

Geriatric Depression Scale: Long Form Versus Short Form

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ABSTRACT. The Long Form and the Short Form of the Geriatric Depression Scale (GDS) were compared in a VA nursing home population. The study had two phases. In the first phase, 86 geriatric male veterans were administered the Long Form of the GDS at intake. The Long Form was rescored on the Short Form and a scatterplot was constructed. The Short Form of the GDS consistently identified 94% of the participants using the Long Form as the standard. In the second phase of the study, 31 veterans were administered both the Long Form and the Short Form of the GDS in alternating order during their intake or annual screening assessment. A scatterplot showed the Short Form to consistently identify 100% of the participants using the Long Form as the standard. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <<http://www.HaworthPress.com>> © 2000 by The Haworth Press, Inc. All rights reserved.]

The use of the Geriatric Depression Scale (GDS) as a screening tool in nursing home populations is wide spread. This 30-item, yes/no, questionnaire has been shown over the years to be a valid instrument for assessing depressive symptoms in the geriatric as well as other populations (e.g., Brink, Yesavage, Lum, Heersema, Adey, & Rose, 1982; Koenig, Meador, Cohen, & Blazer, 1989; Leshner, 1986; Olin, Schneider, Eaton, Zemansky, & Pollock, 1992; Parmelee, Lawton, &

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Katz, 1989; Rule, Harvey, & Dobbs, 1989; Showdon, 1990; and Yesavage, Brink, Rose, Lum, Huang, Adey, & Leirer 1983). Brink and Yesavage (1982) suggest scores of 0 to 10 to be in the normal range, 11 to 20 to indicate mild depression, and 21 to 30 to indicate moderate to severe depression.

In 1986, a short form of the GDS was developed by Sheikh and Yesavage. The 15-item Short Form has been demonstrated to be a useful screening tool with both inpatients and outpatients (Hermann, Mittman, Silver, & Shulman, 1996; Leshner & Berryhill, 1994), with nursing home patients (Baker & Miller, 1991), and with Asian and Native American populations (Ferraro, Bercier, Chelminski, 1997; Lee, Chiu, Kwok, & Leung, 1993; Lee, Chiu, & Kwong, 1996). Brink and Yesavage (1982) suggest scores of 0 to 4 to be in the normal range, 5 to 9 to indicate mild depression, and 10 to 15 to indicate moderate to severe depression. Evidence for concurrent and convergent validity of the Short Form has been established (Alden, Austin, & Sturgeon, 1989; Ferraro & Chelminski, 1996; Herrmann, Mittman, Silver, & Shulman, 1996).

Nevertheless, there are those who have questioned the use of the Short Form as a suitable substitute for the Long Form of the GDS. Alden, Austin and Sturgeon (1990) administered the Long Form followed by the Short Form two weeks later to the same participants. Conclusions that the instruments were not equivalent were based on correlations between the two instruments at two distinct periods in time.

Use of the Short Form would be beneficial in that it would decrease the time of testing, which is particularly important in working with older people. This study attempts to provide evidence that the Short Form of the GDS is a suitable substitute for the Long Form when used as a screening tool in the geriatric nursing home population.

PHASE ONE

Method

Participants. Participants were 86 veterans admitted to a Midwestern Veterans Administration Medical Center Nursing Home Care Unit over a 3 year period. Participants were admitted due to physical im-

pairment, cognitive impairment, and/or psychiatric impairment. The age range of the participants was 55 to 91, with a mean age of 73. There were 4 (4.6%) participants aged 55-59, 28 (32.6%) aged 60-69, 33 (38.4%) aged 7-79, 16 ((18.6%) aged 80-89 and 5 (5.8%) aged 90-91. All of the participants were male, reflecting the typical VA nursing home population.

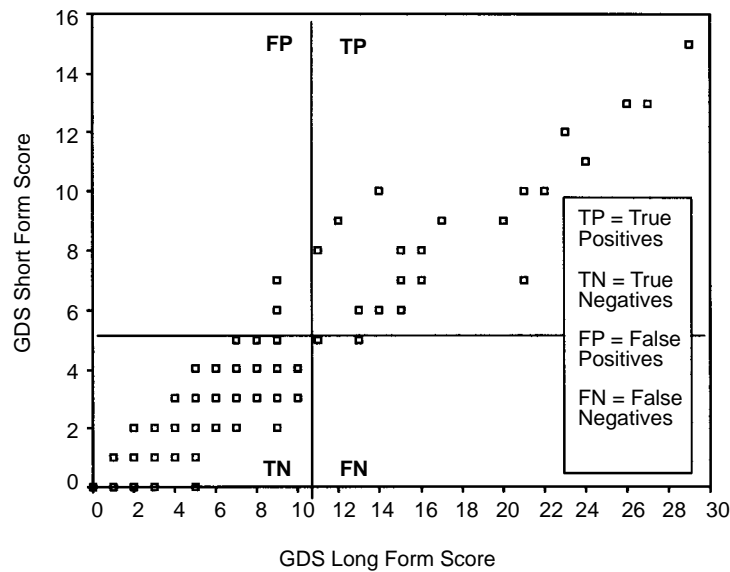
Procedure. Participants were administered a Long Form GDS either on admission to the unit or at their annual screening assessment. Examiners ranging from practicum students to staff psychologists administered the instrument orally to each participant. The archival GDS Long Form was rescored using the GDS Short Form.

Analysis. Scores of 11 or more on the Long Form (Brink & Yesavage, 1982) and scores of 5 or more on the Short Form (Yesavage, 1986) have been identified as indicative of the need for further evaluation of depressive symptoms. A scatterplot was constructed using the Long Form score as the standard to determine the number of true and false positives and true and false negatives based on a cutting score of 11 on the Long Form and 5 on the Short Form.

Results. The Long Form score was used as the standard by which the Short Form was compared in this study. Therefore the “true/false positives” and “true/false negatives” do not indicate positive and negative for depression, but rather for agreement between the Short Form and Long Form of the GDS. Therefore, a “true positive” or a “true negative” occurs when there is consistency between the Short Form and the Long Form scores in predicting the presence of depression or lack of depression, respectively. A “false positive” occurs when the Short Form score exceeds the cutoff, but the Long Form score does not exceed the cutoff. Thus, a “false positive” is when the Short Form identifies the individual as depressed, while the Long Form does not identify them as depressed. Conversely, the “false negative” occurs when the Short Form score did not meet the cutoff for depression, while the Long Form score identified the individual as depressed.

Figure 1 shows that the Short Form of the GDS consistently identified 79 (92%) of the 86 participants. Twenty-three (27%) of the participants were identified as true positives and 53 (62%) of the participants were identified as true negatives. Seven (8%) participants were identified as false positives with the Short Form. There were no false

FIGURE 1. Scatterplot of Individuals' GDS Long Form score and Short Form score when the Short Form score is extracted from the Long Form ($n = 86$).



negatives. It is generally more acceptable to have false positives since overidentification on a screening instrument is preferable.

PHASE TWO

Method

Participants. Participants for the second phase of the study were 31 veterans admitted to the same Nursing Home over a 3-year period. The age range of the participants was 60 to 92 with a mean age of 74. There were 8 (25.8%) participants aged 60-69, 16 (51.6%) aged 7-79, 6 (19.4%) aged 80-89 and 1 (3.2%) aged 92. All of the participants were male, reflecting the typical VA nursing home population.

Procedure. Participants were administered both the Long Form and the Short Form of the GDS either upon admission to the unit or at their annual screening assessment. The Forms were administered in alter-

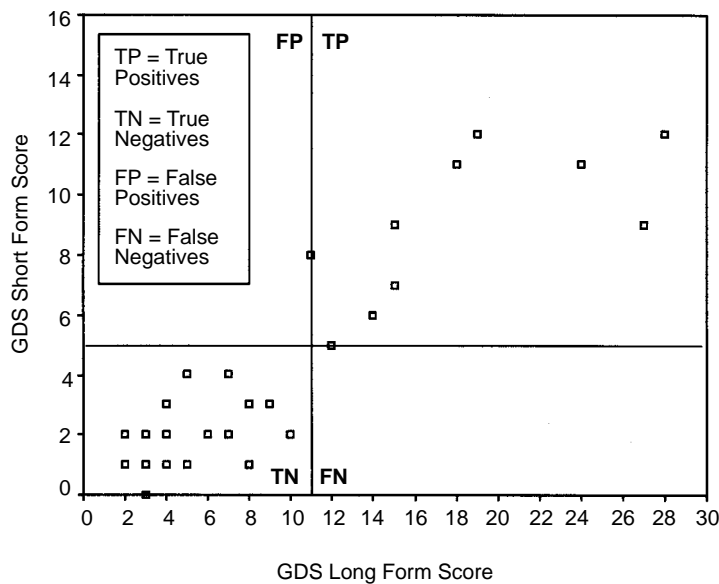
nating order, one at the beginning of an individual's 30 to 45 minute screening assessment and one at the end of the screening assessment. Anxiety measures, a mental status exam, and a brief interview were conducted between administrations of the two Forms.

Analysis. Again, scores of 11 or more on the Long Form (Brink & Yesavage, 1982) and scores of 5 or more on the Short Form (Yesavage, 1986) were considered to indicate the need for further evaluation of depressive symptomatology. A scatterplot was constructed using the Long Form score as the standard to determine the number of true and false positives and true and false negatives based on the Short Form.

Results. The Long Form was used as the standard by which the Short Form was compared and "True/False positives and negatives" were determined as described in Phase One of this study.

Figure 2 shows that the Short Form of the GDS correctly identified 100% of the 31 participants. There were 10 participants identified as

FIGURE 2. Scatterplot of Individuals' GDS Long Form score and Short Form score when each instrument is given separately ($n = 31$).



true positives and 21 participants identified as true negatives. The correlation of the Short Form scores and Long Form scores was $r = .91, p < .01$.

DISCUSSION

This study supports the use of the Short Form of the GDS as a substitute for the Long Form of the GDS in the veteran nursing home population. All participants in the second phase of the study who were identified by the Long Form as needing further evaluation for depression were also identified by using a cutting score of 5 on the Short Form.

Although the Short Form identified the same participants as the Long Form, 27 (90%) of the 31 participants answered between one and five questions differently on the two forms: 42% percent changed one response, 26% changed two responses, 13% changed three responses, 3% changed four responses, and 6% changed five responses. Questions answered differently between the two forms varied among the 15 items of the Short Form; no single question appeared to be answered differently significantly more or less often than the others. The order in which the forms were administered and the age of the participant made no significant difference in the number of changed responses ($R = .05, p = .21$ for order of administration and $R = .05, p = .23$ for age of participant).

This study provides support for the use of the GDS Short Form as a screening tool for depression in nursing home populations. However, the Short Form is considered to be a good screening tool only to the extent that the Long Form is a good screening tool. To establish construct validity and concurrent validity, further research is needed to compare the GDS Short Form with other measures of depression and clinical diagnoses. Psychometric properties such as sensitivity and specificity could also then be examined.

Finally, in this VA system, the GDS is used primarily as an annual screening tool for depression. However, another use of the instrument is to assess change in depressive symptomology over time (e.g., to determine the effectiveness of medications or therapy). Whether the Short Form performs as well as the original GDS when used for this purpose is an empirical question. The original form may be a better choice for this use because of the heightened variability in responses.

In summary, the 15-item Short Form of the GDS appears to be as good at screening for depressive symptoms as the original 30-item GDS in the VA nursing home population. Future research needs to continue to establish validity of the Short Form and determine whether the Short Form is as good as the original for repeat administration in comparing the level of depressive symptomology over time.

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