Interpersonal dependency in older adults and the risks of developing mood and mobility problems when receiving care at home

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ORIGINAL ARTICLE

Interpersonal dependency in older adults and the risks of developing mood and mobility problems when receiving care at home

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Abstract

Despite a broad interest in various types of dependency as they relate to older people (structured dependency, learned dependency, learned helplessness, and interdependency), research of dependency in older people has not included an individual difference measure of interpersonal dependency. Studies that have examined the correlates of interpersonal dependency in general populations have found links with mental health conditions such as depression and anxiety and also with physical illness. If these findings could generalise to older populations then there would be important intervention and financial implications for providers of health services to older adults. This research examined the correlates of interpersonal dependency in older adults using a new measure of interpersonal dependency—the Interpersonal Dependency Scale for Older Adults (IDS-OA). One hundred and five new clients aged 65–90 years recruited through a private home care agency responded to a postal survey requesting their completion of a questionnaire package. Interpersonal dependency was found to correlate significantly with both depression and mobility. In addition, a hierarchical regression analysis found that both higher interpersonal dependency and depression were significant positive predictors of poor mobility in older adults.

Introduction

There is wide interest in individual difference in dependent personality (Bornstein, 1993) but this has been largely neglected in research with older people. Since older people are high consumers of health services (Seshamani & Grey, 2002) and research with younger people suggests that an excessively dependent personality is a risk factor for depression and anxiety (Birtchnell, 1988; Bornstein, 1993), there is the potential for high demands for health services and increased risks for mental health conditions from older individuals with highly dependent personality characteristics. An understanding of individual differences in dependent personality in older age will add interest in other forms of dependency in older people, such as structured dependency (Townsend, 1981), learned dependency (Baltes, 1996), learned helplessness (Peterson, Maier, & Seligman, 1993), and interdependency (Johnson, 1990). This paper will review the correlates of interpersonal dependency in a general population, compare these with an older adult home-care population (people receiving home-help and/or personal care services at home) and examine the potential utility of the Interpersonal Dependency Scale for Older Adults (IDS-OA), a new measure of interpersonal dependency in older adults (Gardner & Helmes, 2004).

According to a number of researchers, a link between depression and dependency is well established (Birtchnell, 1988; Bornstein, 1992; Emery & Lesher, 1982; Hirschfeld, Kleman, Chodoff, Korchin, & Barret, 1976; Overholser, 1996). But it remains unclear whether an interpersonally dependent disposition predisposes a person to depression or whether state dependency, which often coexists with depression (American Psychiatric Association, 2000) has influenced interpersonal dependency scores (Bornstein, 1992). However, recent research undertaken by Mazure, Bruce, Maciejewski and Jacobs (2000) does suggest that characteristics of interpersonal dependency appear to be risk factors for the onset of depression. They found that depression was three times more likely after a major adverse event if the person involved also reported personality characteristics that emphasised concern about disapproval. In addition, results of Overholser’s (1996) research indicated that dependency and depression were linked via the maladaptive social functioning of people with both high levels of interpersonal dependency and vulnerability for depression. According to Overholser (1996),
depression is likely if people high in dependency are unable to achieve their interpersonal goals. His findings support Bornstein’s (1993) theoretical interactive model of dependency, which suggests that poor social skills that result in an inability to elicit help can lead to the development of depression and/or anxiety. Other research suggests that social skills need not be particularly poor for dependent people to experience constant low mood. Zuroff, Stotland, Sweetman, Craig and Koestner (1995) found that dependency predicted high levels of dysphoria in college students even though it was also linked to more frequent and more intimate interactions than were experienced by a nondependent group. They suggested that highly interpersonally dependent people might have a need for intimacy that is so great that interactions that are relatively intimate for most people are not sufficient to produce a sense of wellbeing.

Although dependent personality in older adults has not been the focus in previous studies, depression has been associated with an increase in the utilisation of non-mental health services by older people (Banerjee & MacDonald, 1996; Kempen & Stuurmeier, 1991). In addition, research with younger populations has consistently linked interpersonal dependency with: anxiety disorders (Bornstein, 1992; Davila & Beck, 2002; McCarthy & Shean, 1996; Overholser, 1989); physical illness such as heart disease, ulcers, epilepsy and asthma (Bornstein, 1998; Greenberg & Bornstein, 1988); and with reluctance to terminate a health service when it is no longer required (O’Neill & Bornstein, 2001).

If these findings generalise to older populations, there are important implications for providers of health care intervention services for older people. Important intervention considerations would include screening for interpersonal dependency to evaluate various risk factors associated with dependency (such as those discussed above) for clients as well as discharge planning (Bornstein, 1994; Bornstein & Bowen, 1995). As pointed out by Bornstein, transference and counter-transference issues that might interfere with individual clients’ progress in therapy could also be considered. This kind of informed planning and intervention would, in turn, have important personal implications for older people receiving the service, such as the maintenance or improvement of their dependency levels (Dougherty, 2000; Rosowsky, 2000; Rosowsky, Dougherty, Johnson, & Gurian, 1997), as well as positive financial implications for the service provider.

The purpose of this study was to examine correlations among older home-care service recipients’ scores on a new measure of interpersonal dependency (Gardner & Helmes, 2004) and their scores on measures of depression, anxiety and physical function. This study also tested the hypothesis derived from Bornstein’s (1993) proposed interactive theory of dependency that scores on the interpersonal dependency measure would contribute to a greater proportion of the variance in a measure of mobility than would scores on depression and anxiety measures. According to Bornstein’s theory, an inability to get dependency needs met leads to anxiety and/or depression, which in turn, can lead to complaints of physical illness.

Methods

Participants

The questionnaire package was distributed to a computer-selected random sample of 300 new (three months or less) clients aged 65–90 years from a private home-care agency. This constituted approximately the total number of eligible clients over three months. Only new clients previously assessed by the agency as having low service needs (using activities of daily living [ADL] and instrumental activities of daily living [IADL] measure) were included in the sample. A total of 105 people responded (response rate = 35%). Sixty-five were women and 34 were men. The age range of the respondents was 65–90 years (mean age = 76.09, standard deviation = 7.15).

Instruments

Interpersonal dependency. The IDS-OA (Gardner & Helmes, 2004) is a 20-item interpersonal dependency screening tool with a seven-point Likert-type response format ranging from one (not at all like me) to seven (just like me). The scale items (see Appendix) were based on the following definition of dependency:

Dependency is a personality style (or ‘type’) that is characterised by four primary components: (1) motivational (i.e., a marked need for guidance, approval, and support from others); (2) cognitive (i.e., a perception of self as relatively powerless and ineffectual, along with the belief that others are powerful and can control the outcome of situations); (3) affective (i.e., a tendency to become anxious and fearful when required to function independently, especially when the products of one’s efforts are to be evaluated by others); and (4) behavioural (i.e., a tendency to seek help, support, approval, guidance, and reassurance from others and to yield to others in interpersonal transactions) (Bornstein, 1993, p.19).

The IDS-OA was designed specifically for use with older adults. Its reliability was reported to be high with coefficient alphas ranging from 0.92–0.94 (Gardner & Helmes, 2004).

Physical dependency. The Medical Outcomes Study (MOS) Physical Functioning Measure (cited in McDowell & Newell, 1996) was used to measure participants’ physical abilities. This was developed for use with relatively healthy people and consists of
10 items on physical functioning (PF), one on dissatisfaction with physical activity referred to here as the Physical Activity Dissatisfaction (PAD) measure, and three on mobility referred to here as the Mobility (Mob) measure. The 10 physical functioning items include some items on basic activities such as dressing, as well as items concerning ability to undertake more strenuous activities such as climbing stairs (McDowell & Newell, 1996). The mobility items are concerned with ability to travel about the community and move about the home unassisted. Three scores are derived for the scale: a physical function score, a mobility score and a dissatisfaction score (based on item 2). McDowell & Newell (1996) reported an internal consistency reliability for the physical functioning and mobility scales of 0.92 and 0.71 respectively and that the physical functioning scale correlated moderately with both the mobility score (0.58) and the dissatisfaction score (0.63).

**Depression.** Depression was measured using the Geriatric Depression Scale (GDS), a commonly used and well-validated screening tool (Yesavage, Brink, Rose, & Aday, 1983). The GDS consists of 30 ‘yes/no’ items that were selected from a pool of 100 by clinicians and researchers because of their ability to distinguish elderly depressed people from non-depressed people. Several studies have reported good reliability of the GDS with alpha coefficients ranging from 0.82 to 0.94 (McDowell & Newell, 1996).

**Anxiety.** Anxiety was measured using the Goldberg Anxiety Quiz (GAQ; Goldberg, Bridges, Duncan-Jones, & Grayson, 1988). The GAQ was developed to assist general practitioners and other non-psychiatrists in the recognition of anxiety. It is a screening tool, which provides a dimensional measure of the severity of anxiety. The GAQ was found by Goldberg et al. (1988) to have a sensitivity of 82% and a specificity of 91%. The original scale consists of nine ‘yes/no’ items. One point is scored for each ‘yes’ response. A seven-item survey version of the scale was used in this research.

**Procedure**

This study was a postal survey of a stratified/random sample of a private home-care agency’s new clients who had been previously assessed by the agency as having low service needs. The research was granted ethics approval by the committees of the organisations involved. A two-week survey return date was requested of the respondents, which was in keeping with the agency’s usual practice. The response rate of 35% was average for the home-care agency for surveys that were not directly related to services being received. [Non-responders were not followed up.]

**Statistical analyses**

The Pearson $r$ was the measure of correlation used to determine the relationships among age, physical function, physical activity dissatisfaction, mobility, anxiety, depression and interpersonal dependency. Each of the distributions of anxiety, depression and interpersonal dependency were positively skewed. This result was expected because these variables are not normally distributed in the general population (American Psychiatric Association, 2000). The distributions of mobility and physical function were also positively skewed. This result was also expected for this home-care population which was seeking support with ADLs. ‘Physical ability dissatisfaction’ produced a negatively skewed distribution and ‘age’ approximated a normal distribution. The degree of skewness in each of the skewed distributions was not severe enough to warrant the use of non-parametric statistics with these variables. However, the Spearman rho, a non-parametric measure of correlation, was used to determine the relationships among gender (a dichotomous variable) and the other variables of interest. Hierarchical multiple regression analysis was used to examine the relative unique contribution of individual variables (anxiety, depression and interpersonal dependency) in a predetermined and ordered set of variables to the prediction of mobility in older adults. Variables were ordered prior to analysis based on logical and theoretical considerations. The main variable of interest was interpersonal dependency in terms of what it added to the prediction of mobility over and above the other variables in the set, so it was the final variable to be entered. Depression was the next variable of interest so it was entered prior to interpersonal dependency. Physical function and physical ability dissatisfaction were entered into the analysis first because they were considered to be the most logical predictors of mobility.

**Results**

The intercorrelations of all of the variables are shown in Table I along with the means and standard deviations of the continuous variables. Correlations of the demographic measures (age and gender) with other variables were not significant. A moderate statistically significant correlation was obtained between the interpersonal dependency measure (IDS-OA) and the depression variable (GDS). Although statistically significant, the correlation obtained between the IDS-OA and the anxiety (GAQ) measure was negligible. A low-to-moderate statistically significant correlation was obtained between the mobility variable (Mob) and the IDS-OA measure. Moderate statistically significant correlations were obtained among the scales of the MOS Physical Functioning Measure; Physical Function (PF), Physical Activity Dissatisfaction (PAD) and
Mobility (Mob) and low-to-moderate correlations were obtained between the GDS and each of the PF, PAD and Mob measures.

Hierarchical multiple regression analysis

A hierarchical multiple regression was performed between mobility as the criterion variable and physical function, dissatisfaction with physical ability, anxiety, depression and interpersonal dependency as predictor variables. Physical Function and Physical Ability Dissatisfaction were taken as the first level of the analysis, with each of the additional variables added in separate analyses. Interpersonal dependency was the main variable of interest in the analysis, followed by depression. Results of evaluation of assumptions were satisfactory after two multivariate outliers were deleted from the analysis. Nine other cases were excluded from the analysis because of missing data. A significant overall model was produced in the hierarchical multiple regression analysis (i.e., requesting the \( R^2 \) Change statistic), \( F(5, 90) = 21.29, p < 0.05 \). Results are shown in Table II.

Physical Function and Physical Ability Dissatisfaction, which were entered at the first step, contributed 46% to the variance in Mobility, \( F(2, 93) = 38.78, p < 0.05 \). Anxiety was entered at the second step and did not contribute significantly to the variance of Mobility, \( F(3, 92) < 26.65, p > 0.05 \). At the third step, Depression contributed a further 3%, \( F(4, 91) = 22.12, p < 0.05 \). Interpersonal Dependency added a further 5% to the variance in Mobility after the other predictor variables had been controlled at the final stage, \( F(5, 90) = 21.29, p < 0.05 \).

Discussion

Results of this research indicate that the IDS-OA (Gardner & Helmes, 2004) has the potential to target new recipients of home-care services who are at risk of mood or mobility problems in the absence of current physical dependence. A significant, moderate correlation was found between scores on the IDS-OA and the GDS. This supports the findings of research with younger samples that has consistently found links (Birtchnell, 1988; Bornstein, 1992). A significant, low correlation was found between the IDS-OA and the GAQ, leaving questions open about a possible link between dependency and general anxiety measures. However, the significant, moderate correlation found between the IDS-OA and the mobility measure appears to offer some support for the links found previously between dependency and the anxiety disorder ‘agoraphobia’ (McCarthy & Shean, 1996) given that the mobility scale used in this study was concerned with travelling about the community unassisted.

No association was found between scores on the IDS-OA and the PF suggesting no link between physical functioning ability (for activities such as basic personal care, home-care, walking, running and climbing stairs) and interpersonal dependency (dependent personality) in this home-care population. This is an important finding because it supports the discriminant validity of the new interpersonal dependency scale (Gardner & Helmes, 2004) as a dispositional dependency measure and not one that taps reliance on others due to physical functioning disabilities. It is important to be able to discriminate between the two, particularly in populations of older people, because better information provided about the dependency needs of a person will more
accurately and appropriately direct intervention decisions.

Age and gender were not found to be associated with scores on any of the Medical Outcomes Study (MOS) Physical Functioning Measures (McDowell & Newell, 1996) (PF, PAD and Mob) in this population, or with interpersonal dependency (IDS-OA). Although these results suggest that physical functioning, mobility, dissatisfaction with physical ability and interpersonal dependency scores do not increase as age increases past age 65 years in this population (which was high functioning relative to general home-care populations), caution is required in interpreting the results this way. A cross-sectional design was utilised in this study. Longitudinal research would be necessary to determine whether the physical functioning, mobility and interpersonal dependency scores of individuals increase as they age past 65 years and affect their receipt of home-care services. Nonetheless, for the new home-care clients with low service needs in this study, neither age nor gender per se appear to be factors contributing to their dependency needs. For these older people, the reception of home-care support might have more to do with their stereotypical beliefs about aging, mobility and dependency issues than it has with their actual dependency needs.

As predicted, interpersonal dependency contributed significantly more to the variance in mobility independent of the other variables than did both depression and anxiety. Although the amount of variance in mobility accounted for by interpersonal dependency was comparatively small, it was more than either depression or anxiety.

The findings of this research are limited to the new clients with low service needs entering one home-care agency. Nonetheless, they do indicate that more research is needed in the areas of interpersonal dependency and other personality and mental health factors that influence mobility in older adults. The IDS-OA (Gardner & Helmes, 2004) has the potential to assist with such research. Health and home-care services will then be better able to provide clients with services that facilitate a healthy balance between dependency and autonomy needs while at the same time reduce their service costs.

Acknowledgements

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References


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Appendix

Interpersonal dependency scale for older adults (Gardner & Helmes, 2004).

<table>
<thead>
<tr>
<th>Item number</th>
<th>Item</th>
<th>Dependency component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Worry tends to make me cling to those I’m closest to.</td>
<td>M</td>
</tr>
<tr>
<td>2</td>
<td>I have a lot of trouble making decisions by myself.</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>I need more help with things than other people seem to need.</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>I really only feel safe when I am with the person I am especially close to.</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>I become extremely anxious if I have to do something new by myself.</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>If a friend has not called in a while I get worried that he/she has forgotten me.</td>
<td>M</td>
</tr>
<tr>
<td>7</td>
<td>I need people to tell me what to do.</td>
<td>M</td>
</tr>
<tr>
<td>8</td>
<td>I tend to worry about what other people think of me.</td>
<td>M/A</td>
</tr>
<tr>
<td>9</td>
<td>I become anxious when I have to be alone for any length of time.</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>I often feel threatened by change.</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>It is very important to me to be approved of by others.</td>
<td>A</td>
</tr>
<tr>
<td>12</td>
<td>I would be helpless without support from others who are close to me.</td>
<td>C</td>
</tr>
<tr>
<td>13</td>
<td>When things go wrong, I need to be with someone I am close to.</td>
<td>M/C</td>
</tr>
<tr>
<td>14</td>
<td>When I am with other people I look for signs of whether or not they like being with me.</td>
<td>B</td>
</tr>
<tr>
<td>15</td>
<td>I tend to go along with what other people want even if it is not what I want.</td>
<td>B</td>
</tr>
<tr>
<td>16</td>
<td>I feel helpless in many situations.</td>
<td>A</td>
</tr>
<tr>
<td>17</td>
<td>I almost always avoid going out alone.</td>
<td>B</td>
</tr>
<tr>
<td>18</td>
<td>My worst fear is being rejected by someone.</td>
<td>A</td>
</tr>
<tr>
<td>19</td>
<td>I only enjoy what I am doing when I think that someone really cares about me.</td>
<td>M</td>
</tr>
<tr>
<td>20</td>
<td>I generally follow other people’s suggestions.</td>
<td>B</td>
</tr>
</tbody>
</table>

C, cognitive component of interpersonal dependency; M, motivational component of interpersonal dependency; B, behavioural component of interpersonal dependency; A, affective component of interpersonal dependency (Bornstein, 1993).