Section 2: The Selection and Development of Psychometric Measures for the Study of Dependency in Later Life

Chapter 4. The Standardized Assessment of Personality and Behavior in Older Adults

In this chapter, I first review general criteria used in the construction of personality scales. The assessment of personality in later life has its own unique challenges. Care must be taken in the selection of appropriate measures, particularly in the assessment of elderly care recipients. Standardized alternatives for assessing the dependent personality, trait affiliation, and attitudes toward authority are discussed.

Dependency upon one's caregiver is a further construct of interest. Thus, rating scales for assessing dependent behavior in the caregiving context are also described. This brief review shows that although the assessment of physical dependency is commonplace in gerontological research, there are comparatively few instruments that measure social dependency.

In conclusion, the reliability of the personality measures and behavior rating scales selected for the present study is tested in a sample of elderly care recipients.

1. General Criteria for the Selection and Construction of Personality Scales

All personality measures are not created equal. The principles used to construct scales have a direct impact on the measure's reliability and validity, and care must be taken when choosing a particular research instrument. The items used in this study were selected or created with the following criteria in mind:

Criteria:	*Goal:*
1) positivity/negativity	half of items positive, half negative
2) social desirability	balanced formulation
3) redundancy	zero redundancy
4) constituency	focus on internal constituents
5) applicability	items that are relevant to frail elderly persons
6) comprehensibility	easy-to-understand items

Positivity/negativity

The first selection criterion is especially important in the context of geriatric assessment. One argument put forward earlier stated that the frail elderly may be somewhat passive, submissive, and acquiescent. If this is the case, then a strong tendency to always answer in the affirmative might also be present. To counteract this, each scale employed in this study should ideally have an equal number of positive and negative items.

Social desirability

Quite early in the process of developing these measures, I became aware of the subjects' desire to say the "right" thing in the interview. Elderly respondents are prone to ask, "Did I answer that question correctly?" and "How should I answer that?" Astoundingly, many of these responses were not meant rhetorically -- the respondent actually wanted me to answer the "difficult" questions for them! Whether or not social desirability is more pronounced in the elderly than in younger persons, items should ideally be formulated in a diplomatic manner, such that one can respond with either a yes or a no and not feel ashamed for doing so.

Redundancy

The third selection criterion is crucial on theoretical grounds. All too often, the authors of psychological scales inflate their scale's alpha correlation by the inclusion of items that are essentially the same. It is not uncommon for a scale to contain three or more items that are almost identical in content and even formulation. Intentionally padding a scale in this manner is, in my opinion, a kind of psychometric fraud. Ideally, each item in a scale should tap a different

aspect of the underlying trait. Redundancy, if it occurs at all, should be reserved for cases in which there is demonstrable variance in item difficulty.

In more pragmatic terms, the elderly subject often reacts with irritation to redundant items. A lengthy assessment procedure produces fatigue and robs the subject of his or her initial enthusiasm for the endeavor. For these reasons alone, redundancy should be avoided.

Constituency

Scale items are seldom scrutinized regarding what aspect of the individual's psychology they address. However, items can be differentiated according to their focus:

1) feelings
2) preferences
3) beliefs
4) attitudes
5) behaviors

Depending upon the balance of such items in each scale, the approach to the concept differs. For example, some personality measures, such as the *Inhibition* scale of the *Freiburger Personality Inventory* (Fahrenberg, Hampel & Selg, 1989) have a preponderance of items assessing the subject's behavior; thus, the construct is operationalized as a *behavioral tendency*. In clinical research, personality measures are more likely to reflect an *affective* or *cognitive predisposition* (e.g., *Grazer Abhängigkeitsskala;* Rossmann & Blöschl, 1982).

Naturally, not every item on a personality questionnaire can be neatly categorized into one of the preceding categories. However, one must take into consideration that the various component types are differentially useful in predicting results. For example, behavior-based items are presumably better able to predict similar behaviors, whereas items based upon feelings and preferences might be more predictive of affective responses (such as life satisfaction or self-esteem).

In order to improve the quality of personality questionnaires, Kline (1986) has argued for the use

of objective behavioral criteria. This practice, however, lends credence to the argument that personality is nothing more than a linguistic convention for summarizing behaviors (Wiggins, 1973 quoted in Park & Waters, 1988). Because the present study contends that personality can be used to explain behavior, an alternate method of operationalization -- based upon a different concept of personality -- must be employed. In terms of the present point of inquiry, since the study is based upon the premise that dependent behavior (overreliance on a caregiver) is in part determined by a dependent personality structure, it is somewhat circular to employ instruments based upon behavioral items. A correlation between a score on a personality test ("Do you ask for help using the telephone?") and a dependency rating ("Does the subject ask for help using the telephone?") only proves that the subjects are accurate in reporting their behavior. Of more salience to the present study are variables based upon preferences, attitudes, and feelings -- Murray (1938) bases his theory of personality on *needs* -- which address a particular psychological mechanism influencing behavior. Therefore, since *external* constituents (behaviors) can be viewed as being merely further examples of the criterion, the scales employed in this study, particularly the newly developed ones, focused predominantly on *internal* constituents, (preferences, attitudes and feelings).

Applicability

Furthermore, the personality scales employed in this study had to be applicable to an elderly population. Some personality scales, such as the *Harm Avoidance Scale* of the *German Personality Research Form*, contain items that an elderly care recipient would find laughable (e.g., "I'd like to learn how to walk a tightrope."). Although *Harm Avoidance* might offer an interesting and plausible explanation for dependent behavior, the manner in which it has been operationalized makes it impossible to employ with older, chronically ill individuals.

Comprehensibility

Finally, it is always helpful when the items employed "make sense" to the subject. A subject who feels mystified by a series of questions, and who begins to doubt what the experimenter is likely to infer by them, can easily become mistrustful and defensive. Besides, cognitive and sensory impairment often make assessing the very old difficult enough without complicated syntax. Therefore, with regards to the newly developed scales, a good deal of effort was made to phrase questions as simply as possible.

2. The Selection of Standard Measures

2.1 Personality Measures

The personality constructs chosen for this study were predicated on the questions, "Why are some elderly care recipients more dependent than others? Why are some better adjusted to the nursing home environment than others?" In line with theoretical and empirical research, three global domains of personality functioning appeared worthy of further exploration: *the dependent personality, trait affiliation,* and *attitudes toward authority.* This section reviews standardized scales that have been developed to measure these constructs.

2.1.1 The Dependent Personality

Trait dependency can be assessed using a number of objective and projective procedures (see Bornstein, 1993 for a review). Few of these, however, have been translated into German, which was obviously a prerequisite for use in this particular study. Notable exceptions to this rule are *das Fragebogen Irrationaler Einstellungen* (*Abhängigkeit;* Klages, 1989) and *die Grazer Dependenz Skala* (*Bedürfnis nach emotionaler Zuwendung;* Rossman and Blöschl, 1982). As noted earlier, the MMPI and 16PF assess dependency or constructs similar to them, and German versions of these instruments are also available (Gehring & Blazer, 1993; Schneewind & Graf, 1998).

After careful review, the *Succorance* scale from *the German Personality Research Form* (*PRF*) was selected. A person exhibiting this trait, by definition:

> "seeks support, is needy, trusting, wants to be popular, is dependent, seeks help, readily takes advice, is helpless, enjoys protection, needs affection, is imploring, defenseless (Stumpf et al., 1985; p. 46)"

The concept of succorance is but one of several that stem from a well-elaborated theory of personality (Murray, 1938).

The *German PRF* was chosen above the other personality measures because it the authors clearly

went to great lengths to ensure the proper construction of the scale. All 16 items are balanced in terms of positive/negative responses in order to counteract the effects of affirmative answer tendency. The items are also phrased in a diplomatic manner in order to minimize the effect of social desirability. Extremely easy or difficult items were systematically excluded. Beyond this, the scale assesses a fairly broad palette of behaviors, feelings, and preferences. There is some concentration of items that focus on asking for help and advice, but hardly enough to impinge on the theoretical integrity of the dependency construct. This cannot be said for many other standard personality measures.

The psychometric properties of the *Succorance* scale are excellent. For example, the homogeneity of the scale, which has been empirically tested using 1,086 subjects, is very good (Cronbach's alpha of .77 for Form A; Stumpf et al., 1985). Further advantages to the German *PRF* are that norms are available for those 50 years and over.

A careful review of the questionnaire items ensured that they were applicable to a much older population. Finally, the yes-no answer format appeared to be especially suitable for the elderly, who may have trouble with multiple-point scales.

2.1.2 Trait Affiliation

Like trait dependency, there are a number of measures that can be used to assess affiliation tendency, many of which have been translated into German. For example, the *Inhibition* (*Gehemmtheit*) subscale of *das Freiburger Persönlichkeits Inventar* (Fahrenberg, Hampel & Selg, 1989) as well as the *Extraversion* subscale of *das Eysenck Persönlichkeits Inventar* (Eggert, 1983) both contain components that refer to sociability (or "Geselligkeit"). However, the *Affiliation* scale from *the German Personality Research Form* was the more obvious choice. A person with a high score on this scale, by definition, is:

> "sociable, friendly, loyal, warm, easy-going, good-natured, open, affable, unpretentious, approachable, helpful, hospitable, unaffected, gregarious, well-meaning (Stumpf et al., 1985; p. 44)"

The *Affiliation* scale shares the same excellent psychometric construction as the *Succorance*

scale, which need not be reiterated here. Moreover, both scales have the same answer format, which facilitated the practical administration of this study's personality assessment. Cronbach's alpha for the scale is quoted as being .75 (Stumpf et al., 1985). However, unlike the *Succorance* scale, the *Affiliation* scale is weighted somewhat heavily towards the assessment of habitual behaviors and preferences; there are hardly any items which directly tap feelings or cognitions as such.

Although here too, norms were available for those 50 years and older, items were carefully reviewed to ensure that they could be used with an older population. One item was slightly modified from its original form: the item contained a reference to "going out" alone, which was assumed to be very difficult for an older care recipient. The revised item referred to "doing something" alone. Otherwise, the scale was used in its original form.

2.1.3 Attitudes toward Authority

Although a number of research instruments have been developed to measure attitudes toward authority in adolescence (e.g., Fend et al., 1986), comparatively few tests are suited for older adults. One of these, *die Skalen sozialer Inkompetenz* (*Konformitätstreben;* Maiwald, 1985), measures one's general tendency to defer to others, especially authority figures. Unfortunately, the scale includes a number of awkward references to East German work situations ("Arbeitskollektiv") and has an extreme positivity bias. Other tests of *conformity*, or the tendency to acquiesce to one's peers, include the *Schaetz-Diasierie zur Konformismusmessung* (Viehoefer, 1980), which measure conformism directly.

The only suitable measure of one's attitude toward authority found for this study came from the seminal work of Gerda Lederer on authoritarianism (Lederer, 1983; Lederer & Schmidt, 1995). The author developed and tested a series of scales that measure authoritarianism, one of which is the *Respect for Unspecific Authority* scale (*Skala zur Respect vor unspezifischer Autorität*). Although these scales were generally intended for use with adolescents, there is nothing in their content that would prevent one from applying them to an older population. The *Respect for Unspecific Authority* scale is particularly suited for this study, since its chief purpose is to measure obedience to authority (as opposed to ethnocentric attitudes, political attitudes, etc.).

Fortunately, the scale is also nonredundant, fairly short, and well-balanced in terms of affirmative answer tendency (half of the items are scored positively, half negatively). Unlike the *German PRF Scales* described above, the items of the *Respect for Unspecific Authority* scale center exclusively on attitudes (and not behaviors, feelings, cognitions, or preferences). The reliability of the measure was assessed in seven studies, most frequently in the .60 to .65 range.

2.2 Measures of Dependent Behavior

The personality constructs described above were hypothesized to have an impact on the amount of dependent behavior exhibited by the elderly care recipient. Dependent behavior can be described in terms of *physical dependency* and *social dependency*.

2.2.1 Physical Dependency

A number of measures have been developed to assess physical dependency or functional health. In the present study, physical dependency was assessed using a 12-item version of the *Activities of Daily Living and Instrumental Activities of Daily Living* scales (*ADL*s; Lawton et al., 1982). Basic activities of daily living included walking, eating, transferring, grooming, dressing, bathing and using the toilet. Instrumental activities included using the telephone, cooking, shopping, and doing light and heavy housework.

Correlations between self- and third-party reports of ADLs are modest (Willis, 1991). In the present study, the nursing staff completed the ADL forms. This mode of assessment, it was hoped, would increase the objectivity of the procedure and ease the burden placed upon the elderly care recipient. Thus, two caregivers rated each subject according to the amount of help he or she normally receives. Answers ranged from "no help" to "some help" to "cannot do without help." The *Activities of Daily Living* scales originally comprised 16 items and demonstrated an interrater reliability of .93 and 3-week retest reliability of .75 (Lawton et al., 1982).

2.2.2 Social Dependency

Social dependency complements physical dependency. Whereas physical dependency reflects the care recipient's need for basic, hands-on assistance with daily activities, social dependency comprises many other health-related and relational needs. The regulation of health and activity, described in **Chapter 3,** is important because care recipients must be motivated to be as independent as possible: to make an effort at self-care, to monitor their own health, and to engage in meaningful activity. The regulation of psychosocial functioning, on the other hand, touches upon relational needs, or the desire for certain forms of social capital, such as companionship, empathy, and guidance.

Very few standardized measures for assessing the motivational and relational needs of elderly care recipients could be found in the current literature. Most of the instruments have focused on other problems inherent to geriatric nursing. For example, Ray et al. (1992) created a 29-item scale, based on psychiatric instruments and other measures of behavioral disturbance in institutionalized settings, to assess behavioral problems in nursing home residents. However, the scale is typical in its focus on behaviors that cause a problem for *staff* (e.g., uncooperative, aggressive or dangerous behavior). The scale does contain one item that strikes to the heart of the social dependency construct ("Resident asks for attention or help even though it is not needed"), yet other dysfunctional behaviors (e.g., excessive passivity or conformity, lack of interest in leisure activities) are not considered to be problematic. Another scale considered, the *Multilevel Observation Scale for Elderly Subjects* (MOSES; Helmes, Csapo & Short, 1987) assesses interest in the outside world and engagement in meaningful activity but not excessive help-seeking.

Depression rating scales have also been created for use in nursing homes (Burrows et al., 2000), and it is clear that depressive nursing home residents will exhibit more social dependency, as defined above, than others. A depressive resident will quite obviously require more emotional support, for example. Depression may certainly bring about social dependency, but it certainly should not be equated with it. One must acknowledge the fact that not all behavioral problems exhibited by elderly care recipients are necessarily manifestations of an underlying mental illness.

For these reasons, the *Social Dependency* rating scale was developed. The six scales are completed by the nursing staff and essentially assess forms of dysfunctional social behavior among elderly care recipients. (Details regarding the construction and psychometric properties of the *Social Dependency* rating scale are discussed in **Chapter 5**).

2.3 Measures of Psychological Adjustment

The psychological adjustment of the elderly care recipient was another outcome measure in the study. Some of the personality traits, it was assumed, might prove themselves to be adaptive in the caregiving context. Psychological adjustment is reflected in many different constructs: life satisfaction, positive affect, and well-being. In the end, the construct of morale was selected.

2.3.1 Morale

One of the best-known and most-often recommended instruments for measuring well-being in the elderly is *the Philadelphia Geriatric Morale Scale* (Lawton, 1975). The 17-item instrument actually consists of three different submeasures: agitation, attitude toward one's aging, and lonely dissatisfaction. In order to simplify the response task for the subjects in this study, a yes-no answer format was selected. Scale homogeneity is very good, with reported alphas ranging from .81 to .85 (Lawton, 1975).

3. Psychometric Properties of Standardized Measures

The psychometric properties of the standardized measures were empirically examined in a sample of elderly care recipients. (A comprehensive description of the sample and the interview procedure is presented in **Chapter 7.)** Although some of these instruments, such as the *Activities of Daily Living* scale, were created with the elderly in mind, the personality measures were not. Thus, the question at hand is whether all of the standardized instruments employed in the main study demonstrate sufficient reliability with an old and disabled population. Physical fatigue, memory and cognitive impairment, sensory deficits, and language barriers are only some of the threats to validity encountered in the assessment of the elderly (West, Bondy & Hutchinson, 1991).

3.1 Personality Measures

Scale reliability was generally measured using Cronbach's alpha, which is a stringent measure of a scale's homogeneity, i.e., the extent to which the items in a scale correlate with one another. Obviously, a scale's test-retest reliability is also of interest, but due to the cross-sectional nature of this study, this characteristic was not explored.

Table 1. Alpha Reliabilities for Standardized Personality Scales (Main Study)

Standardized Personality Scale	Sample	Alpha Correlation
Succorance	114 elderly care recipients	.74
Affiliation	114 elderly care recipients	.79
Respect for Unspecific Authority	114 elderly care recipients	.51

As **Table 1** illustrates, the standardized scales employed in the main study had good reliabilities, on par with what might expect from the literature (.77 for *Succorance* and .75 for *Affiliation*; Stumpf et al., 1985). The *Respect for Unspecific Authority* scale had a similar alpha correlation to what had been reported previously (.41 to .64; Seipel, Rippl & Lederer, 1995).

3.2 Measures of Dependent Behavior

Rating scales must demonstrate sufficient consistency and interrater reliability. The only standardized measure of dependent behavior in the study, the *Activities of Daily Living* scale, was developed expressly for use with the elderly, and thus, was expected to possess good consistency and interrater reliability.

Table 2. Tau and Alpha Reliabilities for Standardized Dependency Rating Scales (Main Study)

Standardized Rating Scales	Tau Correlation	Alpha Correlation
Activities of Daily Living		.93
--Eating	.61	
--Toiletting	.84	
--Transferring	.87	
--Self-Care	.71	
--Dressing	.76	
--Bathing	.45	
--Walking	.75	
Instrumental Activities of Daily Living		.90
--Telephoning	.69	
--Cooking	.65	
--Grocery shopping	.56	
--Doing light housework	.69	
--Doing heavy housework	.31	

The ratings of physical dependency show satisfactory interrater reliability (average tau of .66), which, although sufficient, is somewhat lower than usual. In a review of such measures, Willis (1991) contends that interrater reliabilities are normally .80 or higher. In contrast, Zimber, Gaeth and Weyerer (1996) report interrater reliabilities between .50 and .69 for most of the ADLs assessed here.

The alpha correlations, on the other hand, were as high as one might expect. For example, Lawton (1982) reports an alpha reliability of .91 for *IADL* scale. Thus, the consistency observed here is on par with what one would expect.

3.3 Measure of Psychological Adjustment

Finally, the reliability of the measure of psychological adjustment was tested (**Table 3,** below).

Table 3. Psychological Adjustment

Psychological Adjustment	Sample	Alpha Correlation
Philadelphia Geriatric Morale Scale	114 elderly care recipients	.81

As expected, the *Philadelphia Geriatric Morale* scale was a very reliable measure with this older, disabled population. The alpha was in the expected range (.81 to .85; Lawton, 1975).

4. Summary

The personality and psychological adjustment measures could be applied to the older sample without reservations. Alpha consistency was uniformly high on most standardized scales, somewhat lower (but within expectations) for the *Respect for Unspecific Authority* scale.

Likewise, the alpha and interrater reliability of the behavioral adjustment measure were satisfactory. Curiously, the interrater reliability of the *ADL / IADL* scales was lower than some authors have reported, but still sufficiently reliable for further analysis.