback on the importance of items as aspects of the distress they experienced, and were asked to assist with language used in the questions, such as whether the term “burden” or “stress” was most appropriate. Participants were also asked to provide input on the time frame for the questions (i.e. in the past month vs. in the past two weeks), and to provide feedback on any questions that were difficult to understand. Items were altered to reflect the feedback received.

Other Variables

The following data were obtained during the interview to describe the cohort: demographics (age, gender, race, education, relationship to resident); length of resident NH stay; and frequency of family member visits with the NH resident. In addition, measures of related constructs were administered to test convergent evidence of validity. In selecting these measures, our goal was to utilize comparison measures that were brief and easy to administer, as well as commonly cited in the literature. These included a measure of depression (PHQ-9)²⁷ [range 0–27, higher scores indicate greater symptom levels] satisfaction with care (Satisfaction with Care at the End-of-Life in Dementia [SWC-EOLD])²⁸ [range 10–40, higher scores indicate greater satisfaction] and caregiver burden (Zarit Burden Interview short version)²⁹ [range 0–48, higher scores indicate greater burden]).

Data Analysis

Item frequency distributions were examined to ensure item responses were distributed across the full range of response options. Exploratory factor analysis with an oblique geomin rotation was performed on responses to the items. We used weighted least squares factor analysis for categorical dependent variables using Mplus software (version 7.0, Muthén & Muthén, Los Angeles CA). Factor solutions of 1,2,3, and 4 factors were estimated, and the optimal number of factors was determined by comparison of the Comparative Fit Index (CFI), Root Mean Squared Error of Approximation (RMSEA), and a quasi-permutation approach to parallel analysis test on the significance of the eigenvalues for the correlation matrix.³⁰ Within each factor, item sets were then restricted to those items with factor loadings greater than 0.4. To examine the reliability of scores, Cronbach’s alpha was computed for each subscale. Patterns of association between the subscales and other established measures were evaluated using Pearson correlation coefficients.

RESULTS

A total of 189 potentially eligible family member HCPs were identified, among whom 130 (69%) agreed to participate. Among those who chose not to participate, we were able to collect demographic information on 35 (59%), and when compared to participants, there were no significant differences from this group with respect to gender, age or race. The mean age of family members was 61 years, 64% were female, 72% were children of the resident and 95% were White. The mean resident NH length of stay was 4.1 years (range 0.5 to 13). Other family member characteristics are reported in Table 1. One family member was dropped from further analyses as responses to over half of the scale items were missing.

Item frequency distributions

Examination of the item frequency distributions, means, and standard deviations revealed that all items were endorsed by at least some respondents (i.e. no items had scores of 0). The mean score in the cohort for each scale item are reported in Table 2. Items with the highest mean scores (indicating greater frequency) included “I have felt my loved one is less of the person he or she used to be”, “I have felt that my loved one has endured enough suffering”, and “I have felt a sense of longing for my loved one as they used to be”.

Factor analysis and reliability

Results of the factor analysis suggested three distinct, but correlated domains. The three factor solution had a CFI of 0.97, and a RMSEA of 0.031 and provided a better fit than a one (CFI = 0.83, RMSEA = 0.066), and two (CFI = 0.92, RMSEA = 0.046) factor solution, and worse fit than a four factor solution (CFI = 0.99, RMSEA = 0.017). Only the first eigenvalue of the correlation matrix was significant in the permutation test. We decided to retain the three factor model after examining the factor loading patterns and considering the clinical meaning of the implied underlying factors, and the results of the EFA models and permutation tests. The exploratory factor analysis solution is presented in Table 5. A table of eigenvalues is presented in an appendix table.

After dropping items with factor loadings less than 0.4 on any of the three factors, the item pool was reduced to 22 items. After examining each item's contribution to alpha, 1 item was removed from factor 2 leaving a total of 21 items. The final subscales and items displayed in Table 3. The first subscale represents Emotional Distress and contains 9 items. The second subscale represents Dementia Preparedness, and contains 5 items. The third subscale represents NH Relations and contains 7 items.

Scores for the final subscales are calculated by summing the responses to all items and dividing by the number of items in the subscale. Time for administration of all three subscales was approximately 5–10 minutes. Means and standard deviations (SD) for the scores based on the items in the three subscales are as follows, along with skewness and kurtosis values: Emotional Distress 2.7 (1.0), skewness 0.8, kurtosis 2.43; Dementia Preparedness 1.7 (0.8), skewness 1.44, kurtosis 4.97; NH Relations 1.2 (0.4), skewness 3.65, kurtosis 19.12.

The correlations between scores for the three subscales are as follows: Emotional Distress with Dementia Preparedness, $r = 0.37$ ($p < 0.001$, $N = 129$); Emotional Distress with NH Relations, $r = 0.25$ ($p = 0.005$, $N = 129$); Dementia Preparedness with NH Relations, $r = 0.41$, ($p < 0.001$, $N = 129$). Estimates of Cronbach's alpha were good: for Emotional Distress, alpha was 0.82, for Dementia Preparedness, alpha was 0.75, and for NH relations, alpha was 0.83.

Patterns of Associations

Table 4 displays correlations between scores from the subscales and scores from the established measures included for comparison purposes. Scores on the subscales are related in expected ways to scores on established scales which are believed to measure related constructs. The PHQ-9 (alpha 0.75) correlated most strongly with the Emotional Distress subscale ($r = 0.34$). The SWC-EOWD (alpha 0.86) correlated most strongly with the NH Relations subscale ($r = 0.35$), as did the Zarit Burden Scale (alpha 0.76) ($r = 0.50$). Although the Dementia Preparedness subscale correlated moderately well with the Zarit Burden Scale ($r = 0.27$), this subscale appears to represent a construct not well characterized by the other established measures.

DISCUSSION

Families play an important role in caring for patients with dementia, but are at risk of significant levels of stress and adverse outcomes. This manuscript describes a new scale to measure such distress among family members of NH residents with advanced dementia. Although several scales currently exist to measure caregiver burden or distress in dementia, our work is important because it is specific to the NH setting where the majority of patients with dementia reside, as well as specific to the end-stage of illness which generates unique stressors. This scale is short, easy to administer, and potentially useful in both research and clinical settings.

This scale consists of three domains of distress: emotional distress, preparedness for dementia, and NH relations. When compared to the domains of the Fukahori scale,¹⁹ (conflict with care staff, constraints of caregiving, guilt, and anticipatory grief), there is similarity only with a few items in the conflict with staff and anticipatory grief domains. Thus, we feel that our scale represents a contribution to the literature of scales to assess distress in this unique population.

Our first domain confirms the importance of emotional distress among family members, which has been well documented. However, while the items on other burden scales assess general feelings of depression, sadness or anger,^{14,15,29} our items are focused on distress specific to aspects of dementia. A similar approach has been used in other caregiver burden scales,^{17,19} although the items in our scale are different from these previously used items. The emotional distress items in our scale assess feelings of sadness, isolation, anxiety and fear related to the loss of personhood associated with the late stages of dementia. This domain displays good construct validity, as it was the domain that correlated most strongly with the PHQ-9, a measure of depression.

Our second domain of dementia preparedness has not been well described in other measures of burden. Our items mostly represent distress associated with lack of knowledge of the course of dementia and surrogate medical decision making. Prior work has clearly documented that family members of patients with dementia are frequently asked to make medical decisions,^{31,32} and that they report feeling unprepared and unsupported in this role, particularly in the NH setting.^{22,33,34,35} However, greater caregiver knowledge of the course of dementia has been associated with residents having a lower likelihood of receiving aggressive care at the end of life.³⁶ Given the high frequency of surrogate medical decision-making in this population,³² this domain may be useful as a measure of an important under-appreciated area of distress.

Our third domain of NH relations captures the distress associated with the provision of care, as well as interactions and communication with NH staff. Family member concerns regarding resident care have been previously described in the NH setting¹² as has the perceived need for families to remain vigilant in an attempt to improve care.²³ Family members' experience of poor communication with NH physicians is also supported by prior literature, particularly at the end-of-life.¹² Thus, this domain appears to be capturing an important component of distress for this population. Construct validity is supported by the correlation with SWC-EOWD, although our items are distinct. This domain is also represented in the other published scale designed for use among caregivers of NH residents with dementia,¹⁹ which, although developed in Japan, also addressing concerns regarding treatment of residents, and difficulties with NH staff communication.

We acknowledge certain limitations in the development of this scale. Our sample size was relatively small, although adequate for the analyses performed.³⁷ In addition, our sample was mostly female, white, well educated and geographically limited to the Boston area, which may limit the generalizability of our findings. Further testing of the scale in more diverse populations would be appropriate. Although our scale identified three domains of distress, there are likely other sources of distress which we did not measure, that may be important to family members. In addition, some family members may experience significant positive effects of caregiving that this scale does not measure, and which may ameliorate the effects of distress.

CONCLUSIONS

The Family Distress in Advanced Dementia Scale, derived for the specific population of family members of NH residents with advanced dementia is suitable for use in clinical and research settings. Items are specific to the distress found in this population, and each domain addresses a well defined area of concern with potential for tailored interventions. We anticipate that this scale will be useful in clinical settings as a way to identify family members in need of outreach from the nursing home. In addition, it can likely serve as an outcome measure for family member interventions such as those providing education regarding the course of dementia, efforts to improve NH communication, or interventions to address family member distress associated with having a loved one with advanced dementia.

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Table 1

Characteristics of family members and nursing home residents with advanced dementia, n=130

Age in years, mean (SD)	61 (11)
Female, n (%)	82 (64)
Race, n (%)	
African American	6 (5)
White	124 (95)
College education, n (%)	99 (76)
Child of resident, n (%)	93 (72)
Hours/wk visiting resident, mean (SD)	1.5 (1.3)
Years resident has resided in nursing home, mean (SD)	4.1 (2.7)

Table 2

Mean values and standard deviations (SD) of frequency responses to initial scale items

Item	Mean	SD
1. I have felt that I don't know what to expect in my loved one's illness	1.9	1.3
2. I have felt that I don't know how to communicate with my loved one	2.8	1.7
3. I have felt isolated from my loved one	2.6	1.7
4. I have been concerned about what to expect when my loved one is close to death	2.0	1.4
5. I have felt my loved one is less of the person he or she used to be	3.8	1.6
6. I have felt worried that my loved one will die alone*	1.9	1.4
7. I have felt scared or helpless because of my loved one's illness	2.4	1.5
8. I have felt that my loved one has endured enough suffering*	3.2	1.6
9. I have felt anxious about my loved one's illness	2.4	1.4
10. I have felt a sense of longing for my loved one as they used to be	3.4	1.5
11. I have felt depressed or sad because of my loved one's illness	2.7	1.4
12. I have felt emotionally drained because of my loved one's illness	2.3	1.4
13. I have felt a sense of disbelief over my loved one's illness*	1.5	1.0
14. I have wanted to have more information about the course of dementia	1.8	1.2
15. I have wanted to be more involved in medical decisions for my loved one*	1.5	1.1
16. I have felt unsure about the course of my loved one's illness	2.0	1.4
17. I have not felt supported by nursing home staff in making medical decisions	1.3	0.8
18. I have not understood the medical decisions regarding my loved one	1.2	0.6
19. I have felt unsure about what my loved one would want in terms of medical care*	1.3	0.8
20. I have felt conflict with other family members about medical decisions for my loved one*	1.2	0.8
21. I have felt that the staff at the nursing home have not communicated with me about medical decisions for my loved one	1.2	0.7
22. I have felt a sense of guilt over having my loved one in the nursing home*	2.0	1.5
23. I have had difficulties communicating with staff at the nursing home	1.3	0.7
24. I have had difficult relationships with staff at the nursing home	1.1	0.3
25. I have felt the need to watch over the care my loved one is getting at the nursing home*	1.9	1.3
26. I have not been able to visit the nursing home as much as I would like*	2.6	1.5
27. I have felt that my loved one is not getting good medical care at the nursing home	1.2	0.7
28. I have felt that my loved one is not treated with respect at the nursing home	1.2	0.5
29. I have felt that my loved one has not been clean or well groomed at the nursing home	1.4	0.8
30. I have felt that I have not been made to feel welcome at the nursing home	1.1	0.3
31. I have had concerns about not being able to pay for nursing home care for my loved one*	1.3	0.9

* Item not included in final scale

Table 3**Final domains and items for Family Distress in Advanced Dementia Scale****Emotional Distress**

I have felt that I don't know how to communicate with my loved one
I have felt isolated from my loved one
I have been concerned about what to expect when my loved one is close to death
I have felt my loved one is less of the person he or she used to be
I have felt scared or helpless because of my loved one's illness
I have felt anxious about my loved one's illness
I have felt a sense of longing for my loved one as they used to be
I have felt depressed or sad because of my loved one's illness
I have felt emotionally drained because of my loved one's illness

Dementia Preparedness

I have felt that I don't know what to expect in my loved one's illness
I have wanted to have more information about the course of dementia
I have felt unsure about the course of my loved one's illness
I have not felt supported by nursing home staff in making medical decisions
I have not understood the medical decisions regarding my loved one

Nursing Home Relations

I have felt that the staff at the nursing home have not communicated with me about medical decisions for my loved one
I have had difficulties communicating with staff at the nursing home
I have had difficult relationships with staff at the nursing home
I have felt that my loved one is not getting good medical care at the nursing home
I have felt that my loved one is not treated with respect at the nursing home
I have felt that my loved one has not been clean or well groomed at the nursing home
I have felt that I have not been made to feel welcome at the nursing home

Table 4

Correlation coefficients between subscales of the Family Distress in Advanced Dementia scale and established measures

Subscale	PHQ-9	SWC-EOWD	Zarit burden scale
Emotional Distress	0.34 [*]	0.13	0.47 [*]
Dementia Preparedness	0.11	0.06	0.27 [*]
Nursing Home Relations	0.33 [*]	0.35 [*]	0.50 [*]

^{*}
p<0.05

Table 5

Exploratory Factor Analysis, 3 factor solution

Item	Factor		
	1	2	3
11. I have felt depressed or sad because of my loved one's illness	0.81	0.00	0.14
9. I have felt anxious about my loved one's illness	0.80	0.15	-0.01
12. I have felt emotionally drained because of my loved one's illness	0.66	-0.00	0.22
2. I have felt that I don't know how to communicate with my loved one	0.64	0.21	-0.11
7. I have felt scared or helpless because of my loved one's illness	0.61	-0.05	0.30
3. I have felt isolated from my loved one	0.58	0.14	0.02
10. I have felt a sense of longing for my loved one as they used to be	0.57	-0.10	0.13
5. I have felt my loved one is less of the person he or she used to be	0.56	0.11	0.00
4. I have been concerned about what to expect when my loved one is close to death	0.53	0.32	-0.20
31. I have had concerns about not being able to pay for nursing home care for my loved one	0.41	0.18	-0.21
14. I have wanted to have more information about the course of dementia	0.14	0.85	-0.03
18. I have not understood the medical decisions regarding my loved one	-0.09	0.76	0.34
17. I have not felt supported by nursing home staff in making medical decisions	-0.00	0.65	0.48
1. I have felt that I don't know what to expect in my loved one's illness	0.27	0.64	0.16
16. I have felt unsure about the course of my loved one's illness	0.38	0.57	0.02
19. I have felt unsure about what my loved one would want in terms of medical care	0.04	0.56	-0.07
30. I have felt that I have not been made to feel welcome at the nursing home	-0.00	0.13	0.95
29. I have felt that my loved one has not been clean or well groomed at the nursing home	0.00	-0.11	0.91
24. I have had difficult relationships with staff at the nursing home	-0.13	0.31	0.85
28. I have felt that my loved one is not treated with respect at the nursing home	0.23	0.00	0.79
23. I have had difficulties communicating with staff at the nursing home	0.06	0.3	0.76
27. I have felt that my loved one is not getting good medical care at the nursing home	0.02	0.36	0.75
21. I have felt that the staff at the nursing home have not communicated with me about medical decisions for my loved one	-0.04	0.33	0.62
25. I have felt the need to watch over the care my loved one is getting at the nursing home	0.12	0.14	0.56
22. I have felt a sense of guilt over having my loved one in the nursing home	0.32	-0.15	0.43
20. I have felt conflict with other family members about medical decisions for my loved one	0.07	0.34	0.36
26. I have not been able to visit the nursing home as much as I would like	0.16	-0.11	0.36
I have felt worried that my loved one will die alone	0.34	-0.16	0.29
15. I have wanted to be more involved in medical decisions for my loved one	-0.05	0.29	0.26
13. I have felt a sense of disbelief over my loved one's illness	0.32	0.24	0.20
8. I have felt that my loved one has endured enough suffering	0.28	0.00	0.07
Factor correlation matrix			
factor 2	0.05	1	
factor 3	0.24	0.19	1
Model fit			
Confirmatory Fit Index			0.967

Item	Factor		
	1	2	3
Root mean squared error of approximation			0.031

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Appendix Table

Eigenvalues of the correlation matrix

Item	Observed Eigenvalue	Percent of Variance	Random Eigenvalues		P- value
			Mean	95% CI	
1	9.8	32	5.8	(5.4, 6.5)	0.01
2	4.1	13	4.4	(4.1, 4.9)	0.96
3	3.3	11	3.8	(3.2, 4.1)	0.91
4	2.6	8	3.2	(2.7, 3.5)	0.96
5	2.0	7	2.7	(2.5, 3.1)	0.99
6	1.7	5	2.3	(2.1, 2.6)	0.99
7	1.5	5	2.1	(1.8, 2.4)	0.99
8	1.4	5	1.9	(1.7, 2.1)	0.99
9	1.3	4	1.7	(1.6, 1.9)	0.99
10	1.2	4	1.5	(1.4, 1.7)	0.99
11	0.8	3	1.4	(1.3, 1.5)	0.99
12	0.8	3	1.3	(1.2, 1.4)	0.99
13	0.6	2	1.2	(1.1, 1.3)	0.99
14	0.6	2	1.0	(1.0, 1.2)	0.99
15	0.5	2	1.0	(0.9, 1.1)	0.99
16	0.5	1	0.9	(0.7, 1.0)	0.99
17	0.4	1	0.7	(0.7, 0.8)	0.99
18	0.3	1	0.6	(0.6, 0.7)	0.99
19	0.3	1	0.5	(0.5, 0.7)	0.99
20	0.3	1	0.5	(0.4, 0.6)	0.99
21	0.2	1	0.4	(0.3, 0.5)	0.99
22	0.1	0	0.3	(0.2, 0.4)	0.99
23	0.1	0	0.2	(0.1, 0.3)	0.99
24	-0.1	0	0.1	(-0.0, 0.2)	0.99
25	-0.1	0	0.0	(-0.1, 0.1)	0.96
26	-0.2	0	-0.2	(-0.3, -0.0)	0.36
27	-0.2	-1	-0.4	(-0.6, -0.2)	0.04

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Item	Random Eigenvalues				P- value
	Observed Eigenvalue	Percent of Variance	Mean	95% CI	
28	-0.2	-1	-0.7	(-1.0, -0.4)	0.01
29	-0.4	-1	-1.1	(-1.4, -0.7)	0.01
30	-0.5	-2	-1.6	(-2.0, -1.2)	0.01
31	-1.7	-5	-4.7	(-5.2, -3.8)	0.01