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Original Study

Reliability and Validity of the Resistiveness to Care Scale Among Cognitively Impaired Older Adults

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A B S T R A C T

Background: Resistiveness to care is behavior that prevents or interferes with caregivers' performing or assisting with activities of daily living and puts residents at risk for inappropriate use of antipsychotic drugs, other restraining interventions, social isolation, and physical abuse. The purpose of this study was to establish the psychometric properties of a previously developed Resistiveness to Care measure.
Procedures: This was a descriptive study using baseline data from an ongoing randomized controlled trial testing a Function and Behavior Focused Care (FBFC) intervention. Residents were eligible to participate if they were 55 years of age or older, had a Mini-Mental State Exam (MMSE) score of 15 or less, and were not enrolled in hospice or admitted for subacute care. Descriptive information included age, race, gender, cognitive status, and marital status. In addition to the Resistance to Care Scale, the Barthel Index, the Physical Activity Survey in Long Term Care (PAS-LTC), and the Cohen-Mansfield Agitation Inventory (CMAI) were completed. Psychometric testing was done using Rasch analysis and the Winsteps statistical program.
Main findings: The participants were moderate to severely cognitively impaired (MMSE of 7.23), functionally dependent (Barthel Index 47.31, SD 27.59), and engaged in only 134.17 (SD = 207.32) minutes of physical activity daily. Reliability was supported based on a Cronbach alpha of 0.84 and the DIF analysis, as there was no difference in function of the items between male and female participants. Validity was supported as all items fit the measurement model based on INFIT and OUTFIT statistics.
Conclusions: The findings support the reliability and validity of the Resistiveness to Care Scale for use with older adults with dementia in nursing home settings. Future work with the measure may benefit from the addition of items that are easier to endorse with regard to resistiveness to care (shutting eyes or spitting out food may be useful additions).

Resistiveness to care generally occurs when an individual with cognitive impairment interferes with caregivers' attempts to provide care. There have been multiple definitions of resistiveness to care, although most commonly it is defined as the "repertoire of behaviors with which persons with dementia withstand or oppose the efforts of a caregiver."[1] Alternatively, resistiveness to care has been described as rejection of care[2] or behavior that prevents or interferes with caregivers' performing or assisting with activities of daily living, such as bathing, toileting, and dressing.[3] Resistiveness to care most commonly occurs during personal care interactions, such as when an attempt is made to bathe, dress, provide oral care, or help to transfer an older adult.

Resistiveness to care is one of the behavioral symptoms associated with dementia, although it is recognized as a symptom that may have additional contributing factors. Behavioral symptoms, including resistiveness to care, are believed to be associated with a variety of factors, such as unmet basic needs like hunger, pain, or fatigue[4]; the way in which interactions occur with residents; the use of Elderspeak (ie, infantilization or secondary baby talk)[5]; or simply because the care recipient with dementia does not recognize others and refuses to engage with them and thereby resists any interaction or care approach.[6] Direct care workers are usually the ones who experience resistiveness to care and unfortunately they often describe the

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resident as being aggressive or combative. The resident's resistiveness to care can escalate or diminish, depending on the response of the caregiver.[2]

Resistiveness to care is different from aggressive behavior or agitation. Agitation is "inappropriate verbal, vocal or motor activity that is not judged by an outside observer to be an obvious outcome of the needs or confusion of the individual."[7] Agitation is behavior that occurs when the resident is alone and there is no care attempt or interpersonal interaction occurring. The term agitation should be reserved for behaviors that are not triggered by an interpersonal interaction or a stimulus, and are not due to an unmet need of the individual. Agitation is an indication that the individual with dementia is experiencing an unpleasant state of excitement for unknown reasons.

Measurement of Resistiveness to Care

Resistiveness to care is generally conceptualized as observed behavior on the part of the caregiver or objective observer. Measurement of resistiveness to care is incorporated within the Minimum Data Set 3.0 (MDS) in Section E, which focuses on behavior.[8] In earlier versions of the MDS, evaluators determined that residents were exhibiting resistiveness to care if the resident "resists care; resisted taking medications/injections, activities of daily living assistance or eating" within the past 7 days and whose behavior was not easily altered.[9] The current version of the MDS evaluation (MDS 3.0) refers to resistiveness to care behaviors as rejection of care and evaluators determine if the resident rejected evaluation or care (eg, bloodwork, taking medications, or activities of daily living assistance) that was necessary to achieve the resident's goals for health and well-being. The frequency of resistiveness to care is also documented as occurring 1 to 3 days; 4 to 6 days but less than daily; or daily.

Another measure that is used to evaluate resistiveness to care is the Caretaker Obstreperous Behavior Rating Scale (COBRA).[10] The COBRA Scale was developed to evaluate behaviors among older adults with dementia and includes 30 items classified into 4 categories: mechanical/motor (7 behaviors); aggressive/assaultive (8 behaviors); disordered ideas/personality (9 behaviors); and vegetative (6 behaviors). It is the aggressive/assaultive behaviors that address resistiveness to care. Evaluations by a caregiver include identifying the frequency of each behavior, ranging from 0 (not in the past 3 months) to 4 (daily), and severity, which ranges from 0 (no disruption) to 4 (danger).

Similarly, the Nursing Home Behavior Problem Scale[11] was developed to assess the frequency of serious behavior problems in nursing home residents. This measure includes 29 items that most often precipitated the use of antipsychotic medication or physical restraint among nursing home residents. The rater reports the frequency of each behavior in the past 3 days on a 5-point scale from 0 (never) to 4 (always). Resisting care is 1 of the 29 behaviors evaluated. Thus, the MDS, the COBRA, and the Nursing Home Behavior Problem Scale all assess general behavior among nursing home residents and include at least a single item to consider resistiveness to care.

In an attempt to focus measurement of behaviors comprehensively on resistiveness to care, the Resistiveness to Care Scale was developed.[1] The items on the Resistiveness to Care Scale include behaviors exhibited by older adults with dementia that occur during care interactions with staff. Because resistive behaviors are more likely to occur during bathing, dressing, toileting, transferring, or feeding, direct observation during care activities is required. The 13 resistiveness to care behaviors included within the measure were based on direct observations of residents and included turning away, pulling away, pushing away, pushing and pulling, grabbing an object from the caregiver, grabbing another person, adducting, hitting or kicking, saying no to care opportunities, crying, threatening the caregivers, screaming or yelling, and clenching the mouth during such things as eating or oral care.

Testing of the Resistiveness to Care Scale was initially done with a sample of 68 residents with moderate to severe dementia and included 232 observations of those residents. The mean age of the residents was 72.8 (SD = 7.7) and they were moderate to severely cognitively and functionally impaired. There was support for the internal consistency of the Resistiveness to Care Scale based on an alpha coefficient of 0.82.[1] There was evidence of criterion-related validity based on a significant correlation between the Resistiveness to Care Scale and a global resistance scale using a visual analog scale with anchors of no resistiveness to extreme resistiveness ($r = 0.74$, $P < .001$). As anticipated, as the severity of dementia increased through the moderate to advanced stages, resistiveness to care scores were higher, until very late in the disease when scores fell.

Interventions to Decrease Resistiveness to Care

Resistiveness to care puts residents at risk for inappropriate use of antipsychotic drugs and other restraining interventions that can exacerbate resistiveness to care or increase risk of social isolation and physical abuse.[12–14] Conversely, there are behavioral interventions that can be used to help decrease resistiveness to care.[15] Specifically, these include optimizing function and physical activity during care interactions,[16,17] using Video-Simulated Presence,[18] communicating appropriately, implementing individualized caregiver approaches,[5,19,20] using relaxation and reminiscence associated with care activities,[21] and making environmental adaptations to facilitate a more homelike setting for care.[22] To be able to continue to test appropriate nonpharmacological interventions designed to decrease behavioral and psychological symptoms of dementia and the ability of staff to maintain the use of these interventions over time, it is important to ensure that resistiveness to care is being comprehensively evaluated and that the measure used is reliable and valid among the residents with dementia currently in nursing home settings. The purpose of this study, therefore, was to test the reliability and validity of the Resistance to Care measure using a Rasch Measurement Model among a larger group of nursing home residents with moderate to severe dementia.

Methods

Design and Sample

This was a descriptive study using baseline data from an ongoing randomized controlled trial testing a Function and Behavior Focused Care (FBFC) intervention for nursing home residents with dementia. The first 268 consented residents were recruited from 9 nursing homes, each of which had at least 100 residents. Residents were eligible to participate if they were 55 years of age or older, lived in the facility at the time of recruitment, had a Mini-Mental State Examination (MMSE)[23] score of 15 or less, and were not enrolled in hospice or admitted to the facility for subacute, short-term rehabilitation.

All potentially eligible residents were approached to complete the Evaluation to Sign Consent (ESC) as per the University of Maryland Institutional Review Board procedures and invited to participate in the project. If capacity was determined (ie, if all items on the ESC were answered correctly), the resident could provide his or her own consent. If decisional capacity was impaired, then assent was obtained from the resident and the legally authorized representative was approached to complete the consent process. For potential participants who were unable to sign an assent form due to inability to