

UNIVERSITY OF CALGARY

Assessing Anxiety in Continuing Care Residents

by

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## Abstract

The assessment of anxiety in the elderly has long been earmarked for further investigation. However, the lack of standardized self-report instruments designed for the elderly, and the lack of norms for existing instruments have been a source of concern to researchers and practitioners in the area. Because of the complicated nature of teasing out anxiety symptoms from symptoms of physical and cognitive decline associated with the elderly, the current study focussed on the assessment of worry as the cognitive component of anxiety. A 25-item Worry Questionnaire for Continuing Care Residents (WQCCR) was designed and tested for internal consistency ( $\alpha = .821$ ), test-retest reliability (.817), and convergent and divergent validity using a multitrait-multimethod matrix. The sample consisted of 69 continuing care residents (mean age = 80.35, ranging from 62 to 97), their family/friend, and staff caregivers. An abbreviated form of the questionnaire was also developed, and likewise showed promise.

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## Introduction

With longer life expectancy in Canada and other developed countries, and the aging of the baby boom generation, more and more people will fall under the “older adult” age range of over 65. In fact, individuals over age 65 currently comprise 9.8% of the population in Alberta, and are projected to make up 14.5% of the population by the year 2016 (Alberta Health, 1999). Moreover, individuals aged 85 years and over make up the fastest growing segment of the Canadian population. Approximately 29% of this burgeoning population reside in continuing care facilities (Statistics Canada, 1994). The current study focuses on the assessment of anxiety in elderly residents of continuing care facilities, by examining the frequency and content of worry in a sample of continuing care residents, and providing information regarding the psychometric properties of two brief self-report inventories of cognitive and somatic anxiety symptoms.

### The Construct of Anxiety

Consistent with theories of emotion, theories of anxiety approach the construct either as expressed behaviour, biology, cognition, or as an interaction between and among these three components (Barlow, 1988). Examinations of the construct of anxiety therefore typically focus on the three components of behaviour, physiology, and cognition/affect.

Two themes seem to be central to the definition of anxiety as a mental health problem. The first is the distinction between normal and pathological anxiety: when does anxiety become a maladaptive response? The second is the distinction between anxiety and depression, the other mental health problem characterized by high levels of negative affect and subjective distress.

Normal Anxiety and Pathological Anxiety. The New Oxford Dictionary of English (1998) defines anxiety as “a feeling of worry, nervousness, or unease, typically about an imminent event or something with an uncertain outcome.” In the context of everyday language, anybody can become anxious. Anxiety can be a normal response to a given situation: when one does not know what to expect, one naturally feels rather anxious (worried, nervous, uneasy). Moreover, some scientists (e.g., Barlow, 1988; Lazarus & Folkman, 1984) would argue that anxiety, and particularly the fear response, can be adaptive -- that is, something positive. When viewed in an evolutionary context, the alterations in physiology that accompany fear, such as heart palpitations which maximize the efficiency of blood circulation; and behaviour (e.g. freezing; avoidance of feared stimulus) can aid in the survival of the organism. However, there can be no question that not all anxiety is adaptive in this sense. In fact, many forms of anxiety can be limiting at best, and severely debilitating at worst. How does one draw the line between normal and pathological anxiety? When does anxiety become a “mental health problem?” These questions are central in the assessment of anxiety symptoms and anxiety disorders.

According to Barlow (1988), two cognitive processes can serve to distinguish between normal and pathological anxiety. The first is a shift in attention from the task at hand (whether it be entering a supermarket to do some grocery shopping or delivering a speech) to an internal focus: an increase in autonomic arousal and heightened somatic awareness, characterizing panic; or thoughts and images about possible negative events and consequences, characterizing worry. This shift in attention typically leads to impaired performance, which in turn leads to more panic/worry, more impaired performance, and so on, in a process Barlow describes as a “negative feedback cycle” (p. 71).

Pathological anxiety can also be distinguished from normal anxiety by its excess and lack of controllability. In the case of a panic reaction, for example, the awareness of autonomic arousal (pounding heart, sweating, trembling) can be so powerful as to provoke fears of going crazy, losing control, or dying. For many individuals, the fear of having a panic attack painfully circumscribes their lives. For anxious individuals who do not suffer from panic, excess and control are still a central issue. For example, although worriers may have legitimate concerns or problems to worry about, pathological worriers find it difficult, even impossible to control either the amount or the subjects of their worry. Wells (1994) calls this process “meta-worry.”

Anxiety as Distinguished from Depression. Attempts at distinguishing anxiety from depression has recently become a salient focus of theoretical formulation, research, and clinical attention. Barlow (1988) begins his discussion defining anxiety by first examining the dimensions of anxiety and depression, concluding that distinctions between anxiety and depression can be made on the basis of “action tendencies and underlying associated physiology.” That is, whereas the stance of depression is general withdrawal from action, anxiety suggests engagement and activation. Thus one of the hallmarks of anxiety as distinct from depression is physiological hyperarousal, signifying a readiness to engage in “fight or flight.” Worrying, when seen as an imperfect means of problem solving, is also consistent with anxiety’s engaged stance.

Watson and Kendall (1989b) summarize hypothesized differences between the constructs of anxiety and depression:

(1) differences in cognitive content: specifically, maladaptive cognitions in anxiety are hypothesized to be future-oriented, and more related to anticipatory fears of threat or harm, while maladaptive cognitions in depression seem to focus more on actual or perceived losses in the past (Beck, 1976; Tellegen, 1985);

(2) differences in relationship to life stress: Smith and Allred (1989)

hypothesize that negative life events may be more strongly associated with depression in general; also, events involving loss are hypothesized to be more strongly associated with depression, whereas events involving threat or harm would be more strongly linked with anxiety;

(3) differences in relationship to positive and negative affect: although both depression and anxiety are associated with high negative affect, only depression is linked with low positive affect and the loss of pleasurable events (Barlow, 1988; Watson & Kendall, 1989a);

(4) behavioural differences: depression is often characterized by a general withdrawal from activity, whereas anxiety is associated with heightened arousal and high levels of maladaptive responding, such as worry or avoidance.

Despite these hypothesized differences, however, making empirical distinctions, particularly between anxious and depressive symptoms (as opposed to disorders), has so far been an extremely challenging task. Still, descriptions of anxiety disorders within the general population are relatively well-developed. It must be kept in mind, however, that many of the currently defined anxiety disorders often are comorbid with depression.

### Anxiety and Anxiety Disorders

The American Psychiatric Association's latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994) does not provide a definition specifically for the construct of anxiety. However, a glance over the section on anxiety disorders gives some indication as to the consistency of the DSM-IV conception of anxiety with theory regarding the nature of anxiety as reviewed in the last section, at least in the general population. Such words as "fear," "apprehension,"

“worry,” and “avoidance” of different situations and stimuli characterize most of the anxiety disorders. Because the DSM-IV strives to be atheoretical, empirical descriptions of the various types of anxiety disorders are provided without reference to how these disorders may arise or are maintained.

According to DSM-IV, there are at least nine distinguishable types of anxiety disorder, all characterized by anxiety (fear, apprehension, worry, avoidance) that is maladaptive and/or inappropriate to the situation or stimulus. Many of the anxiety disorders are characterized by panic attacks and/or agoraphobic avoidance. Panic attacks are defined as discrete periods of intense fear or discomfort, characterized by such somatic symptoms as breathlessness, heart palpitations, chest discomfort, or stomach discomfort. Agoraphobia is the avoidance of certain places or situations for fear of having panic attacks.

Panic disorder, which is characterized by recurrent unexpected panic attacks, can occur with or without agoraphobia, and is thus subtyped. Panic disorder, regardless of subtype, has a worldwide lifetime prevalence rate of between 1.5% and 3.5% (APA, 1994). Agoraphobia can also occur without history of unexpected panic attacks, although it can be characterized by the experience of panic-like symptoms, thus provoking the situational avoidance in the first place. Prevalence rates for agoraphobia without history of (or concurrent) panic disorder have been difficult to determine: the clinical picture indicates that 95% of individuals presenting with agoraphobia also have at least a history of panic disorder. However, epidemiological studies seem to indicate that the prevalence of agoraphobia alone is higher than panic disorder, an apparent contradiction that so far has not been sorted out.

Specific phobia is characterized by a marked fear of discrete, fairly circumscribed objects (e.g., snakes) or situations (e.g., heights). Exposure to the feared object or situation provokes an intense anxiety response, sometimes resulting in panic

attacks. At any rate, the anxiety response is often characterized by somatic, panic-like symptoms. Specific phobia also often results in marked avoidance of the feared object or situation, at times to the extent that the quality of life of the individual is severely limited. Although the prevalence of specific phobias in the general population is 9%, the majority of these individuals do not receive a diagnosis of specific phobia, as their anxious response to the feared object or situation does not interfere with their everyday functioning (Bourne, 1998).

Individuals with social phobia suffer from intense anxiety when either interacting or performing in a social situation, for fear of being negatively evaluated, or somehow embarrassed. Like specific phobia, a diagnosis of social phobia is not normally given unless the fear, apprehension, or avoidance causes significant distress, or interferes significantly with daily functioning. This last criterion for diagnosis accounts for the wide range in estimated prevalence (3 to 13%; Turner, Beidel, & Dancu, 1996).

Obsessions, defined as persistent thoughts or images, and compulsions, repetitive actions in which an individual may engage in order to dispel or neutralize the feelings of anxiety brought on by the obsessions, characterize obsessive-compulsive disorder. Once again, the obsessions and/or compulsions must be the cause of significant distress or impairment in order to qualify for a diagnosis. The lifetime prevalence rate for obsessive-compulsive disorder is 2.5%, which is higher than previously estimated.

Generalized anxiety disorder (GAD) is characterized by persistent and excessive worry about a number of events, people, or activities in the individual's daily life. A key feature of GAD is the fact that the individual finds it difficult to control the worry, and tends to continue to worry even when things are going well. A number of somatic symptoms accompany the worry, including restlessness, irritability, muscle tension,

fatigue, and sleep disturbance. Lifetime prevalence for GAD in community samples is 5% (APA, 1994).

Both post-traumatic stress disorder (PTSD) and acute stress disorder are brought on by exposure to an event or events that may be characterized as traumatic (e.g., events which constitute a direct threat to one's physical well-being, or witnessing an event that causes violent death or serious injury to others). The traumatic event is typically re-experienced by the individual through intrusive imagery. PTSD and acute stress disorder are often accompanied by symptoms of anxiety of which the following examples are cited: "difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness" (APA, 1994, p. 432). Avoidance of stimuli or situations that may recall the traumatic event is another anxiety symptom which may also be characteristic of PTSD and acute stress disorder. The classification of PTSD and acute stress disorder as anxiety disorders is somewhat questionable, though, as many of the symptoms of PTSD appear to have much in common with depressive symptomatology as well (Joseph, Williams, & Yule, 1995). Prevalence rates for PTSD vary widely in the general population (1% to 14%), as well as in at-risk populations, such as war veterans or victims of natural disasters (3% to 58%).

Epidemiology of Anxiety Disorders among Older Adults. Perhaps the best source for prevalence rates of anxiety disorders among community elderly is still the various epidemiological catchment area (ECA) studies, which are summarized by Fisher and Noll (1996). Part of the difficulty with the ECA study reported here is that diagnoses from the earlier edition of the DSM (DSM-III-R) was used. Thus there is a prevalence rating for agoraphobia (with or without panic), a classification which no longer exists in DSM-IV. Prevalence rates were averaged over a 6-month period, and are reported separately for males and females over age 65. No males qualified for a diagnosis of panic

disorder, while for females the averaged prevalence rate was 0.2%. For the no-longer existent agoraphobia classification, prevalence rates averaged 1.6% for males, and 3% for females. Simple phobia (now specific phobia) had an averaged prevalence rate of 3.3% for males, and 7% for females. For obsessive-compulsive disorder, prevalence rates averaged 1.3% for males, and 1% for females.

Most epidemiological studies apparently indicate that the population aged 65 and over have the lowest prevalence of anxiety disorders across age groups. The numbers are still significant, however: for older females the prevalence of anxiety disorders in general is 6.8%, which is higher than the prevalence rate for males at any age. There is also some danger in reading too much into the low numbers: differences in prevalence rates across age groups may have more to do with the criteria used to define the various anxiety disorders, than with the actual experience of anxiety. For example, Wisocki (1988) reports that 14% of older adults aged 60 to 90 years suffer from significant levels of worrying. Among those aged 55 and over, 17.1% of males, and 21.5% of females in a community sample were identified as suffering from anxiety symptoms severe enough to warrant intervention (Smith, Sherrill, & Colenda, 1995).

It is important to bear in mind that the diagnostic criteria described in DSM-IV were developed based on information regarding the general population, and that the experience of anxiety among the elderly may be quite different. Diagnostic classification can only be as accurate as assessment measures are valid and reliable. Assessment measures of anxiety symptoms and disorders up to this point have been designed for, and largely normed on, younger adults (Morin & Colecchi, 1995).

However, several concerns have been raised regarding the age-specificity of assessment measures (Lawton & Teresi, 1994): To what extent does a construct like anxiety share meaning across age groups? How is the presentation of a mental health problem, and its assessment, influenced by age and its correlates, including cognitive

dysfunction, motor and sensory decline, and cohort effects? With regards to anxiety specifically, Wisocki (1994) asserts that there may be little correspondence between what is known about anxiety in younger adults and the phenomenology of anxiety among older adults. It is possible that biological markers normally associated with anxiety in younger adults may be similar to biological changes associated with aging. For example, somatic symptoms such as sweating, trembling, or heart palpitations assessed in existing measures of anxiety overlap considerably with symptoms of physical health decline associated with aging, and particularly common among frail elderly residents of continuing care, for whom no epidemiological data are available, partly because of these outstanding questions.

#### Assessing Anxiety in the General Population

There are two general methods of assessing anxiety in the younger adult population. The first is through the use of rating scales, usually self-rated, although observer ratings are also a possibility (e.g., Zung, 1971). The second method is through structured or semi-structured clinical interviews. The first method is usually used to screen for anxiety symptoms, while the second method is used to determine the presence or absence of anxiety disorders. The distinction between anxiety symptom and anxiety syndrome (or disorder) is important, particularly when considering that whereas anxiety disorders may be an arguably uncommon syndrome in the elderly, anxiety symptoms appear to be quite common (Gurian & Miner, 1991).

Anxiety Symptom Rating Scales. Most anxiety symptom rating scales include symptoms from three dimensions: the cognitive-emotional dimension (e.g., thoughts of being scared, thoughts of danger, or difficulty concentrating), the behavioural or motoric dimension (e.g., avoidance, trembling, restlessness), and the somatic or

physiological dimension (e.g., heart rate, breathlessness, nausea or stomach upset). Two examples of the most commonly used rating scales in the general population are the State-Trait Anxiety Inventory (STAI; Spielberger, 1983), and the Beck Anxiety Inventory (BAI; Beck & Steer, 1988).

The STAI approach to the measurement of anxiety takes into account the distinction between so-called “state” anxiety, which is a relatively transitory subjective feeling of apprehension or worry, and “trait” anxiety, which is a relatively enduring personality variable, also called “anxiety proneness” (Barlow, 1988). “State” anxiety can be thought of as an immediate cognitive-emotional and physiological reaction to an anxiety-evoking event; “trait” anxiety refers to the likelihood that an individual will react to such an event with “state” anxiety.

The STAI is a self-report scale, and consists of two forms: Form Y-1 contains 20 items designed to assess “state” anxiety, and asks the respondent to endorse one of four Likert points (1 = not at all; 4 = very much so), according to how the respondent feels at the moment of responding to the scale. Form Y-2 contains a further 20 items, designed to measure “trait” anxiety, again requiring the respondent to endorse one of four Likert points (1 = almost never; 4 = almost always), according to how the respondent feels generally. Scores can range from 20 to 80, with higher scores indicating higher levels of anxiety (some items are reverse-scored). The scale is recommended for adults with at least a fifth or sixth grade reading ability.

The STAI is brief, and easy to administer and score. It is particularly important, however, to make sure that the directions for each form are read and understood by the respondent in order to adequately differentiate between the “state” measure and the “trait” measure, if both measures are administered. The wording of the directions is almost identical, except for a few key words (“how you feel right now” in Form Y-1 versus “how you generally feel” in Form Y-2). The STAI-Trait scale correlates

moderately highly with other measures of trait anxiety ( $r = .70$ ); however there has been some recent debate regarding the construct of “trait” anxiety itself, and ways of measuring it (Reiss, 1997). With the STAI itself, apart from the time frame, many of the items between the “trait” and “state” scales overlap, such that they almost look like parallel forms.

More recently, researchers and practitioners have observed that although the phenomenological difference between the experience of anxiety and depression may seem relatively straightforward, making empirical distinctions between these experiences have been less simple (Dobson, 1985). Such observations have spurred attempts to design and validate “purer” measures of anxiety: that is, the concern more recently has been to come up with ways to measure the severity of anxiety symptoms minimally shared with symptoms of depression. The BAI (Beck & Steer, 1993) is one such attempt.

The BAI (Beck & Steer, 1993) is a 21-item Likert scale with four anchors (not at all, mildly, moderately, and severely), with scores ranging from zero to 63. It takes between five and 10 minutes to complete, and is simple enough to be administered orally. Perhaps because of its focus on anxiety symptoms minimally shared with depression, most of the items on the BAI are somatic or autonomic, which may cause some problems when trying to assess anxiety symptoms in populations where more somatic symptoms are also expected, such as the sick or the elderly. The BAI seems to be a promising tool for screening for anxiety symptoms, at least in the general population, and it has been validated in a number of populations since its original publication in 1988 (e.g., Fydrich, Dowdall, & Chambless, 1992; Gillis, Haaga, & Ford, 1995; Osman, Barrios, Aukes, Osman, & Markway, 1993; Wetherell & Arean, 1997). More work needs to be done, however, in terms of establishing cut scores according to gender and age.

Clinical Interviews for Anxiety Disorders. As mentioned previously, the presence or absence of an anxiety disorder is usually determined by clinical interview. The most common structured clinical interviews used are the anxiety disorders module from the Structured Clinical Interview for DSM-IV (SCID; American Psychiatric Association, 1994), and the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, DiNardo, & Barlow, 1994). Only the ADIS-IV will be described here.

The ADIS-IV is a structured diagnostic interview designed to assess current episodes of anxiety disorders, and differential diagnoses among anxiety disorders according to DSM-IV criteria. It is a comprehensive interview which allows for full description of symptoms associated with the various anxiety disorders described above; the assessment of disorders which are highly comorbid with anxiety disorders, such as depression and substance abuse; as well as a medical and psychiatric history. The ADIS-IV has two versions: one to assess current symptomatology, and the other to assess lifetime diagnoses. It goes beyond merely establishing symptom presence or absence, and tries to determine functional relationships among symptoms, thus hopefully resulting in more reliable differential diagnoses. The attention to functional relationships is especially important when assessing symptoms that cut across anxiety disorders, and across disorders with which the anxiety disorders are most frequently comorbid.

Because the ADIS-IV is a diagnostic instrument, as opposed to a screening instrument, it would take the average adult more than an hour to go through the entire interview. It also requires that the interviewer be a clinically trained professional (or a clinical professional-in-training), be familiar with DSM-IV diagnoses and decision rules, and be able to exercise sound clinical judgment in order to skip appropriate sections if the initial screening inquiry is not endorsed. Each diagnostic section (of which there is one for each of the DSM-IV anxiety disorder diagnoses, plus separate

sections for depression, mixed anxiety-depression, substance abuse, and other probable comorbid diagnoses) begins with an initial inquiry which serves as a screen for further questioning in the area. If the initial inquiry is endorsed, the interviewer goes on to establish symptomatology, details regarding onset of the disorder, and life factors which may influence presentation of the disorder.

In sum, the assessment of anxiety is relatively well-developed among younger adults, a situation unfortunately not shared by older adult populations. Some work has been directed towards validating brief symptom rating scales; there has been no research as yet on the appropriateness of the DSM-IV criteria and classifications for the elderly (Fisher & Noll, 1996).

#### Assessing Anxiety Symptoms in Older Adult Populations

The assessment of anxiety in the elderly has long been earmarked for further investigation (Hersen, Van Hasselt, and Goreczny, 1993). Most of the work so far has focussed on the anxiety symptoms as opposed to disorders. Sheikh (1991), and Hersen et al. (1993) provide extensive reviews of the assessment of anxiety through the use of screening devices and behavioural procedures respectively. They conclude that existing assessment procedures need to be re-evaluated with older adults, both with respect to the appropriateness of available norms, and to the assessment procedures' reliability and validity with the older adult population. Hersen et al. assert that the "development of new schedules that pertain more directly to the experience of the older adult may prove be more cost-effective in the long run" (p. 109).

There has been some effort to validate brief self-report screening instruments among older adults. For example, Hale, Cochran, & Hedgepeth (1984) published norms for the elderly for the first edition of the Brief Symptom Inventory (Derogatis & Spencer, 1983), which allowed that measure to be used in a number of studies

involving older adult populations (e.g., Gilewski, Farberow, Gallagher, & Thompson, 1991; Kitson & Zyzanski, 1987; Thompson, Gallagher, & Breckenridge, 1987).

Rankin, Gfeller, & Gilner (1993) administered the A - State subscale of the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, Edwards, Lushene, Montouri, & Platzek, 1973) to a geriatric population (aged 60 to 95 years), examined descriptive and validity data, and concluded that the STAIC - State subscale is a valid and reliable screening measure for an older adult population. The sample of older adults used in the validation were physically healthy, and lived independently in the community, factors that become significant when considering that, regardless of age, anxiety symptoms have exhibited a strong negative linear relationship with physical health (Gurian & Miner, 1991). Thus housebound or institutionalized elderly are more likely to exhibit anxiety symptoms than the healthy elderly, and would require different norms.

Assessing mental health problems in the continuing care setting is generally more challenging than among the community elderly for a number of reasons. Anxiety and depression are apparently fairly common problems among continuing care settings. Parmelee, Katz, & Lawton (1993) observe that, at least for depression, prevalence rates are much higher for elderly residents of continuing care than for community-residing elderly. Furthermore, they add that, as in younger populations, anxiety and depressive symptoms often co-occur among the continuing care population. Yet anxiety and depression largely remain either underrecognized or overpathologized (Morin & Colecchi, 1995), partly because continuing care facilities largely operate within a medical model, and are far better equipped to assess and treat physical problems. The assessment of mental health, if done at all, often involves little more than administering a few items within a multidimensional instrument. Few mental health professionals in Alberta particularly have special training in working

with older adults, and still fewer work within continuing care. Continuing care residences are generally not integrated into the mental health system, and continuing care residents can be described as a largely forgotten population as far as mental health is concerned.

Apart from these systemic challenges hampering the task of addressing mental health issues among continuing care residents, characteristics of the continuing care population itself make the assessment of anxiety in particular a somewhat daunting task.

### Assessing Anxiety in the Continuing Care Population

In the continuing care population, anxiety is the second most frequent mental health problem requiring intervention (Wisocki, 1994), but its assessment is complicated partly by the overlap of anxiety symptoms with symptoms of physical illnesses relatively common in the continuing care population. Chronic illnesses such as hyperthyroidism, cardiac arrhythmias, hypoglycemia, or congestive heart failure, tend to be particularly prevalent among the frail elderly (Smith, Sherrill, & Colenda, 1995), and can serve to inflate scores on anxiety measures, particularly if those measures have a number of items reflecting the somatic component of anxiety (e.g., shaking, heart palpitations, sweating, trembling).

Beck, Steer, Ball, Ciervo, & Kabat (1997) recognized that this overlap between physical illness symptoms and anxiety symptoms (e.g., pounding heart, which could be attributable to both anxiety and cardiac problems) needed to be addressed. They used nonsomatic items from the BAI (Beck & Steer, 1993) to develop the BAI for Primary Care patients (BAI - PC), suggesting that the use of this subscale would be a more effective way to screen for anxiety symptoms in medical patients. Although this approach shows promise for use with frail older adults, the mean age for their sample

was 48.54 years, thus making generalizability to a much older continuing care population inadvisable.

Wetherell and Arean's (1997) psychometric evaluation of the BAI among older medical patients (mean age = 67.8) provides information which may be more useful when applied to frail older adults characteristic of the continuing care population. Although Wetherell and Arean conclude that the BAI may be a valuable screening tool for anxiety symptoms among older adults, some of their findings also suggest that there may be differences in the meaning of anxiety across age groups. For example, in their factor analysis of BAI items, the item "Fear of dying" loaded onto a depression factor rather than on an anxiety factor as it does with younger adult samples. They suggest, therefore, that further research be conducted to determine whether the content of BAI items truly reflect the construct of anxiety among older adults.

The relatively high rate of dementia in continuing care residents constitutes another complicating factor in the assessment of anxiety symptoms in continuing care settings. A survey of Alberta's continuing care settings indicated that about 40% of continuing care residents are cognitively impaired (Alberta Health, 1991). The use of traditional measures of anxiety symptoms are hampered by the possible presence of cognitive impairment in continuing care residents. For example, the Likert format of most of the screening inventories may not be readily understood by the cognitively impaired. Yesavage et al. (1983) designed the Geriatric Depression Scale (GDS) so that respondents could answer in a simple categorical format (yes/no). Rankin et al. (1993) addressed the same issue by using the simpler 3-point format of the STAIC (Spielberger et al., 1973) rather than the traditional 4-point scale of the STAI (Spielberger, 1983) in their validation study with older adults.

A second implication of the relatively high rates of dementia in continuing care facilities is the difficulty of teasing apart the overlap between behavioural indicators of

anxiety (e.g., general restlessness and pacing) and manifestations of agitation among elderly persons in the early stages of dementia (Cohen-Mansfield, Marx, & Rosenthal, 1989). Thus even the development of behavioural measures of anxiety for those who are suffering from dementing illnesses is particularly tricky.

Finally, the cognitive-affective component of anxiety has been shown to overlap considerably with depressive symptomatology in the general population. Granted that the relationship between anxiety and depression among the frail elderly (indeed, among older adults in general) has not been systematically examined, and can only be speculative at this point, current conceptualizations of anxiety and depression share many common features, thus making it more likely for anxious and depressive symptoms to co-occur (Watson & Kendall, 1989b). Clark and Watson (1991) point out that the correlations between self-report measures of anxiety and depression are quite high in the general population, averaging about .70. These high correlations may be due to overlapping symptoms, such as obsessive thinking, or anticipating negative events. Clark and Watson make an argument for a new "Mixed Anxiety-Depression" diagnosis in order to account for the high rates of symptom overlap, still an open question in the general population, although the ADIS-IV includes a diagnostic section for it. However, making distinctions between anxiety and depression in the continuing care setting, if possible, remains important, both because of the known high rates of depression and depressive symptoms in continuing care residents (30% to 50% show marked depressive symptoms; Alberta Health, 1991; Gerety et al., 1994), and because of the implications of the distinction for pharmacological treatment, particularly in the traditionally highly medicalized environment of continuing care settings.

In view of the above, a potentially useful measure of anxiety in the continuing care population, then, would be brief and follow a simple, straightforward format; its reliability would be reported according to cognitive status; and it would differentiate as

well as possible between anxiety symptoms and symptoms of physical health problems, and between anxiety symptoms and symptoms of depression. One possible way of teasing apart anxiety symptoms at least from physical health decline is, in the manner of the BAI-PC (Beck et al., 1997) and the GDS (Yesavage et al., 1983), to minimize the inclusion of somatic items in anxiety symptom rating scales. A focus on worry as a measure of the cognitive component of anxiety may be particularly promising.

#### Worry: A Possible Means to Measure Anxiety in the Frail Elderly

Molina and Borkovec (1994) have described worry as the cognitive aspect of anxiety, particularly when anxiety is at sub-syndromal levels, as has been noted occurs quite frequently among the elderly. They point out the high correlations between measures of worry and cognitive subscales of anxiety measures. Because of the complicated nature of teasing out anxiety symptoms from signs and symptoms of physical and cognitive decline that may be associated with aging, an examination of worry may prove a promising approach to the assessment of anxiety among continuing care residents.

Existing measures of worry may be grouped roughly into two general classifications: unidimensional measures that assess worry as a general tendency, such as the Pennsylvania State Worry Questionnaire (PSWQ; Molina & Borkovec, 1994); and multidimensional measures that assess the content of worry, such as the Worry Domains Questionnaire (WDQ; Tallis, Davey, & Bond, 1994).

Of existing unidimensional measures, at least two may be suitable for use in geriatric populations. The PSWQ (Molina & Borkovec, 1994) mentioned earlier evaluates the frequency of worry: the typical tendency to worry, its excessiveness and intensity, and the tendency to worry in most situations, as opposed to situation-specific worry. As a general measure of the frequency and severity of worry, the PSWQ shows

promise as a useful assessment tool to screen for cognitive symptoms of anxiety in a general geriatric population. It has been used in nonanxious older adults, as well as with a sample of older adults diagnosed with Generalized Anxiety Disorder (Beck, Stanley, & Zebb, 1995). In both populations the PSWQ showed good internal consistency and adequate convergent validity. There was a relatively young sample of older adults, however (range = 55 to 82 years, with a mean age of 67).

Labarge (1993) designed a 10-item unidimensional Worry Scale to help assess feelings of worry about changes related to dementia. Because of the focus on dementia, the scale is both too broad and too narrow for the purpose of investigating the nature of anxiety in nursing home elderly: dementing diseases are not confined to the older adult population, nor do all elderly residents of continuing care institutions suffer from a dementing disease.

Wells (1994), in developing and validating the Anxious Thoughts Inventory (AnTI), recognized and attempted to measure the involuntary and uncontrollable nature of pathological worry regardless of content. He introduced the term "meta-worry" to describe the cognitive processes involved in "worrying about worry" (p. 297). Although original items used in construction of the AnTI were derived from interviews with adults whose ages ranged from 17 to 74, the Meta-Worry subscale of the AnTI as a measure of the general tendency to worry warrants more thorough investigation in older adults, as it has the distinct advantage of being short (five items), and addresses a construct, meta-worry, which in theory could distinguish between "reasonable" worry and pathological worry.

Assessing the content of worry may be particularly important in examining the nature of the construct of anxiety among continuing care residents. Multidimensional, domain-specific measures of worry could help validate the content of anxious worry among the frail elderly. Two multidimensional measures are most commonly used to

assess the content of worry in adults. The Worry Domains Questionnaire (Tallis et al., 1994) consists of 25 items assessing worry in five domains: relationships, lack of confidence, aimless future, work, and finances. As is evident from the subscale headings, the WDQ was designed for, and normed on, younger adult student and working populations. A quick examination of the items preclude its use with most older adults, for whom the content of items clearly does not apply.

Perhaps the most widely used worry measure in older populations is the Worry Scale, designed by Wisocki, Handen, and Morse (1986) to assess "anxiety-related uncontrollable negative thinking in financial, health, and social areas specifically relevant to an older population sample" (p. 91). It was validated among housebound and community elderly. Although some of the worry items in the "Health" subscale apply to continuing care residents (e.g., worry about having to be taken care of by strangers), many of them are not suitable, and may even be upsetting, for residents of continuing care (e.g., worry about having to go to a nursing home or hospital; worry about not being able to care for one's spouse). In addition, the subscales may not be appropriate classifications of the items when considering continuing care residents: for example, worry about not being able to enjoy travel or recreation may be more a matter of "Health" for continuing care residents than of "Finances," as they are currently classified in the Worry Scale.

In sum, there are at least two measures assessing the general tendency to worry that could be validated with continuing care residents (the PSWQ and the AnTI Meta-Worry subscale). Of these two, the much briefer AnTI Meta-Worry subscale was chosen to be administered in the current study. Existing measures of worry content are largely inappropriate, however. Considering our lack of information regarding the content validity of items of existing measures (e.g., the BAI's "Fear of dying" item, as

described above), the work of validating the possible content of worries among elderly residents of continuing care remains an important task.

### This Study: Goals

There has been increasing frustration among investigators, as examination of issues involving anxiety in older adults (particularly those residing in continuing care) is hampered by the dearth of measurement instruments designed for this population, and the uncertainty regarding the content validity and psychometric properties of many of the existing instruments when used with the elderly (Beck & Stanley, 1997; Hersen, Van Hasselt, & Goreczny, 1993; Sheikh, 1991). Indeed, a relatively brief, reliable measure of anxiety symptoms, the items of which would have content pertinent to the continuing care population, and would be a reliable measure when applied to the frail elderly with possible cognitive impairment, is no longer a luxury item. The growth of this segment of the population would mean that more and more people would be effectively neglected in terms of assessing (and treating) mental health problems, unless something is done immediately to begin to rectify the situation. Gurian and Miner (1991) express the need for a “diagnostic gold standard” against which anxiety measures for the elderly, and particularly elderly residents of continuing care, may be compared. The current study is the first step in an attempt to fill the growing need for such a “diagnostic gold standard.”

This study had two main goals. The first was to examine and report the psychometric properties of two brief self-report measures of anxiety in a sample of continuing care residents. The first measure, the anxiety dimension of the Brief Symptom Inventory (BSI; Derogatis, 1992), contains items that are consistent with the more traditional conceptualization of anxiety as a combination of somatic, cognitive/affective, and behavioural symptoms, and consists of six items. The Meta-

Worry subscale of the Anxious Thoughts Inventory (AnTI - MW; Wells, 1994) consists of five items focusing on the process of worry -- that is, the excessiveness/controllability of worry (rather than its content).

The second, and larger goal of this study was to develop a domain-specific worry measure designed specifically for the continuing care population, and to report its psychometric properties. The 25 items of the Worry Questionnaire for Continuing Care Residents (WQCCR) were developed from a content analysis of interviews conducted as part of a previous research study (Crowhurst & Konnert, 1996). Elderly persons relocating to continuing care facilities were asked about sources of stress and worries as they contemplated and adjusted to their move to continuing care. The WQCCR was designed to be administered first as a categorical measure ("Do you worry about ...?"), then each item endorsed was also assessed for frequency ("How often do you worry about ...?"). Preliminary reliability and validity information for both the simpler, categorical version of the questionnaire, and the more complex 4-point Likert scale, are provided.

Reliability analyses for all three measures included an examination of mean inter-item and item-to-total correlations, test-retest reliability (WQCCR only), and alpha coefficients.

Validity of the measures were assessed using a Multitrait-Multimethod Matrix (MTMM; Campbell & Fiske, 1959). The MTMM is a means of assessing the convergent and divergent validity of a measure by examining its pattern of correlations with other measures: the measure in question should thus correlate positively and significantly with other measures assessing the same (or similar) trait(s), even when the method of assessment differs (e.g., self-report inventory vs. semi-structured interview). Conversely, there should be no correlation with measures that assess different traits,

even if the method of assessment is the same (e.g., aggressiveness and creativity both measured by self-report inventories).

In the current study, three different characteristics of the continuing care resident were measured: anxiety, depression, and health. The methods used were: (1) for anxiety, self-report inventories and interview; symptom checklists and inventories from collateral sources (family/friend and staff caregivers); (2) for depression, self-report inventory and interview; symptom checklists and inventories from collateral sources (family/friend and staff caregivers); (3) for health, a single item self-rating of perceived health; and a rating of Activities of Daily Living (ADLs) and list of chronic illnesses from staff caregivers. To demonstrate construct validity, a measure of anxiety (e.g., the WQCCR) would have to correlate positively and significantly with all other measures of anxiety regardless of method (convergent validity), while not correlating significantly with measures of depression or of health, again regardless of method (divergent validity).

## Method

Data for the current study were collected in the context of a larger study on the reliability of collateral measures of anxiety and depression (Konnert, Hertzprung, & Brinker, 1999).

### Sample

The sample consisted of 69 continuing care residents recruited through Carewest, an agency which at the time of data collection operated five continuing care sites in Calgary. Family/friend and staff caregivers who had significant contact with the participating resident were also recruited to provide collateral information.

Residents were excluded from the study if: (1) the resident was physically too ill to participate; (2) the resident had severe communication problems, such as aphasia or deafness; (3) the resident had moderate to severe cognitive impairment, as indicated by a score of 15 or lower on the Folstein Mini-Mental State Examination (Folstein MMSE; Folstein, Folstein, & McHugh, 1975); or (4) the resident was non-English-speaking.

The appropriate family/friend caregiver to be recruited was determined in conjunction with Carewest staff. Only those family/friend caregivers who had visited the resident at least twice in the previous month were asked to participate.

Determination of the appropriate staff caregiver to be interviewed was likewise completed in coordination with Carewest administration. The majority (92.8%) of staff caregivers recruited were the participating resident's "Team Leader:" that is, one of usually two registered nurses on the resident's unit who had been assigned to the resident as primary staff caregiver.

### Procedure

Residents were initially approached by a member of the Carewest staff in order to determine their level of interest in participating in a research study. Those residents who indicated their willingness to “meet with researchers from the university” were given a full description of the study, its purpose and goals, and the time commitment likely involved in participating. Informed consent for the interview, as well as the audiotaping, was obtained from residents who chose to participate. Residents were then interviewed for approximately one hour in a quiet location in their continuing care facility. Part of the interview was based on the anxiety and depression modules of the Structured Clinical Interview for DSM-IV (SCID-IV; American Psychiatric Association, 1994), and was audiotaped to determine inter-rater reliability. The resident was reminded of the purpose of the audiotaping procedure, and informed consent for audiotaping was clarified at the appropriate point during the interview. In order to determine temporal stability of the WQCCR, that instrument was re-administered within approximately a two-week period, again with the informed consent of the resident.

With the permission of the resident, family/friend and staff caregivers were then recruited to participate, and were interviewed within approximately two weeks of the resident interview. Collateral versions of the various measures were completed at the convenience of the family/friend and staff sources. Collateral ratings from staff took approximately 20 minutes per resident to complete; ratings from family members were designed to take approximately 30 minutes.

The adequacy of the interview protocols for residents, family/friend caregivers, and staff caregivers was determined through pilot research, and resulted in two revisions of the protocol for residents. Revisions largely involved shortening the

protocol in order to ensure that it did not exceed the time limits, as is necessary for this frail elderly population.

For each case, all three interviews (resident, family/friend caregiver, staff caregiver) were completed by researchers blind to collateral information. Copies of the informed consent forms appear in Appendix A.

### Measures

Copies of resident, family/friend caregiver, and staff caregiver protocols can be viewed in Appendix B.

Resident Measures. In addition to a questionnaire requesting demographic information, the following measures were administered to residents:

The Folstein Mini-Mental State Examination (Folstein MMSE; Folstein, Folstein, & McHugh, 1975) is a 30 item measure which assesses orientation, registration, attention and calculation, recall, and language skills. As some residents were unable to complete some items (e.g., unable to write due to stroke; unable to read the instruction “close your eyes” due to sensory impairment), results on the Folstein MMSE were prorated for 33% of the residents interviewed.

A single-item measure of perceived physical health, rated as either excellent, good, fair, or poor (Maddox & Douglas, 1972) was administered. Scores could range from 1 to 4, with higher scores indicating poorer health.

The Geriatric Depression Scale (GDS; Yesavage et al., 1983) is a 30-item inventory (yes/no) assessing subjective depression, with possible scores ranging from 0 (no depression) to 30 (severe depression). It is valid and reliable with institutionalized elderly persons, including those with mild to moderate levels of cognitive impairment (Parmalee, Katz, & Lawton, 1992). Cut-offs are 17 or greater for major depression, and

11 to 16 for minor depression. Compared to other measures of depression, the GDS has fewer somatic items, making it more appropriate for the frail elderly.

The anxiety dimension of the Brief Symptom Inventory (BSI; Derogatis, 1992) is a five-point-Likert scale (0 = not at all; 4 = extremely) consisting of six items commonly associated with high levels of anxiety. The items include general signs of anxiety, such as tension and nervousness, as well as cognitive and somatic symptoms. Norms are available for non-patient normal, psychiatric outpatient, psychiatric inpatient, and non-patient adolescent samples. An earlier version of the BSI already has published norms for older adults (Hale, Cochran, & Hedgepeth, 1984), and the measure was often used in studies involving older adult populations (e.g., Gilewski, Farberow, Gallagher, & Thompson, 1991). Internal consistency is good (coefficient alpha = .81), and test-retest reliability is acceptable (.79). Scores can range from 0 to 24, with higher scores indicating greater levels of anxiety.

The Anxious Thoughts Inventory - Meta-Worry subscale (AnTI - MW; Wells, 1994) consists of five items rated on a four-point Likert scale (1 = almost never; 4 = almost always), and focuses on the assessment of the process of worry, and includes such items as the experience of bothersome repetitive thoughts, and lack of controllability of anxious thoughts. Internal consistency derived from the original sample of adults aged 17 to 74 was acceptable (coefficient alpha = .75). Scores can range from 1 to 20, with higher scores indicating greater levels of uncontrollable worry.

The Worry Questionnaire for Continuing Care Residents (WQCCR) is a 25-item measure designed for this study. The items were developed from a content analysis of interviews conducted as part of a previous qualitative research study (Crowhurst & Konnert, 1996) in which elderly individuals relocating to continuing care facilities, and those who had been living in continuing care for six months, were

asked to identify sources of worry and stress. The WQCCR was administered in this study, such that categorical (yes/no) information was gathered first, in response to the question stem, “Do you worry about ... ?” Then those items which were endorsed during the categorical administration were then assessed for frequency, in response to the question stem, “How often do you worry about ... ?” A four-point Likert scale (1 = almost never; 4 = almost always) yielded possible scores ranging from 0 to 25 for the categorical format, and from 0 to 100 for the frequency format of the questionnaire, with higher scores indicating more worry.

The anxiety module from the Structured Clinical Interview for DSM-IV (SCID-Anx; American Psychiatric Association, 1994) was administered, and used to derive an index of number and severity of anxiety symptoms. Twelve symptoms of anxiety were rated as either absolutely absent (rated 0), at subthreshold (rated 1), or present (rated 2). Scores could range from 0 to 24, with higher scores indicating more anxiety symptoms.

The depression module from the Structured Clinical Interview for DSM-IV (SCID-Dep; American Psychiatric Association, 1994) was likewise administered, and used to derive an index of number and severity of depression symptoms. Sixteen symptoms of depression were rated as either absolutely absent (rated 0), at subthreshold (rated 1), or present (rated 2). Scores could range from 0 to 32, with higher scores indicating more depressive symptoms.

Administration of both modules of the SCID-IV was audiotaped with the resident’s permission, and 20% of the tapes were later reviewed for inter-rater reliability.

Finally, residents were also administered a single-item measure of worry frequency, designed to provide a gross rating of how often a resident worried in

general on a scale from 1 to 4 (“almost never,” “sometimes,” “often,” and “almost always”). Higher scores indicated greater frequency of worry.

Collateral Measures: Family/Friend Caregivers. In addition to information regarding date, location, and mode of the interview (telephone or in person), and frequency of visits, family/friend caregivers were administered symptom checklists based on the anxiety and depression modules of the SCID-IV (SCID-Anx-F and SCID-Dep-F). Symptoms could be rated as either absolutely absent (rated 0), at subthreshold (rated 1), or present (rated 2). The SCID-Anx-F consisted of 11 items, yielding possible scores ranging from 0 to 22, with higher scores indicating greater levels of anxiety. The SCID-Dep-F consisted of 16 items, yielding possible scores ranging from 0 to 32, with higher scores indicating greater levels of depression.

Collateral versions of the GDS (Nitcher, Burke, Roccaforte, & Wengel, 1993) and the WQCCR were also administered. Like the GDS, the GDS-Collateral is a 30-item inventory rated either yes or no, with possible scores ranging from 0 to 30, with higher scores indicating more depression. The WQCCR-Collateral, like the WQCCR, was administered first as a categorical (yes/no) measure, and then as a frequency measure on a four-point Likert scale (1 = almost never; 4 = almost always), yielding possible scores of 0 to 25 for the categorical format, and 0 to 100 for the frequency format, with higher scores indicating more worry.

Collateral Measures: Staff Caregivers. In addition to objective information regarding the staff caregiver’s relationship to the participating resident (e.g., length of time the staff caregiver had been primary caregiver), staff caregivers were also asked for a subjective rating of how well they felt they knew the resident in question (not at all well, somewhat well, or very well).

Symptom checklists based on the anxiety and depression modules of the SCID-IV (SCID-Anx-S and SCID-Dep-S) were also administered to staff caregivers. Like the family/friend collateral measures, the SCID-Anx-S consisted of 11 items, which yielded a range of possible scores from 0 to 22, again with higher scores indicating more anxiety. The SCID-Dep-S likewise consisted of 16 items, and scores could range from 0 to 32, with higher scores indicating more depression.

Staff caregivers were also asked to endorse a list of chronic illnesses based on the Minimum Data Set for Nursing Home Resident Assessment and Care Screening (MDS-Chronic; Morris et al., 1990), a set of items, definitions, and response categories which was developed for, and used to assess continuing care residents in the United States. Very good reliability has been demonstrated for items relating to disease diagnoses, with reliability coefficients averaging .74 (Hawes et al., 1995). In this study, staff caregivers could endorse the 25 possible chronic diagnoses from the MDS, and specify additional chronic diagnoses, if necessary. The possible range of scores was 0 to 29.

An evaluation of functional health based again on the Minimum Data Set for Nursing Home Resident Assessment and Care Screening, and modified slightly to be consistent with a standard Carewest measure of Activities of Daily Living (ADLs) was used to describe participating residents' relative dependence or independence in performing such daily tasks as eating, bathing, grooming, etc. Excellent reliability has been demonstrated by the original MDS measure, with average alpha coefficients ranging from .87 to .92, depending on the area of evaluation (Hawes et al., 1995). For the current study, six areas were assessed on a five point Likert scale (0 = independent or no assistance; 4 = total dependence), yielding possible scores ranging from 0 to 24, with higher scores indicating more dependence.

A summary of measures administered to each participant is displayed in Table 1.

Table 1. A summary of measures according to characteristic and data source.

	Resident	Family/Friend	Staff
Anxiety	SCID-IV BSI AnTI Worry WQCCR	SCID-IV checklist WQCCR (collateral)	SCID-IV checklist
Depression	SCID-IV GDS	SCID-IV checklist GDS (collateral)	SCID-IV checklist
Health	Perceived health		Chronic illnesses ADLs

Note: SCID-IV = Structured Diagnostic Interview for the DSM-IV; BSI = Brief Symptom Inventory, Anxiety Dimension; AnTI = Anxious Thoughts Inventory, Meta-Worry Subscale; WQCCR = Worry Questionnaire for Continuing Care Residents; GDS = Geriatric Depression Scale; ADLs = Activities of Daily Living.

Analyses. Demographic information for the resident sample was analyzed in terms of frequencies and percentages in order to adequately describe the sample, and to be able to make comparisons where possible with available data on the population of Carewest residents, and continuing care residents in Alberta. Descriptive statistics on all measures, along with alpha coefficients, were then examined to get an overall picture of how internally consistent the measures were, as well as how this particular sample of residents, family/friend caregivers, and staff caregivers were responding to the items. Inter-rater reliability on the SCID-IV modules were examined using kappa coefficients, and evaluated according to Cicchetti's (1994) guidelines: less than .40 as poor, .40 to .59 as fair, .60 to .74 as good, and .75 and above as excellent.

More detailed reliability analyses were run on the BSI (Anxiety) and AnTI-MW scales. Apart from alpha coefficients, mean inter-item correlations, mean item scores, and item-to-total correlations were examined. Evaluation of alpha coefficients were again based on Cicchetti's (1994) guidelines, indicating that coefficients of less than .70 are unacceptable; those between .70 to .79 as fair; those between .80 to .89 as good; and those .90 and above as excellent. Mean inter-item correlations and item-to-total correlations were evaluated according to Jarvis & Petty's (1996) guidelines for item retention in scale development: mean inter-item correlations over .20 are acceptable; item-to-total correlations over .30 are acceptable. Needless to say, higher correlations generally indicate a more reliable measure.

Both Resident and Collateral versions of the WQCCR (both categorical and frequency) were also subjected to detailed reliability analyses, with items evaluated according to the guidelines outlined above. The Resident version of the WQCCR was

also analyzed for test-retest reliability. In addition, the performance of the WQCCR - Resident Version (frequency) was evaluated for subgroups of residents. First residents were grouped according to scores on the Folstein MMSE, a classification particularly relevant to elderly residents of continuing care, as was discussed earlier. The cut-off score was set at 24 on the Folstein MMSE, as this score has been shown to effectively screen for individuals with dementia (Reischies & Geiselman, 1997; Van der Cammen, Van Harskamp, Stronks, Passchier, & Schudel, 1992). The residents were then grouped according to scores AnTI-MW. The latter subgroups were divided along the median score of the sample, and were done in order to determine if the WQCCR performed better at relatively higher levels of general worry.

The pattern of correlations among all measures was then examined to evaluate convergent and divergent validity of the anxiety self-report measures (BSI, AnTI-MW, WQCCR). Correlations between the WQCCR - Resident Version (categorical and frequency) and other measures of anxiety, measures of depression, and measures of health, were examined more closely. Again, the desired pattern according to the multitrait-multimethod matrix (Cambell & Fiske, 1959) for the WQCCR to achieve construct validity would have been positive and significant correlations with other anxiety measures, and nonsignificant correlations with measures of depression and health, regardless of method of assessment.

Finally, based on the reliability information on the WQCCR, an abbreviated form of the scale is suggested, and is itself subjected to further reliability analyses. Although the ideal would have been to test the abbreviated form with a new sample, both preliminary reliability and validity statistics are provided for the WQCCR -

Abbreviated, to aid in determining if the abbreviated form is worth pursuing in further studies.

## Results

### Sample Characteristics

Residents. The mean age of the sample of residents for this study at the time of interview was 80.35 (s.d. 8.27), with ages ranging from 62 to 97. The majority of residents were female (71%) and widowed (58%), and most did not complete high school (57.4%). All were Caucasian. Detailed demographic information is displayed in Table 2.

Mean age at relocation was 78.12 (s.d. 9.52), and ranged from 52 to 97. The average duration since their admission into the Carewest system was 2.33 years (s.d. 2.82), and ranged from one month to 10.5 years. The sample scored a mean of 24.91 (s.d. 4.03) on the Folstein MMSE, with a range from 12 to 30. It was decided to include the two residents who scored under the stated cut-off of 15 (one resident scored 14; the other, 12), considering that the data would be subgrouped and analyzed according to Folstein MMSE scores.

Most of the residents considered themselves in good health (54.4%); the vast majority (85.3%) considered that their health was at least fair (that is, fair, good, or excellent). At least four chronic illnesses were endorsed per resident. The most commonly endorsed illnesses were hypertension (50.7%), arthritis (37.7%), cardiopulmonary disorders (34.8%), and stroke (34.8%).

Family/Friend Caregivers. Of the 69 residents interviewed, 58 had family/friend caregivers willing to participate in the study. Fifty percent of the family/friend caregivers interviewed were daughters (32.8%) or daughters-in-law (17.2%); 10.3% were spouses of residents; siblings, sons, nephews or nieces, and friends made up the remaining 40%. One parent of a resident was interviewed.

Most of the family/friend caregivers maintained contact with the resident by visiting with resident two to three times per week (45%), while some visited daily

Table 2. Demographic information on the resident sample.

	Frequency	Percentage
Sex (N=69)		
Male	20	29
Female	49	71
Ethnicity (N=69)		
Caucasian (White)	69	100
Age (N=69)		
60–74	21	30.4
75–85	31	45
Over 85	17	24.6
Marital Status (N=69)		
Single	8	11.6
Married	12	17.4
Widowed	40	58
Divorced/Separated	9	13
Education (N=68)		
5–8 years	17	25
High School incomplete	22	32.4
High School completed	16	23.5
Post High School, Business, or trade school	6	8.8
1–3 years college	2	2.9
4 years college completed	2	2.9
Post-graduate college	3	4.3

(10%). All but 8% of the family/friend caregivers visited the resident at least weekly. That remaining 8% made contact with the resident twice or three times per month.

Family/friend caregivers were interviewed within an average of 15 days of the resident interview. Nine percent of the interviews were conducted over the telephone; the vast majority (91%) of the family/friend caregivers were interviewed in person, either in their home or at the continuing care facility, according to their preference.

Staff Caregivers. Staff caregivers were interviewed within a mean of nine days of the resident interview. On average the staff caregivers had known the resident 35 months, and had been the primary staff caregiver for the resident an average of 20 months. The majority of staff caregivers interviewed were employed as “Team Leaders” within the Carewest administrative system (92.8%). As mentioned previously, Team Leaders are one of two registered nurses within each unit who have primary responsibility for the care of a given resident. Staff caregivers considered that they knew 71% of the residents interviewed “very well;” 27.5% of the residents were considered known “somewhat well;” while 1.4% (representing a single resident) was considered to be known “not at all well” by the interviewed staff caregiver.

### Descriptive Statistics

Descriptive statistics for all measures administered to participants are displayed in Table 3. For all measures, higher numbers indicate more symptoms (lower level of health/well-being). The SCID-IV anxiety and depression modules administered to residents, upon which the SCID-IV anxiety and depression symptom endorsements were based, were audiotaped and checked for inter-rater reliability. Twenty percent of the audiotapes were reviewed by an independent rater (a clinical psychology graduate student), and inter-rater reliability was determined via a kappa coefficient of .88, which according to Cicchetti (1994), is excellent.

Table 3. Means and standard deviations on all measures.

Measure	Mean	S.D.	Possible Range	Range within sample
<b>Residents (N=69)</b>				
MMSE	24.91	4.03	0-30	12-30
SCID-IV depression symptoms	6.16	5.47	0-32	0-22
SCID-IV anxiety symptoms	6.64	5.18	0-24	0-22
BSI	2.30	2.63	0-24	0-10
AnTI-MW	7.02	2.34	1-20	4-15
GDS	8.29	5.23	0-30	0-23
Worry frequency	1.73	0.71	1-4	1-4
Perceived health	2.54	0.78	1-4	1-4
WQCCR (frequency)	14.75	11.36	0-100	0-57
WQCCR (categorical)	6.75	4.48	0-25	0-24
<b>Family/Friend Caregivers (N=58)</b>				
SCID-IV depression symptoms	0.24	0.51	0-32	0-2
SCID-IV anxiety symptoms	0.20	0.44	0-22	0-2
GDS collateral	9.37	6.43	0-30	1-26
WQCCR collateral (frequency)	21.64	14.91	0-100	0-56
WQCCR collateral (categorical)	11.39	7.62	0-25	0-25
<b>Staff Caregivers (N=69)</b>				
SCID-IV depression symptoms	0.32	0.70	0-32	0-3
SCID-IV anxiety symptoms	6.10	4.44	0-22	0-13
Chronic illnesses	7.12	1.64	0-29	4-12
ADLs	13.16	7.51	0-24	0-24

Note: MMSE = Folstein Mini-Mental State Examination; SCID-IV = Structured Diagnostic Interview for the DSM-IV; BSI = Brief Symptom Inventory, Anxiety Dimension; AnTI = Anxious Thoughts Inventory, Meta-Worry Subscale; WQCCR = Worry Questionnaire for Continuing Care Residents; GDS = Geriatric Depression Scale; ADLs = Activities of Daily Living.

Reliability information, in the form of alpha coefficients and mean inter-item correlations, are displayed in Table 4.

Cicchetti's (1994) guidelines specify that alpha coefficients of less than .70 are unacceptable; those between .70 to .79 are fair; those between .80 to .89 are good; and those above .90 are excellent. Jarvis & Petty (1996) specify mean inter-item correlations of at least .20 as acceptable. Unfortunately, these reliability analyses could not be performed on the SCID-IV anxiety and depression symptom checklists administered to collateral sources (both family/friend and staff caregivers). In the case of the SCID-IV anxiety and depression symptom checklists for family/friend caregivers, and the SCID-IV depression symptom checklist for staff caregivers, the low endorsement of symptoms precluded the possibility of conducting reliability analyses. Table 3 confirms this, as the ranges of each measure within the current sample were 0 to 2, 0 to 2, and 0 to 3 respectively. In the case of the SCID-IV anxiety symptom checklist for staff caregivers, although more symptoms were endorsed, there were too many items with zero variance to allow for an analysis of the measure's reliability.

Reliability: The BSI, the AnTI-MW, and the WQCCR (Resident and Collateral Versions)

The BSI (Anxiety Dimension). Of a possible maximum score of 24, the residents scored a mean of 2.30 (s.d. 2.63). Scores ranged from a minimum of 0 to a maximum of 10. The overall mean of inter-item correlations for the six items of the BSI was .165, and the scale had an alpha coefficient in this sample of .575, much lower than the demonstrated internal consistency of this measure in other samples (alpha = .81). Mean scores on each item, and item-to-total correlations are displayed in Table 5.

Table 4. Reliability information for all measures.

Measure	Alpha	Mean inter-item correlations
Residents (N=69)		
SCID-IV depression symptoms	.820	.233
SCID-IV anxiety symptoms	.331	.069
BSI	.575	.165
AnTI-MW	.695	.318
GDS	.801	.120
WQCCR (frequency)	.821	.155
WQCCR (categorical)	.803	.142
Family/Friend Caregivers (N=58)		
SCID-IV depression symptoms	---	---
SCID-IV anxiety symptoms	---	---
GDS collateral	.922	.285
WQCCR collateral (frequency)	.859	.197
WQCCR collateral (categorical)	.934	.363
Staff Caregivers (N=69)		
SCID-IV depression symptoms	---	---
SCID-IV anxiety symptoms	---	---
ADLs	.928	.673

Note: SCID-IV = Structured Diagnostic Interview for the DSM-IV; BSI = Brief Symptom Inventory, Anxiety Dimension; AnTI = Anxious Thoughts Inventory, Meta-Worry Subscale; WQCCR = Worry Questionnaire for Continuing Care Residents; GDS = Geriatric Depression Scale; ADLs = Activities of Daily Living.

Table 5. The Brief Symptom Inventory: Mean item scores and item-to total correlations. (N=69)

Item	Mean (range = 0 to 4)	Item-to-total Correlations
Over the past week, how much were you distressed by ...		
1. Nervousness or shakiness inside?	.464	.206
2. Suddenly scared for no reason?	.334	.334
3. Feeling fearful?	.203	.202
4. Feeling tense and keyed up?	.754	.556
5. Spells of terror and panic?	.159	.077
6. Feeling so restless you couldn't sit still?	.391	.493

The AnTI-MW. Of a possible maximum score of 20, residents scored a mean of 7.02 (s.d. 2.34). Resident scores ranged from a minimum of 4 to a maximum of 15. The overall mean of inter-item correlations on the AnTI was .318, and the alpha coefficient in this sample was .695, once again indicating that this measure performs somewhat less consistently in this sample than in the standardization sample (alpha = .75; Wells, 1994). Mean scores on each item, and item-to-total correlations are displayed in Table 6.

The WQCCR (Resident Version). As indicated previously, the WQCCR was administered to residents in such a way that they responded first categorically (yes/no), and then in terms of frequency of worry. This strategy was used in order to obtain information regarding simpler and more complex formats of the same measure. That is, if the simpler categorical format were to prove equally reliable as the more complex frequency format, the categorical format would be preferred, particularly for the more cognitively impaired. All preliminary reliability analyses were thus performed on both categorical and frequency formats of the WQCCR. Test-retest reliability analyses were likewise performed on both formats. The questionnaire was readministered after an average of 12.85 (s.d. 5.71) days, with 68% of the original sample responding.

Of a maximum possible score of 25, residents scored an average of 6.75 (s.d. 4.48) on the categorical format of the WQCCR. Residents most commonly endorsed worry over the health of loved ones (69.6%), their ability to remember important things (38.1%), and keeping in touch with family and friends (37.7%). Residents' scores ranged from a minimum of 0 to a maximum of 24. The overall mean of inter-item correlations was .142, with an alpha coefficient of .803. Test-retest reliability for the categorical version was .205 ( $p = .091$ ), indicating that this version of the WQCCR

Table 6. The Anxious Thoughts Inventory (Meta-Worry Subscale): Mean item scores and item-to-total correlations. (N=54)

Item	Mean (range = 1 to 4)	Item-to-total correlations
1. I take disappointments so keenly that I can't put them out of my mind.	1.462	0.394
2. Unpleasant thoughts enter my mind against my will.	1.431	0.497
3. I have difficulty clearing my mind of repetitive thoughts.	1.431	0.369
4. I think that I am missing out on things in life because I worry too much.	1.292	0.544
5. I worry that I cannot control my thoughts as well as I would like to.	1.446	0.466

is likely not stable over the two-week retest time period. Mean scores for each item, and item-to-total correlations are displayed in Table 7.

On the WQCCR version designed to assess frequency of residents' worries, the average score was 14.75 (s.d. 11.36) of a maximum possible score of 100. Scores ranged from a minimum of 0 to a maximum of 57. The overall mean of inter-item correlations was .155, and the alpha coefficient was .821, thus performing slightly better than the categorical version of the questionnaire. Test-retest reliability for the frequency format was good, correlating at .817 ( $p < .001$ ). Item means and item-to-total correlations for the WQCCR frequency format are displayed in Table 8.

As would be expected, the correlation between the frequency and categorical formats of the questionnaire was high (.918,  $p < .001$ ). Because of the slightly more reliable performance, and, more importantly, the temporal stability of the frequency format of the questionnaire, succeeding analyses focused on this format of the WQCCR.

The WQCCR - Resident Version (frequency) was evaluated for subgroups of residents. First residents were grouped according to scores on the Folstein MMSE, a classification particularly relevant to elderly residents of continuing care, as was discussed earlier. For the Folstein MMSE, a cut-off score of 24 was used to divide the sample into subgroups in order to roughly distinguish those with from those without dementia (Reischies & Geiselman, 1997; Van der Cammen, Van Harskamp, Stronks, Passchier, & Schudel, 1992). The residents were then grouped according to scores on the AnTI-MW. The latter subgroups were divided along the median score of the sample, and was done in order to determine if the WQCCR performed better at relatively higher levels of general worry. Means, standard deviations, alpha coefficients, and inter-item correlations for each subgroup are displayed in Table 9.

Table 7. Worry Questionnaire For Continuing Care Residents (Categorical): Mean item scores and item-to-total correlations. (N=69)

Item	Mean (range = 0 to 1)	Item-to-total correlations
Do you worry about...		
1. Your eyesight or hearing getting worse?	0.348	0.264
2. Being able to enjoy eating your food?	0.188	0.405
3. Being able to sleep at night?	0.203	0.364
4. Your physical health getting worse?	0.290	0.373
5. Being able to remember important things?	0.391	0.424
6. Feeling sad?	0.174	0.265
7. Feeling lonely?	0.304	0.405
8. The health of loved ones?	0.696	0.265
9. Keeping in touch with family and friends?	0.377	0.390
10. How family members are getting along with each other?	0.246	0.382
11. Your relationship with a family member?	0.130	0.271
12. Being a burden to your family financially?	0.145	0.284
13. Having enough money to help family members who may be in need?	0.188	0.271
14. Your relationships with other residents?	0.087	0.283
15. Your relationships with staff members?	0.232	0.434
16. Having to be cared for by people other than your loved ones?	0.333	0.470
17. Staff not responding to your needs as quickly as you might like?	0.406	0.334
18. Being able to express your opinions freely?	0.232	0.434
19. Others not listening to your ideas or opinions?	0.246	0.398
20. Others making decisions for you that you would rather make yourself?	0.333	0.455
21. Your personal belongings going missing?	0.319	0.226
22. Having enough room for personal things you may want to have near you?	0.217	0.202
23. Missing meals or other activities you may want to join?	0.073	0.355
24. Having enough privacy?	0.246	0.268
25. Finding enough to do – not being bored?	0.348	0.184

Table 8. Worry Questionnaire for Continuing Care Residents (Frequency): Mean item scores and item-to-total correlations. (N=60)

Item	Mean (range = 0 to 4)	Item-to-total correlations
Do you worry about...		
1. Your eyesight or hearing getting worse?	0.967	0.251
2. Being able to enjoy eating your food?	0.433	0.300
3. Being able to sleep at night?	0.550	0.431
4. Your physical health getting worse?	0.600	0.412
5. Being able to remember important things?	0.817	0.460
6. Feeling sad?	0.417	0.393
7. Feeling lonely?	0.717	0.469
8. The health of loved ones?	1.583	0.358
9. Keeping in touch with family and friends?	0.850	0.416
10. How family members are getting along with each other?	0.417	0.480
11. Your relationship with a family member?	0.250	0.227
12. Being a burden to your family financially?	0.317	0.224
13. Having enough money to help family members who may be in need?	0.383	0.218
14. Your relationships with other residents?	0.150	0.168
15. Your relationships with staff members?	0.417	0.375
16. Having to be cared for by people other than your loved ones?	0.667	0.608
17. Staff not responding to your needs as quickly as you might like?	0.933	0.451
18. Being able to express your opinions freely?	0.450	0.443
19. Others not listening to your ideas or opinions?	0.467	0.368
20. Others making decisions for you that you would rather make yourself?	0.733	0.495
21. Your personal belongings going missing?	0.600	0.250
22. Having enough room for personal things you may want to have near you?	0.550	0.283
23. Missing meals or other activities you may want to join?	0.167	0.337
24. Having enough privacy?	0.600	0.276
25. Finding enough to do – not being bored?	0.717	0.219

Table 9. Worry Questionnaire for Continuing Care Residents (Frequency): Resident subgroups.

	Mean	SD	Alpha	Inter-item correlation	N
Folstein MMSE scores					
≥ 24	15.200	12.451	0.854	0.190	40
< 24	13.850	9.022	0.704	0.097	20
AnTI-MW scores					
< 6	9.250	7.629	0.709	0.092	16
≥ 6	16.750	11.895	0.820	0.152	44

Of the subgroups, both Folstein MMSE scores and scores on the AnTI-MW affected the performance of the WQCCR in this sample. For those scoring below the cut-off of 24 on the Folstein MMSE, the alpha coefficient for the WQCCR is just fair (.704); however for those scoring at or higher than 24 on the Folstein MMSE, the alpha coefficient of the WQCCR is good (.854). Likewise, for those scoring at or below the median score of 6 on the AnTI-MW, reliability of the WQCCR is fair (alpha coefficient = .709); whereas for those scoring on the higher end of the AnTI-MW the alpha coefficient is good (.820).

The WQCCR (Collateral Version). On average, family/friend caregivers endorsed more items on the WQCCR than did the residents. The difference between family/friend caregiver and resident rate of endorsement was statistically significant ( $t(1, 57) = -3.16, p < .01$ ). On the categorical format of the scale, of the possible maximum score of 25, family/friend caregivers endorsed a mean of 11.39 worries (s.d. 7.63), with scores ranging from 0 to 25, as compared to the mean resident endorsement of 6.75 (s.d. 4.48). The overall mean of inter-item correlations for the scale was .363, with an alpha coefficient of .934. Means on individual items, and item-to-total correlations are displayed in Table 10.

On the frequency format, of the possible maximum score of 100, family/friend caregivers scored a mean of 21.64 (s.d. 14.91), again higher than the mean resident endorsement of 14.75 (s.d. 11.36). The overall mean of inter-item correlations was .197, with an alpha coefficient of .859, indicating that with family/friend collateral sources, the categorical format is more reliable. Individual item means, and item-to-total correlations for the frequency format of the WQCCR - Collateral Version are displayed in Table 11.

As expected, the correlation between categorical and frequency formats of the WQCCR (Collateral Version) was quite high (.950,  $p < .001$ ).

Table 10. Worry Questionnaire for Continuing Care Residents – Collateral Version  
 (Categorical): Mean item scores and item-to-total correlations. (N=58)

Item	Mean	Item-to-total correlations
Does the resident worry about...		
1. His/her eyesight or hearing getting worse?	0.464	0.594
2. Being able to enjoy his/her food?	0.348	0.607
3. Being able to sleep at night?	0.406	0.591
4. His/her physical health getting worse?	0.580	0.468
5. Being able to remember important things?	0.464	0.611
6. Feeling sad?	0.377	0.677
7. Feeling lonely?	0.522	0.645
8. The health of loved ones?	0.638	0.418
9. Keeping in touch with family and friends?	0.565	0.541
10. How family members are getting along with each other?	0.464	0.528
11. His/her relationship with a family member?	0.391	0.534
12. Being a burden to his/her family financially?	0.275	0.619
13. Having enough money to help family members who may be in need?	0.348	0.642
14. His/her relationships with other residents?	0.391	0.580
15. His/her relationships with staff members?	0.406	0.676
16. Having to be cared for by people other than his/her loved ones?	0.449	0.615
17. Staff not responding to his/her needs as quickly as he/she might like?	0.739	0.448
18. Being able to express his/her opinions freely?	0.377	0.617
19. Others not listening to his/her ideas or opinions?	0.580	0.665
20. Others making decisions for him/her that he/she would rather make himself/herself?	0.449	0.631
21. His/her personal belongings going missing?	0.609	0.480
22. Having enough room for personal things he/she may want to have near you?	0.420	0.523
23. Missing meals or other activities he/she may want to join?	0.261	0.686
24. Having enough privacy?	0.493	0.535
25. Finding enough to do – not being bored?	0.377	0.626

Table 11. Worry Questionnaire for Continuing Care Residents—Collateral Version  
 (Frequency): Mean item scores and item-to-total correlations. (N=48)

Item	Mean (range = 0 to 4)	Item-to-total correlations
How often does the resident worry about...		
1. His/her eyesight or hearing getting worse?	0.875	0.443
2. Being able to enjoy his/her food?	0.729	0.255
3. Being able to sleep at night?	0.813	0.330
4. His/her physical health getting worse?	1.083	0.311
5. Being able to remember important things?	0.875	0.421
6. Feeling sad?	0.396	0.414
7. Feeling lonely?	1.167	0.637
8. The health of loved ones?	1.583	0.300
9. Keeping in touch with family and friends?	1.436	0.502
10. How family members are getting along with each other?	0.958	0.385
11. His/her relationship with a family member?	0.729	0.379
12. Being a burden to his/her family financially?	0.271	0.317
13. Having enough money to help family members who may be in need?	0.458	0.318
14. His/her relationships with other residents?	0.625	0.299
15. His/her relationships with staff members?	0.708	0.579
16. Having to be cared for by people other than his/her loved ones?	0.936	0.542
17. Staff not responding to his/her needs as quickly as he/she might like?	1.583	0.449
18. Being able to express his/her opinions freely?	0.542	0.470
19. Others not listening to his/her ideas or opinions?	1.125	0.586
20. Others making decisions for him/her that he/she would rather make himself/herself?	0.792	0.468
21. His/her personal belongings going missing?	1.417	0.351
22. Having enough room for personal things he/she may want to have near you?	0.833	0.360
23. Missing meals or other activities he/she may want to join?	0.229	0.236
24. Having enough privacy?	1.042	0.439
25. Finding enough to do – not being bored?	0.813	0.488

### Validity: Patterns of Correlations

The correlation matrix for all measures is displayed in Table 12. The single-item measures of worry frequency and perceived health, as well as “objective” measures of health (chronic illnesses and ADLs) are included in the table; correlations for only the frequency format of the WQCCR (both Resident and Collateral Versions) are displayed, as the categorical format had identical patterns.

The BSI (Anxiety Dimension). The BSI correlated positively and significantly ( $p < .05$ ) with resident scores on the WQCCR, the AnTI-MW, the single-item worry frequency measure, the GDS, and the number of depression and anxiety symptoms as determined by both relevant modules of the SCID-IV. However, none of the anxiety measures from collateral sources (either family/friend or staff caregiver) correlated significantly with the BSI. With regards to divergent validity, none of the health measures (perceived health, chronic illnesses, or ADLs) correlated significantly with the BSI, nor any of the collateral depression measures.

The AnTI-MW. The pattern of correlations for the AnTI-MW was identical to the BSI: the AnTI-MW correlated positively and significantly with the WQCCR, the BSI, the single-item worry frequency measure, the GDS, and with the number of anxiety and depression symptoms as determined by the SCID-IV interview modules. None of the collateral measures of anxiety correlated significantly with the AnTI-MW, nor did the health or collateral depression measures.

The WQCCR (Resident Version). As mentioned previously, convergent and divergent validity of the WQCCR was determined through a multitrait (anxiety, depression, health), multimethod (self-report inventory, structured clinical interview, collateral information) matrix. The WQCCR (Collateral Version) was treated as a separate measure assessing residents’ anxiety through collateral information.

Table 12. Pattern of correlations: All measures.

	Resident							
	SCID-IV (Anx.)	BSI	AnTI-MW	WQCCR (Freq.)	Worry Freq.	SCID-IV (D)	GDS	Perceived Health
<b>Resident</b>								
SCID-IV (Anx.)								
BSI	.422***							
AnTI-MW	.503***	.349**						
WQCCR (Freq.)	.592***	.311**	.576***					
Worry Freq.	.532***	.516***	.299*	.343*				
SCID-IV (D)	.537***	.397**	.377**	.486***	.404**			
GDS	.570***	.314**	.567***	.595***	.303*	.628***		
Perceived Health	.243*	.163	.079	.184	.248	.494***	.195	
<b>Family/Friend</b>								
SCID-IV (Anx.)	-.004	.044	-.025	.107	-.066	.035	.025	-.010
WQCCR (Freq.)	.052	-.039	-.004	.134	.040	.159	.129	-.082
SCID-IV (D)	-.137	-.137	-.131	-.206	.035	-.242	.025	-.048
GDS (Coll.)	.005	.096	.060	-.017	-.219	.296*	.263*	-.148
<b>Staff</b>								
SCID-IV (Anx.)	-.012	-.113	-.098	-.091	.082	-.137	-.199	-.025
SCID-IV (D)	.228	.127	.205	.037	.198	.095	-.018	-.028
Chronic Illnesses	.040	-.009	.077	.096	.007	.208	.059	-.239
ADLs	.061	.185	.233	.018	.102	.174	.033	-.130

\*  $p < .05$   
 \*\*  $p < .01$   
 \*\*\*  $p < .001$

continued on next page

Note: SCID-IV = Structured Diagnostic Interview for the DSM-IV; BSI = Brief Symptom Inventory, Anxiety Dimension; AnTI = Anxious Thoughts Inventory, Meta-Worry Subscale; WQCCR = Worry Questionnaire for Continuing Care Residents; GDS = Geriatric Depression Scale; ADLs = Activities of Daily Living.

Table 12 continued. Pattern of correlations: All measures.

	Family/Friend				Staff		Chronic
	SCID-IV (Anx.)	WQCCR (Freq.)	SCID-IV (D)	GDS (Coll.)	SCID-IV (Anx.)	SCID-IV (D)	
Resident							
SCID-IV (Anx.)							
BSI							
AnTI-MW							
WQCCR (Freq.)							
WQCCR (Cat.)							
SCID-IV (D)							
GDS							
Perceived Health							
Family/Friend							
SCID-IV (Anx.)							
WQCCR (Freq.)	.082						
SCID-IV (D)	.058	.030					
GDS (Coll.)	-.063	.595***	.130				
Staff							
SCID-IV (Anx.)	.041	-.121	.152	.291			
SCID-IV (D)	.230	.228	-.057	.072	.090		
Chronic Illnesses	-.119	.030	-.058	.057	.202	.160	
ADLs	.114	.093	-.172	.114	-.043	.235	.084

\*  $p < .05$ \*\*  $p < .01$ \*\*\*  $p < .001$

The WQCCR correlated positively and significantly with the SCID-IV anxiety and depression modules administered to the residents, the BSI, the AnTI-MW, the GDS, and the single-item measure of worry frequency. Of the resident measures, only the perceived health measure did not correlate with the WQCCR, thus supporting its divergent validity. Although one could argue that a single-item measure of perceived health may not be an adequate measure, it is worth noting that collateral measures of health (chronic illnesses, ADLs) likewise did not correlate significantly with the WQCCR.

#### The WQCCR (Resident Version): A Proposed Abbreviation

An abbreviation of the WQCCR (Resident Version) is proposed for two reasons: first, given the physical frailty of the continuing care population, brevity of reliable and valid assessment measures for use with this population is particularly important. Second, given the mean inter-item correlations on the original measure, it is apparent that the questionnaire could be improved from a psychometric viewpoint by deleting items which may not correlate well with other items, and with the scale as a whole.

Thus in accordance with Jarvis and Petty's (1996) guidelines for retention of scale items, those items with an item-to-total correlation of .30 or greater on the frequency format of the WQCCR (Resident Version) were treated as a "new" scale, and subjected to preliminary reliability and validity analyses. The resulting abbreviated version of the WQCCR had 15 items (total possible score = 60), and reliability analyses revealed an alpha coefficient of .813. Since the original scale had an alpha coefficient of .821, the abbreviated scale did not seem to suffer for having had ten items deleted. Furthermore, the overall mean of inter-item correlations for the shorter version of the WQCCR was .225, thus meeting another of Jarvis and Petty's guidelines for item retention. Test-retest reliability for the abbreviated version is .821 ( $p < .001$ ),

indicating that the scale is likewise quite stable over the two-week test-retest period. Scale items for the new abbreviated scale, along with their new item-to-total correlations, are displayed in Table 13.

Means, standard deviations, and scale characteristics for the 15-item abbreviated WQCCR (Resident and Collateral Versions) for the entire sample, and resident subgroups divided according to Folstein MMSE scores and AnTI-MW scores, are displayed in Table 14. As was true with the original version of the WQCCR, the abbreviated format seems to perform better among those residents with minimal cognitive impairment (as indicated by Folstein MMSE score  $\geq 24$ ), and particularly among those with higher levels of general worry as measured on the AnTI-MW.

Finally, preliminary validity information on the abbreviated WQCCR for the entire sample is displayed in Table 15.

Table 13. Items retained for the Worry Questionnaire for Continuing Care Residents—Abbreviated. (N=69)

Item	Item-to-Total Correlation with Abbreviated Scale
How often do you worry about...	
1. Being able to sleep at night?	.431
2. Your physical health getting worse?	.412
3. Being able to remember important things?	.460
4. Feeling sad?	.393
5. Feeling lonely?	.469
6. The health of loved ones?	.358
7. Keeping in touch with family and friends?	.416
8. How family members are getting along with each other?	.476
9. Your relationships with staff members?	.375
10. Having to be cared for by people other than your loved ones?	.608
11. Staff not responding to your needs as quickly as you might like?	.451
12. Being able to express your opinions freely?	.443
13. Others not listening to your ideas or opinions?	.368
14. Others making decisions for you that you would rather make yourself?	.495
15. Missing meals or others activities you may want to join?	.337

Table 14. Worry Questionnaire for Continuing Care Residents – Abbreviated:  
Preliminary reliability information for Resident and Collateral versions.

	Mean	SD	Alpha	Inter-item correlation
<b>Complete Sample</b>				
WQCCR – Resident (N=62)	9.964	8.387	0.813	0.225
WQCCR – Collateral (N=48)	14.229	10.071	0.818	0.228
<b>Folstein MMSE scores <math>\geq</math> 24</b>				
WQCCR – Resident (N=42)	10.095	8.795	0.833	0.254
WQCCR – Collateral (N=32)	14.250	10.689	0.839	0.255
<b>Folstein MMSE scores <math>&lt;</math>24</b>				
WQCCR – Resident (N=20)	8.850	7.604	0.774	0.216
WQCCR – Collateral (N=16)	14.188	9.035	0.775	0.173
<b>AnTI-MW scores <math>&lt;</math> 6</b>				
WQCCR – Resident (N=17)	5.941	4.930	0.570	0.075
WQCCR – Collateral (N=12)	14.500	8.639	0.740	0.181
<b>AnTI-MW scores <math>\geq</math> 6</b>				
WQCCR – Resident (N=45)	11.111	9.011	0.825	0.234
WQCCR – Collateral (N=36)	14.139	10.616	0.838	0.253

Table 15. Worry Questionnaire for Continuing Care Residents Abbreviated:  
Preliminary validity information.

	WQCCR Abbreviated
<b>Anxiety Measures</b>	
Resident	
SCID – IV	.626***
BSI	.241
AnTI – MW	.595***
Worry Freq.	.387***
Family/Friend	
SCID – IV	.155
WQCCR – Collateral	.055
Staff	
SCID – IV	-.105
<b>Depression Measures</b>	
Resident	
SCID – IV	.421***
GDS	.616***
Family/Friend	
SCID – IV	-.272
GDS Collateral	-.062
Staff	
SCID – IV	.163
<b>Health Measures</b>	
Resident	
Perceived Health	.159
Staff	
Chronic Illnesses	-.012
ADLs	.018

\*\*\* $p < .001$

## Discussion

The goals of this study were, first, to examine and report the psychometric properties of two brief self-report measures of anxiety in a sample of continuing care residents. The first measure, the anxiety dimension of the BSI, was chosen because of its consistency with more traditional conceptualizations of anxiety as it is defined in the general population. The second measure, the AnTI Meta-Worry subscale, was chosen in order to probe the effectiveness of using an instrument that assesses worry as a measure of the cognitive aspect of anxiety, as suggested by Molina and Borkovec (1994).

The second goal of this study was to develop a domain-specific measure of worry designed specifically to address issues within the continuing care setting, the Worry Questionnaire for Continuing Care Residents, and to report its psychometric properties.

### Generalizability

Demographic Comparisons. Demographic information from the current sample was compared to two sources: an extensive descriptive profile of Alberta's continuing care residents (Alberta Health, 1991), and a demographic summary (age and sex) available from Carewest for the period of data collection (Marian Molendyk, personal communication, July 8, 1999).

In comparison with the Carewest continuing care population in Calgary at the time of data collection (May to November, 1998), the sample consists of relatively more residents belonging to the segment of the continuing care population between ages 60 to 75. Two readily available but unfortunately undocumented reasons are possible for the greater number of younger residents in the sample. The first possible reason is the

presence of cognitive impairment; the second possible reason is health status of the resident.

The majority of the sample was recruited from Carewest's "Capable Seniors" program, indicating that the residents were individuals who were both physically and cognitively able to participate in a number of different programs. The resident protocol, as indicated earlier, takes about one hour to complete with a resident, thus ruling out potential participants who may not have been able to complete the interview for either health or cognitive reasons. The interview process itself, particularly if it is lengthy, requires physical energy as well as concentration, both of which may be difficult for the frail elderly individual who may be suffering from some cognitive impairment (Edelstein & Semenchuk, 1996). Additional support for these speculations regarding the sample lies in the fact that, in contrast to the approximately 40% of individuals with cognitive impairment in Alberta's continuing care facilities (Alberta Health, 1991), only 32% of the current sample had even mild cognitive impairment.

Somewhat remarkably, however, females over age 75, who constituted the largest segment of the Carewest population at the time of data collection, was accurately represented: 52.2.% of the sample were of that segment; 51.9% of the Carewest population were females over age 75.

With regards to marital status, the current sample's patterns are similar to Alberta's continuing care population over age 65 in 1991 (Alberta Health, 1991), in that the vast majority of the residents were either widowed, divorced, or separated; close to 20% were married; and approximately 10% had never been married.

Patterns of Resident Endorsement. Perhaps more significant when considering generalizability of data from the current sample is the endorsement of either anxious or depressive symptoms in the current study. In comparison with general adult populations, resident endorsement of symptoms were remarkably low. For example, on

the AnTI – MW, the current sample scored much lower (mean = 7.2) than the standardization sample mean of 11 (Wells, 1994).

Although very little is known about the prevalence of anxiety in continuing care populations, comparisons could be made with prevalence rates of depression reported in the literature. For example, research has indicated that 12 to 26% of residents meet full diagnostic criteria for depression, and another 30 to 50% show marked depressive symptoms (Gerety et al., 1994; Parmelee, Katz, & Lawton, 1992; Parmelee, Lawton, & Katz, 1989). Endorsements of the current sample on the GDS indicate that only 21% of the residents interviewed fell within the GDS cut-off points for minor depression; only 9% met the GDS cut-off for major depression.

In addition, published norms for community elderly on the earlier version of the BSI (Hale, Cochran, & Hedgepeth) noted that older adults “tend to report relatively high levels of distress on the BSI” (p. 322). However, resident endorsements on the anxiety measures in the current study were quite low, and were consistently lower than family/friend endorsements.

Once again, levels of residents’ health may have played a part in these patterns. Regardless of age, anxiety symptoms exhibit a strong negative linear relationship with physical health (Gurian & Miner, 1991). The same can be said of depressive symptoms (Parmelee, Katz, & Lawton, 1993). Furthermore, it is likely that those with mental health problems in this population are not as willing to participate in a research project that deals with mental health issues. There may therefore have been a strong self-selection bias in the current sample.

A second possibility is that a selection bias occurred in referring suitable potential participants to the research project. For ethical reasons, researchers were not permitted to approach potential participants directly. The choice of appropriate residents was therefore the responsibility of the referring staff caregivers at Carewest,

who may have screened out as inappropriate participants those residents who might have been suffering from more anxious and depressive symptoms. Because elderly individuals tend to express depressive symptoms less in terms of depressed mood and more in terms of somatic or other complaints, such as sleep disturbances or aches and pains (Wolfe, Morrow, & Fredrickson, 1996); and because of the overlap between anxiety and somatic complaints (Smith, Sherrill, & Colenda, 1995), only the exclusion criteria specified (ie., too physically ill to participate, severe communication problems, moderate to severe cognitive impairment, or non-English speaking) should have been used to deem residents as inappropriate for the study. Unfortunately, there was likely more informal screening taking place at the continuing care settings.

#### Issues Related to Reliability of Measures

The majority of measures used in the current study appear to have good to excellent reliability as determined by the alpha coefficients (see Table 4). It was unfortunate, however, that three of the four anxiety measures administered to residents (the SCID-IV anxiety module, the BSI, the AnTI-MW) yielded unacceptable alpha coefficients, as evaluated according to Cicchetti's (1994) guidelines.

Two possible reasons could account for the lack of reliability of the SCID-IV measure. Firstly, the SCID-IV was designed as a structured interview upon which basis a diagnosis of generalized anxiety disorder could be made. Deriving what is effectively a symptom checklist on the basis of the interview may have been inappropriate. On the other hand, the same procedure was used for the SCID-IV depression module, which yielded reliable results. A second and more likely possible reason, then, is the effect of the time frame of the interview questions on the reliability of endorsements. Whereas questions on the depression module focussed on symptoms experienced during the

previous month, questions on the anxiety module required the resident to report symptoms over the previous six months.

The performance of the BSI in this sample is particularly disappointing (alpha coefficient = .575), as compared to the normative sample (alpha coefficient = .81; Derogatis & Spencer, 1983) of the earlier version of the BSI, for which norms for the elderly are available. As mentioned previously, the BSI has been fairly well used in studies involving community elderly. The current results imply that measures that may work reasonably well among community elderly are not guaranteed to work well among elderly residents of continuing care. Once again, however, the lack of variability in response may have affected the reliability of the measure. Also, the inclusion of the item regarding the experience of spells and terror and panic, which had the lowest item-to-total correlation (.077), may have lowered the overall alpha coefficient for the BSI. Less than 9% of the current sample endorsed the panic item at all, indicating that the vast majority of the sample did not experience this symptom. This result is consistent with epidemiological data regarding panic disorder, of which spells of terror and panic are the primary symptom. According to Fisher and Noll's (1996) summary of the epidemiological catchment area studies, no males over 65 qualified for the diagnosis of panic disorder, and only 0.2% of females met criteria for panic disorder.

Like the BSI, the AnTI-MW did not perform well in this sample, although the item-to-total correlations indicated a unified scale likely measuring a single trait. It may be worthwhile to test the reliability of the AnTI-MW with a sample of residents endorsing a wider range of anxiety symptoms, as the alpha coefficient yielded in this sample was quite close to the .70 guideline for acceptability, and may have suffered from a restriction of range.

The WQCCR yielded good alpha coefficients in the current sample (for both categorical and frequency formats), but mean inter-item correlations indicated the

need for a paring down of items. The abbreviated WQCCR is encouraging, since all resulting item-to-total correlations and the overall mean of inter-item correlations are acceptable (Jarvis & Petty, 1996), and the alpha coefficient remained good despite fewer items.

Two issues emerged in the process of analyzing the reliability of the WQCCR. The first issue concerned the effect of cognitive impairment on reliability; the second issue concerned the importance of process variables.

Effect of Cognitive Impairment. As discussed earlier, the relatively high rate of dementia in continuing care residents introduces complicating factors in the assessment and diagnosis of mental health problems in continuing care settings. The possible presence of cognitive impairment has obvious implications for the reliability and accuracy of measures used with older adults. Cognitively impaired residents may fail to understand the questions asked of them, or may have difficulty with the Likert scale formats used in some of the measures in this study. According to Feher, Larrabee, and Crook (1992), cognitively impaired older adults who deny memory loss may also tend to deny other symptoms. At the same time, because accurate responding to current symptomatology requires minimal memory ability, the use of shorter time frames (“right now,” “past week”) may increase reliability of measures. This is consistent with the earlier observation regarding the low reliability of the SCID-IV anxiety module, the time frame for which covered the previous six months, as compared to the good reliability of the SCID-IV depression module, the time frame for which only covered the previous month.

Data from the current study regarding resident subgroups are likewise consistent with observations regarding the relationship between cognitive impairment and reliability of measures. Reliability estimates on the WQCCR for residents scoring above the cut-off score of 24 (chosen to roughly distinguish between those who are

and those who are not suffering from dementia) are considerably better than for those who did not. With a larger sample size it would have been possible, and preferable, to determine the reliability of the WQCCR for various cut-off scores on the Folstein MMSE. Such an analysis would have given a clearer picture of when (that is, at what cut-off score) the WQCCR becomes an unreliable assessment instrument. It is encouraging, however, that even for those in this sample who scored below 24 the alpha coefficient is still acceptable, albeit merely fair.

Process Variables in Assessment. Almost incidental to the analyses for the current study, the consistently higher alpha coefficients and generally more reliable characteristics of the retest administration of the WQCCR points to the possible role of process variables in the reliability of assessment measures. Alpha coefficients for the original WQCCR administration were fair to good; for the retest administration alpha coefficients were good to excellent. Apart from the obvious reasons of self-selection (that is, only those most interested in participating in the research study actually consented to be interviewed a second time), at least two possible reasons may account for the difference, both of which point towards the importance of process variables. Firstly, the WQCCR was administered on its own during the second interview. That is, the formal, “questionnaire” part of the second interview was relatively short, and may have left more time for “small talk,” or conversation meant to engage the resident participant. Secondly, a second visit from the researcher likely meant that rapport had been built, and the relationship itself had changed from the first to the second visit.

Little is known to date about process variables in psychological practice in general, and in assessment in particular. Duffy (1999) discusses why process variables have been neglected in psychology in the context of psychotherapy research. He cites the prevailing philosophy of science within psychology as necessarily focusing on content and outcome of psychological activity (the “what”) rather than process (the

“how” and “why”). Until recently (that is, the last 15 to 20 years), at least in North America, psychology has relied exclusively on observable, measurable, external data to draw conclusions, to the neglect of process dimensions, thus accounting for the lack of research on process dimensions such as relationship and interpersonal variables, which have been deemed largely unmeasurable.

Several strands of research have pointed to the need for more attention to process variables, however. For example, Wampold et al. (1997) conducted one of the latest and most sophisticated investigations into the question of psychotherapy treatment outcome, and once again documented a lack of significant differences between bona fide therapies emanating from different theoretical traditions, a finding consistent with other studies from as early as 1980 (Luborsky et al., 1980). Thus, whereas psychotherapy in general has generally been shown to be effective (Seligman, 1996), the mechanism for its effectiveness may have more to do with relationship variables and other “unmeasurables” rather than a particular approach to psychotherapy, or particular psychotherapy techniques.

One relationship variable which has received some attention in the literature has been the therapeutic alliance, defined as the collaborative relationship between the therapist and the client, as representing a “common thread among disparate therapeutic schools of thought” (Kivnick & Kavka, 1999). Edelstein and Semenchuk (1996) describe the establishment of a therapeutic alliance through rapport-building as the initial element in the assessment (and treatment) process. It is important that researchers and clinicians think of the process of building rapport not as a mere “preliminary” to the real business at hand, but to consider it as the first and necessary stage in accomplishing the business at hand (usually assessment). The collaboration of the client is necessary to any progress in either assessment or treatment, and the

establishment of rapport as the first step in building a therapeutic relationship can determine the nature of the collaboration.

Edelstein and Semenchuk (1996) summarize five classes of therapist behaviour which have been shown to encourage a sense of trust in the therapist on the part of the client, thus contributing to positive relationships. These include therapist behaviours that convey: (1) the therapist's genuine concern for the welfare of the client; (2) the therapist's willingness to accept the client's "weaknesses;" (3) the therapist's understanding of the client's needs; (4) the therapist's belief in the client's strengths and in a positive outcome; and (5) the therapist's honesty and dependability. Specific therapist behaviours would include smiling, remembering things that had been discussed previously, letting the client talk about things that are bothering him/her, and taking the time to think before suggesting solutions to the client. Duffy (1999) addresses similar issues in a more general language, warning that clients and therapists tend to scrutinize not only outward behaviours but also the intentions behind the behaviour, which are often conveyed through both verbal and nonverbal means.

An evaluation of whether process variables play a role in the increase in reliability from initial administration to retest administration of a measure, such as occurred in this study, would be both useful and interesting.

#### Issues Related to Validity of Measures

Construct validity of the measures in this study, and particularly of the WQCCR, was evaluated with the use of a multitrait-multimethod matrix (MTMM; Cambell & Fiske, 1959). Resident measures were all positively and significantly correlated to one another to varying degrees, with the exception of the measure of perceived health, which only correlated significantly with the SCID-IV anxiety and depression modules. In this

respect, all the resident self-report questionnaires performed as was hopefully expected: that is, that they would not correlate with any health measures.

Two issues emerged in the process of evaluating construct validity of the measures used in this study. The first issue pertains to the relationship between collateral measures; the second issue lies in the difficulty of making empirical distinctions between anxiety and depression.

The Use of Collateral Measures in Assessment. In the current study, none of the staff caregiver measures correlated significantly with resident or family/friend caregiver measures. Of the family/friend caregiver measures, only the GDS – Collateral correlated significantly with resident measures: these correlations were in the expected direction, and with the expected measures (SCID-IV depression module, and GDS), thus indicating that the GDS – Collateral performed particularly well in this sample. Its correlation with the WQCCR – Collateral, however, indicates that the overlap between depression and worry may extend to family/friend caregivers' endorsement of measures.

The use of multiple informants and collateral reports in assessment has been primarily used among children, in older medical patients with physical illnesses, and, to a lesser extent, among patients with severe mental illness.

Assessment processes with children commonly follows a multimethod template, emphasizing the importance of gathering as much information as possible from different informants and different settings, in addition to information gained directly from the child (Mash & Terdal, 1997). In fact, diagnostic criteria for some childhood disorders such as Attention Deficit/Hyperactivity Disorder (ADHD) require that problematic behaviour occur across two or more settings (American Psychiatric Association, 1994), thus rendering collateral reports a prerequisite to making a diagnosis. Taking ADHD as an example, the average correlation of reports from

different sources of information (parent and teacher) regarding behavioural criteria has been modest (about .30), and Barkley (1997) observes that “stipulating that parents and teachers must agree on the diagnostic criteria [for ADHD] before a diagnosis can be rendered is probably unwise and unnecessarily restrictive” (p. 93). Complete concordance in collateral reports in child assessment are not expected; instead the information is treated as additive and collaborative in order that the researcher/clinician be able to take into account as much information as possible (Mash & Terdal, 1997). In the current study, correlations among primary and collateral sources were quite low. In the case of the GDS – Collateral version, similar to the ADHD literature, correlations of family with primary sources hovered around .30.

Research comparing family/friend and professional caregiver reports with older medical patient reports tend to demonstrate high correlations in the domain of physical health (particularly easily observable indices such as activities of daily living), but not in less easily observed variables such as those in the psychosocial domain (e.g., Magaziner, Simonsick, Kahner, & Hebel, 1988; Rothman, Hedrick, Bulcroft, Hickam, & Rubinstein, 1991). A somewhat surprising finding in this study is the lack of correlation between perceived health and number of chronic illnesses or ADLs as assessed through staff reports. In fact, said correlations (such as they are) are negative: that is, for example, the greater the number of chronic illnesses, the better residents apparently perceived their physical health. However these results may be accounted for by the fact that mere number of chronic illnesses were measured, without regard for severity or nature of illness.

In the few studies among populations with severe mental illness the pattern remains similar as for older medical patients: that is, correlations were highest for measures of objective health, and lowest for subjective measures of distress (e.g., Gater, Kinder, & Gudex, 1995). Since most of the measures used in the current study

necessarily measure subjective distress due to the nature of the construct (anxiety), perhaps the low correlations among sources is not too surprising.

Agreement among collateral ratings of mental health problems, particularly symptoms of depression, has been examined among elderly populations, albeit in a limited number of studies. A number of general conclusions can be drawn from the results of these studies. First, comparisons of ratings from patient, family/friend caregiver, and clinician caregiver have yielded moderate to high correlations (Teri & Wagner, 1991), a result not replicated in this study with the exception of the established GDS and the GDS – Collateral version. Second, correlations between collateral ratings seem to be a function of the patient's cognitive functioning: correlations are higher when patients are either not or only mildly demented (Feher, Larabee, & Crook, 1992). Third, patient ratings for depression are generally lower than clinician ratings, which are in turn generally lower than family ratings (Burke, Rubin, Morris, & Berg, 1988; Miller, 1980; Rubin, 1990). Finally, professional caregivers tend to rate patients as more dysfunctional than would be suggested by more objective measures (Rubenstein, Schairer, Wieland, & Kane, 1984).

In contrast to patterns from previous studies, family/friend caregivers in the current study endorsed the lowest number of symptoms on the SCID-IV symptom checklists for both anxious and depressive symptoms. However, patterns of family/friend caregiver endorsement on the questionnaires (GDS – Collateral and WQCCR – Collateral) were consistent with previous research in that mean scores on these measures were higher than those on the corresponding resident measures. Meanwhile, staff caregivers endorsed more symptoms than family/friend caregivers, but less symptoms than residents on both SCID-IV symptom checklists.

The difference in patterns of response between questionnaire and interview data from resident sources again points to issues of assessment process discussed earlier.

That is, it is likely that continuing care residents are more willing to discuss difficulties and symptoms in an interview format, and, when faced with fixed choices in a questionnaire format, would tend to underreport symptoms.

The current study also yielded quite a different pattern on SCID-IV interviews/checklists than what was expected given previous research in the area. That is, in the current study family/friend caregiver ratings of symptoms were the lowest, closely followed by staff caregiver ratings. Resident endorsement of symptoms via interview were the highest. Aside from process issues (questionnaire vs. interview), other factors may have come into play to account for these results, although the reasons suggested here will be necessarily speculative. With regard to family/friend caregivers, low symptom endorsements on the SCID-IV symptom checklists may reflect their lack of knowledge regarding the daily functioning of the resident (sleep patterns, appetite, etc.), whereas higher endorsement of questionnaire items may reflect themes dealt with in their interactions with residents (e.g., worries).

Staff caregivers in this study endorsed much fewer depression symptoms than did residents; whereas endorsement of anxiety symptoms were comparable to resident sources. Two possible reasons may account for this result. Firstly, the time frame of the SCID-IV checklists may have affected patterns of response. That is, reflecting over a six-month time frame, staff caregivers may have focussed on salient negative aspects of dealing with the resident, and therefore endorse more anxiety symptoms such as irritability and restlessness. Secondly, the anxiety symptom checklist includes more readily observable items (e.g., fidgeting, irritability, tension) as compared with the depression symptom checklist which includes more items of personal distress (thoughts of death, suicide, loss of pleasure).

In light of previous research, the generally low correlations between sources in the current study are somewhat puzzling. However, it must be noted that none of the

previous studies were conducted in continuing care settings. Systemic factors may have played a role in some of the observed patterns of correlations. Not only are the family/friend caregivers somewhat distanced from the day-to-day functioning of residents, but Team Leaders, who were the staff collateral sources for the current study, may not have had enough daily contact with the resident either. The hierarchical model of staffing in most continuing care facilities in general (Zarit, Dolan, & Leitsch, 1998), and Carewest in particular, implies that those with the most training, including Team Leaders, do not necessarily know the residents well.

Perhaps more importantly, many continuing care facilities still operate on a medical model: that is, they are staffed and equipped to deal with physical, rather than psychological distress (Smyer & Qualls, 1999). The majority of staff caregivers at continuing care facilities are licensed practical nurses and registered nurses, who likely have not had geropsychological training. Furthermore, faced with multiple physical health complaints from residents requiring various diets, activities, and schedules of medication, staff caregivers may simply find it too overwhelming to think in terms of mental health care as well.

In any event, as Edelstein and Semenchuk (1996) conclude (and as is the current practice in child assessment), “perhaps the best model of information gathering is one that includes as many sources as possible so that a convergence of information is accumulated” (p. 158). In the assessment of continuing care residents, a variety of methods for assessment may also be important, in light of the differences between questionnaire and interview data.

Distinguishing Anxiety from Depression. Results of the current study indicate substantial correlations between self-report measures of anxiety and depression, regardless of method of assessment (interview vs. questionnaire). As mentioned previously, making empirical distinctions between anxious and depressive symptoms

has so far been a daunting task. Dobson (1985) observed that although the phenomenological difference between the experience of anxiety and depression may seem relatively straightforward, making empirical distinctions between these experiences in the general population have been so complicated as to seem impossible. In the general population, correlations between self-report measures of anxiety and depression are quite high, averaging about .67 among patient populations, and .70 among nonpatient populations (Clark & Watson, 1991).

Correlations between resident measures of depression and anxiety were not quite so high in the current sample. In fact, on a positive note, correlations were highest between the GDS and the SCID-IV (Depression) interview (.628). Among measures of depression and anxiety, the GDS correlated most highly with measures which attempted to isolate the cognitive/affective component of anxiety from its somatic component (AnTI-MW and WQCCR).

Several models of the relationship between anxiety and depression have been proposed in the general population that reflect some of the phenomenological differences summarized by Watson and Kendall (1989a) and outlined earlier. For example, Beck's (1976) cognitive specificity model articulates the differences in cognitive content between anxiety and depression. That is, cognitive content in anxiety tends to be oriented to anticipatory fears regarding future events, while cognitive content in depression focuses more on perceived or actual loss experiences in the past.

The helplessness/hopelessness model of anxiety and depression views the two constructs as points along a unitary continuum: that is, "whereas anxiety is caused by helplessness (uncertain or certain), depression (specifically, the hopelessness subtype) occurs when helplessness becomes hopelessness" (Alloy, Kelly, Mineka, & Clements, 1990, p. 518). This model lends a developmental flavour to the relationship between anxiety and depression, and highlights their connection with the concept of perceived

control. The model implies that subjective distress regarding events beyond one's perceived control first takes the form of anxiety, in which the general stance is engagement; however, when control is not regained the anxious person withdraws and begins to manifest symptoms of depression.

The question of whether anxiety and depression are developmentally linked also arises in the child psychopathology literature, mainly due to the fact that the prevalence rates of anxiety are highest in early to middle childhood (Barrios & Hartmann, 1997), while prevalence rates of depression are highest in late childhood to adolescence (Compas, 1997). In addition, the nature of anxiety has been shown to change with age: older children tend to express their anxiety in terms of worry, rather than nightmares or physical ailments as in younger children. Thus one might speculate that some childhood anxiety may differentiate into depression according to the helplessness/hopelessness model; on the other hand, developmental changes in the expression of anxiety may contribute to more symptom overlap with depression (e.g., worry in anxiety with obsessive thinking in depression).

Clark and Watson's (1991) tripartite model of anxiety and depression is an attempt to explain overlapping and distinctive anxious and depressive symptoms. According to this model, "anxious and depressed syndromes share a significant nonspecific component that encompasses general affective distress and other common symptoms, whereas these syndromes are distinguished by physiological hyperarousal (specific to anxiety) versus the absence of positive affectivity (specific to depression)" (Clark & Watson, p. 331). Within the tripartite framework, therefore, a nonspecific factor common to both depression and anxiety would account for the strong association between current measures of anxiety and depression in the general population.

The current study focussed on the assessment of worry as the cognitive component of anxiety in an attempt to isolate anxiety symptoms from symptoms of physical health problems. Unfortunately, this focus probably highlighted common features between anxiety and depression as posited by Clark and Watson's (1991) tripartite model. Evidently, each of the models discussed above needs investigation in the continuing care population.

Most of the models just discussed have been tested to varying degrees among the general younger adult population; some have been investigated among younger populations of adolescents and children. So far, no theoretical model of the relationship between anxiety and depression has been investigated in an older adult population, despite the fact that clarifying this relationship among older adults may be especially valuable. Parmelee, Lawton, and Katz (1998) point out particularly the potential usefulness of making distinctions between psychic symptoms of anxiety versus somatic symptoms of anxiety in the elderly. Among continuing care residents, the implications of a clear differentiation between anxious and depressive symptoms could mean substantial changes in medication and programming.

#### Limitations of the Study

The current study has several limitations. The sample size was small, precluding more sophisticated statistical analyses of measures. Specifically, a factor analysis at least of the WQCCR would have been desirable, and would have afforded a closer look at the content of residents' worries. Although the most frequently endorsed worries of residents according to this study appear to be related to relationship issues (worry about the health of loved ones, worry that residents would not remember important things, and worry about keeping in touch with family and friends), a much clearer picture of how the items on the WQCCR grouped together, and how those groups of

items in turn correlated with other measures, would have been particularly interesting and useful.

The small sample size may have given rise to a somewhat restricted range of responding on the various measures. In particular, the residents in this sample generally endorsed remarkably few symptoms of anxiety and depression, in comparison not only with the general adult population, but also with other continuing care populations. Questions arise regarding the process of resident recruitment for participation in the current study, which admittedly left open the possibility of several selection biases to operate. As discussed previously, Carewest staff may have been reluctant to refer residents to the study who were either in poor health (though not meeting exclusionary criteria), or already suffering from anxious and depressive symptoms.

In addition, residents themselves may have been reluctant to report symptoms, whether from natural reticence to discuss feelings of subjective distress, or for other reasons. It is important to remember that physically frail residents may feel vulnerable within the continuing care setting. Fears of appearing ungrateful, complaining, or problematic may have played a part in resident endorsements, despite assurances of confidentiality. At any rate, a broader range of symptomatology among resident participants would likely have provided more information regarding the reliability of the various measures used, and the pattern of correlations between measures.

Finally, the results of the interviews with staff caregivers suggests the possibility that perhaps the Team Leaders were not in the best position to respond to some of the measures. Although the Team Leaders had the most training and were responsible for the participating residents, perhaps those with less training but more personal day-to-day contact with the resident might have been more appropriate sources of information (Zarit, Dolan, & Leitsch, 1998).

### Implications and Future Directions

The current study raises several issues with implications for working with elderly residents of continuing care facilities. First of all, the evaluation of psychometric properties of different measures for use among continuing care residents is still necessary. More specifically, low reliability for the BSI implies that a measure that may perform adequately among community elderly may not be appropriate for continuing care residents.

Secondly, both the WQCCR and the single-item question regarding worry frequency show promise in this population. Like the WQCCR, the single-item worry frequency question correlated in expected directions with other measures of anxiety; more importantly, it seemed to differentiate worry symptoms from physical health complaints, and may thus be useful as a screening item for anxiety. The WQCCR likewise correlated significantly with other measures in expected directions, and seemed to have valid content, as none of the WQCCR items were never endorsed by the whole sample. Further analysis of the abbreviated form of the WQCCR with different, larger samples of continuing care residents seems warranted.

Thirdly, the level of an individual's cognitive functioning should always be taken into consideration during assessment and treatment. Both researchers and practitioners would do well to remember that the reliability and validity of measures are likely dependent on the client's level of cognitive functioning. Likewise, process variables may play a vital role in the reliability and validity of measures. The establishment of rapport between researcher/clinician and resident may make a big difference in the results of assessment and treatment procedures. Unfortunately, the area of process variables in general is underresearched in psychology, and is in need of closer attention.

Fourthly, relationships between the collateral measures used in this study seems to imply that, as in the child psychopathology, health, and schizophrenia literatures, various sources of information should be taken additively, as if snapshots of the same event were being taken from different angles. It is important to include the residents themselves in the assessment procedure, particularly when dealing with issues of psychological distress since subjective areas tend yield the least convergence between primary and collateral sources. The researcher/clinician's task then is to sort through the information in order to come up with the most useful formulation for analysis, treatment, or program planning.

Finally, the relationship between anxiety and depression remains a conundrum for a variety of populations, including the population of continuing care residents. Among the elderly particularly, "accurate psychiatric diagnosis of late life affective disorders is in many ways an exercise in disentangling confounds" (Parmelee, Lawton, & Katz, 1998, p. M155). The overlap between anxious and depressive symptoms (both psychic and somatic) in the continuing care population is especially worth investigating, not only because of the apparently high rates of both kinds of symptoms among this population, but also because the overlap of symptoms is likely further complicated by the possibility of cognitive impairment, the presence of multiple chronic illnesses and medication for such illnesses which may produce anxious or depressive symptoms, and the individual's level of functional health. Still, the implications of the presence of either anxiety or depression for programming and medication renders clarification of such relationships necessary.

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**Appendix A**  
**Informed Consent Forms**

## **INFORMED CONSENT**

**(Residents)**

**Research Project Title:** The Assessment of Depression and Anxiety in Continuing Care Residents: How Good are Collateral Reports?

**Investigators:** Candace Konnert, Ph.D., Meyen Hertzprung, B.A., Jaylene Brinker (Research Assistant)

**Funding Agency:** Alberta Heritage Foundation for Medical Research

This consent form, a copy of which has been given to you, is only part of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Please take the time to read and listen to this form carefully and to understand any accompanying information.

The overall goal of this study is to understand better the process of assessing well-being in persons like yourself, who are living in continuing care facilities. More specifically, we are interested in the assessment of depression and anxiety or worry in continuing care residents. Also, we are interested in the amount of agreement across reports of depression and anxiety given by residents themselves, their family caregivers, and the staff members who care for them. This is important because decisions such as giving medication or participating in group programming are often based on reports from all three sources. We need to know whether there is agreement about residents' well-being among those persons involved in decisions about care. To achieve our goal we would like to interview you for about 1 to 1-1/2 hours. This consent form describes the interview to you and requests your participation.

The interview consists of a variety of questions beginning with general information about your background, such as your birth date, your education and past occupation(s), your marital status and family members, and your physical health including some questions about your memory. We will then ask you some questions about your emotional well-being. We will also ask your family/friend caregiver and a staff person who knows you well similar questions about your well-being. You may find some of these questions rather personal but our interviewers are very experienced in talking with people about their emotional well-being. Also, if there are questions you

would prefer not to answer that will be fine. Part of the interview may be audiotaped so that we can go back and make sure that our information is correct. If you would prefer not to have your responses audiotaped please let us know and we can omit that from our procedure.

You should know, as well, that the information you give us will be kept confidential and will not be shared with anyone you know, including your family members or persons at your residence. After you complete the interview, the questionnaire and audiotape will be kept in a locked file. You will be given a number code and will not be identified by name. Furthermore, all the information will be treated as group data and pooled across many respondents.

Participation in this study does not involve risk or discomfort other than the sensitivity and personal nature of some of the questions. It has the potential to detect any emotional difficulties you might be experiencing. In addition, your participation may benefit other people who live in continuing care settings by improving our ability to assess the well-being of residents. We will provide you with a summary of our results at the end of the study so that you can see how this research might help others.

If you find the interview is too long please let me know and we can stop and perhaps continue at a later time. Or, if you like, you can withdraw from the study completely. Whether or not you choose to participate or continue in the study will have no effect on the care you receive or on the attitudes of other people towards you.

In addition, we would like to ask you some of the same questions in about one or two weeks. The purpose of this is to find out how well our measures are working. Your consent to participate today does not mean that you have to be interviewed again in two weeks. We will ask your permission and obtain your informed consent again at that time.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. That is, you will be asked to answer questions about your background, and your physical and emotional well-being. Also, you understand that your family/friend caregiver and a staff person who knows you well will also be asked to answer questions about your emotional well-being. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. As I indicated already, you are free to

withdraw from the study at any time. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact **Dr. Candace Konnert** at 220-4976.

If you have any questions concerning your participation in this project, you may also contact the Office of the Vice-President (Research) at the University of Calgary, and ask for **Karen McDermid** at 220-3381.

**Signatures:**

Participant: \_\_\_\_\_

Legal Guardian: \_\_\_\_\_  
(if appropriate)

Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

### **CONSENT FOR RELEASE OF MEDICAL RECORDS**

In addition to interviewing you as described above, we would like to look at your medical chart to obtain information about your background and your physical health. As indicated above, this information is confidential and will not be shared with anyone who does not already have access to it, for example, staff members. The information from your chart will be released only in an anonymous and averaged format. Thus, your second signature indicates that you have given your permission to access your medical records. Again, in no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities.

Participant: \_\_\_\_\_

Legal Guardian: \_\_\_\_\_  
(If appropriate)

Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

A copy of this consent form has been given to you to keep for your records and reference.

## **INFORMED CONSENT** (Family/friend version)

**Research Project Title:** The Assessment of Depression and Anxiety in Continuing Care Residents

**Investigators:** Candace Konnert, Ph.D., Principal Investigator  
Research Assistants: Meyen Hertzprung, Jaylene Brinker, Cheryl Chang

**Funding Agency:** Alberta Heritage Foundation for Medical Research

This consent form, a copy of which has been given to you, is only part of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Please take the time to read this form carefully and to understand any accompanying information.

The overall goal of this study is to understand better the process of assessing well-being in continuing care residents. More specifically, we are interested in the degree of agreement among reports of depression and anxiety or worry given by residents themselves, a family member/friend like yourself, and the staff members who care for them. This is important because decisions such as giving medication or participating in psychosocial activities are often based on reports from all three sources. We need to know whether there is agreement about residents' well-being among those persons involved in decisions about care. To achieve our goal we would like to interview you for about 30 minutes. This consent form describes the interview to you and requests your participation.

The interview consists of a variety of questions pertaining to the general well-being of the resident, and one question about your own well-being. We have asked your family member/friend similar types of questions. You may find some of these questions rather personal but our interviewers are very experienced in talking with people about emotional well-being. Also, if there are questions you would prefer not to answer that will be fine. You should know, as well, that the information you give us will be kept confidential and will not be shared with anyone you know, including your family member/friend, or staff at the continuing care facility. After you complete the interview, your questionnaire will be kept in a locked file. You will be given a number code and will not be identified by name. Furthermore, all the information will be treated as group data and pooled across many respondents.

Participation in this study does not involve risk or discomfort other than the sensitivity and personal nature of some of the questions. Your participation may benefit other people who live in continuing care settings by improving our ability to assess depression and anxiety in residents. We will provide you with a summary of our results at the end of the study so that you can see how this research might help others.

If you find the interview is too long please let me know and we can stop and perhaps continue at a later time. Or, if you like, you can withdraw from the study completely.

Whether or not you choose to participate or continue in the study will have no effect on the care your family member/friend receives, or on the attitudes of other people towards him/her or you.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to be involved. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. As I indicated already, you are free to withdraw from the study at any time. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact **Dr. Candace Konnert at 220-4976.**

If you have any questions concerning your participation in this project, you may also contact the Office of the Vice-President (Research) at the University of Calgary, and ask for **Karen McDermid at 220-3381.**

Participant: \_\_\_\_\_

Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

A copy of this consent form has been given to you to keep for your records and reference.

## **INFORMED CONSENT** (Staff member version)

**Research Project Title:** The Assessment of Depression and Anxiety in Continuing Care Residents

**Investigators:** Candace Konnert, Ph.D., Principal Investigator  
Research Assistants: Meyen Hertzsprung, Jaylene Brinker, Cheryl Chang

**Funding Agency:** Alberta Heritage Foundation for Medical Research

This consent form, a copy of which has been given to you, is only part of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Please take the time to read this form carefully and to understand any accompanying information.

The overall goal of this study is to better understand the process of assessing well-being in continuing care residents. More specifically, we are interested in the degree of agreement across reports of depression and anxiety given by residents themselves, family/friend caregivers, and staff members like yourself. This is important because decisions such as giving medication or participating in psychosocial activities are often based on reports from all three sources. We need to know whether there is agreement about residents' anxiety and depression among those persons involved in decisions about care. To achieve our goal we would like to interview you for about 20 minutes. This consent form describes the interview to you and requests your participation.

The interview consists of a variety of questions pertaining to the general well-being of the resident. We have asked him/her similar types of questions. If there are questions you would prefer not to answer that will be fine. You should know, as well, that the information you give us will be kept confidential and will not be shared with anyone you know, including the resident, his/her family or friend caregiver, or other persons at Carewest. After you complete the interview, your questionnaire will be kept in a locked file. You will be given a number code and will not be identified by name. Furthermore, all the information will be treated as group data and pooled across many respondents.

Participation in this study does not involve risk or discomfort other than the sensitivity and personal nature of some of the questions. Your participation may benefit people who live in continuing care settings by improving our ability to assess depression and anxiety in residents. We will provide you with a summary of our results at the end of the study so that you can see how this research might help others.

We can stop the interview at any time and perhaps continue at a later time. Or, if you like, you can withdraw from the study completely. Whether or not you choose to participate or continue answering questions will have no effect on any aspect of your employment with Carewest, including your performance evaluations.

Your signature on this form indicates that you have understood to your satisfaction the information regarding the research project and that you agree to participate. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. As I indicated already, you are free to withdraw from the study at any time. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact  
**Dr. Candace Konnert at 220-4976.**

If you have any questions concerning your participation in this project, you may also contact the Office of the Vice-President (Research) at the University of Calgary, and ask for **Karen McDermid at 220-3381.**

Participant: \_\_\_\_\_

Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

A copy of this consent form has been given to you to keep for your records and reference.

**Appendix B**  
**Research Protocols**

**The Assessment of Depression and Anxiety in Continuing Care Residents**

(Resident version)

A. 1. Participant's I.D.: \_\_\_\_\_ 2. Date of interview: \_\_\_\_\_

3. Place of residence: \_\_\_\_\_ 4. Interviewer: \_\_\_\_\_  
(Site and unit)

5. Date of relocation to this residence (from chart): \_\_\_\_\_

6. Name of caregiver informant: \_\_\_\_\_ 7. Relationship: \_\_\_\_\_  
(First name only.)

8. Name of staff informant: \_\_\_\_\_ 9. Position: \_\_\_\_\_  
(First name only.)

\*\*\*\*\*  
B. First I would like to learn something about your personal background. (Confirm demographic data from medical chart.)

1. Participant's gender:        Male                Female

2. Participant's ethnicity (clarify if necessary):

1 Caucasian

2 Asian (please specify): \_\_\_\_\_

3 Native Canadian

4 East Indian

5 Black

6 Other (please specify): \_\_\_\_\_

3. What is your date of birth? Day \_\_\_\_\_ Month \_\_\_\_\_ Year \_\_\_\_\_

4. What is your age? \_\_\_\_\_

5. What is your current marital status?

1 Single

2 Married

3 Widowed

4 Divorced

5 Separated

6. How far did you go in school? (Please indicate the highest level completed.)

1 0-4 years

2 5-8 years

3 high school incomplete

4 high school completed (grade 12 \_\_\_\_\_ grade 11 \_\_\_\_\_ )

5 post high school, business or trade school

6 1-3 years college

7 4 years college completed

8 post-graduate college

7. Were you employed outside of your home for most of your life?

Yes \_\_\_\_\_ No \_\_\_\_\_ If no: Homemaker Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, what kind of work did you do? for most of life?

---

8. How many children do you have (include adopted and stepchildren)?

no children \_\_\_\_\_ number of daughters \_\_\_\_\_ number of sons \_\_\_\_\_

9. If children identified, how many of these children live in Calgary?

number of daughters \_\_\_\_\_ number of sons \_\_\_\_\_

10. Now I would like to ask you a few questions about your relatives and friends.

Thinking about these people, who visits you most often?

(Indicate name and relationship. Attempt to identify preferably one person, perhaps two.)

1. \_\_\_\_\_

2. \_\_\_\_\_

11. How often do you visit with \_\_\_\_\_?

Person 1

- 1 daily or almost daily
- 2 4-5 times per week
- 3 2-3 times per week
- 4 weekly
- 5 2-3 times per month
- 6 monthly
- 7 less than once per month

Person 2 (if necessary)

- 1 daily or almost daily
- 2 4-5 times per week
- 3 2-3 times per week
- 4 weekly
- 5 2-3 times per month
- 6 monthly
- 7 less than once per month

12. How would you rate your physical health at the present time?

- 1 excellent
- 2 good
- 3 fair
- 4 poor

13. Compared to others your age, how would you rate your health at the present time?

- 1 excellent
- 2 good
- 3 fair
- 4 poor

(Insert Folstein MMSE here.)

C. STRUCTURED INTERVIEW (SCID-IV) FOR DEPRESSION AND ANXIETY (Request permission to tape). Note that subthreshold responses indicate that the symptom is present but does not meet criteria (e.g. not in nearly every day or as long as two weeks, or weight loss/gain but without meeting 5% criteria, etc). For every subthreshold response, indicate the reason for not meeting full criteria.

1. Now I am going to ask you some questions about your mood. In the last month, has there been a period of time when you were feeling depressed or down most of the day nearly every day? (What was that like?)

? false subthreshold true

Describe resident's report of symptoms: \_\_\_\_\_

1a. IF YES, how long did it last? (As long as two weeks?)

? false subthreshold true

Comments  
(duration): \_\_\_\_\_

1b. Did anything happen that made you feel depressed or down? no \_\_\_\_\_ yes \_\_\_\_\_  
Describe (if bereaved, indicate date of death and relationship): \_\_\_\_\_

2. What about losing interest or pleasure in things you usually enjoy?

? false subthreshold true

Comments  
(examples): \_\_\_\_\_

2a. IF YES, was it nearly every day?

? false subthreshold true

Comments: \_\_\_\_\_

2b. IF YES, how long did it last? (As long as two weeks?)

? false subthreshold true

Comments  
(duration): \_\_\_\_\_

2c. IF YES, does the respondent spontaneously attribute this to his/her residential situation?  
 Yes \_\_\_\_\_ No \_\_\_\_\_

For the following questions, focus on the worst two weeks in the past month (or else the past two weeks if equally depressed for the entire month).

3. During this (two week period) did you lose or gain any weight? (How much?) (Were you trying to lose or gain weight?) (Note: Significant weight loss/gain is defined as a change of 5% of body weight in a month.)

? false subthreshold true

Check if: \_\_\_\_\_ weight lost \_\_\_\_\_ weight gain  
 \_\_\_\_\_ amount lost (lbs./kgs.) \_\_\_\_\_ amount gained (lbs./kgs.)

Comments: \_\_\_\_\_

4. How was your appetite? (What about compared to your usual appetite?) (Did you have to force yourself to eat?) (Eat (less/more) than usual?) (Was that nearly every day?)

? false subthreshold true

Check if: \_\_\_\_\_ decreased appetite \_\_\_\_\_ increased appetite

Comments: \_\_\_\_\_

5. How were you sleeping? (Trouble falling asleep, waking frequently, trouble staying asleep, waking too early, OR sleeping too much? How many hours a night compared to usual? Was that nearly every night?)

? false subthreshold true

Check if: \_\_\_\_\_ insomnia \_\_\_\_\_ hypersomnia

Comments: \_\_\_\_\_

5a. Were you taking medication for sleep?: \_\_\_\_\_ yes \_\_\_\_\_ no \_\_\_\_\_ uncertain

6. Were you fidgety or restless? (Was it so bad that other people noticed it? What did they notice? Was that nearly every day?)

? false subthreshold true

Comments: \_\_\_\_\_

---

7. What about the opposite - - talking or moving more slowly than is normal for you? (Was it so bad that other people noticed it? What did they notice? Was that nearly every day?)

? false subthreshold true

Comments: \_\_\_\_\_

---

8. What was your energy like, that is, were you feeling tired all the time? (Nearly every day?)

? false subthreshold true

Comments: \_\_\_\_\_

---

9. During this time, how did you feel about yourself in general, for example, did you feel badly about yourself? (Nearly every day?) (Note: Code 1 or 2 if only low self-esteem.)

? false subthreshold true

Describe (in resident's words): \_\_\_\_\_

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10. What about feeling guilty about things you had done or not done? (Nearly every day?)

? false subthreshold true

Comments (describe nature of guilt if resident spontaneously provides information):

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11. Did you have trouble thinking or concentrating? (What kinds of things did it interfere with?) (Nearly every day?)  
 ? false subthreshold true

Comments (kinds of things interfered with):

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12. Was it hard to make decisions about everyday things? (Nearly every day?)  
 ? false subthreshold true

Comments (types of decisions):

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13. Were things so bad that you thought a lot about your own death?  
 ? false subthreshold true

Describe ideation:

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13a. IF YES, did you think about ending your own life or wish that you could?  
 ? false subthreshold true

Comments:

---



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13b. IF YES, did you do anything to hurt yourself? (Note: Code 1 for self-mutilation w/o suicidal intent.)  
 ? false subthreshold true

Specify:

---



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14. Has (depressive episode/own words) made it hard for you to do things or get along with other people?  
? false subthreshold true

Comments: \_\_\_\_\_  
\_\_\_\_\_

15. In the last six months, have you been particularly nervous or anxious?  
? false subthreshold true

Comments: \_\_\_\_\_

15a. Do you also worry a lot about bad things that might happen?  
? false subthreshold true

Comments: \_\_\_\_\_

15b. IF YES, what do you worry about? (Do you worry about people/events/activities)?  
? false subthreshold true

Describe worry: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

15c. IF YES, during the last six months, would you say that you have been worrying more days than not?  
? false subthreshold true

Comments: \_\_\_\_\_

15d. IF YES, when you worry, do you find that it's hard to stop yourself?  
? false subthreshold true

Comments: \_\_\_\_\_

15e. IF YES, when did this anxiety or worry start? (Same time as the onset of mood disorder?)  
? false subthreshold true

15f. Did anything happen that made you feel anxious or worried? No \_\_\_\_ Yes \_\_\_\_

(Indicate approximate date and precipitating event(s), if any) \_\_\_\_\_  
 \_\_\_\_\_

**Continue assessing symptoms of anxiety, whether or not anxiety/worry were endorsed.**  
 Now I am going to ask you some questions about other symptoms that you may or may not have. Thinking back over the past six months (when you're feeling nervous and anxious) and now . . .

16. Do you often feel physically restless – can't sit still?

? false subthreshold true

Comments: \_\_\_\_\_

17. Do you often feel keyed up or on edge?

? false subthreshold true

Comments: \_\_\_\_\_

18. Do you often tire easily?

? false subthreshold true

Comments: \_\_\_\_\_

19. Do you have trouble concentrating or does your mind go blank?

? false subthreshold true

Comments: \_\_\_\_\_

20. Are you often irritable?

? false subthreshold true

Comments: \_\_\_\_\_

21. Are your muscles often tense?

? false subthreshold true

Comments: \_\_\_\_\_

22. Do you often have trouble falling or staying asleep?

? false subthreshold true

Comments: \_\_\_\_\_

23. (If any symptoms endorsed) Have any of these symptoms made it hard for you to be with other people?  
? false subthreshold true

Comments: \_\_\_\_\_

D. BRIEF SYMPTOM INVENTORY - ANXIETY

Below is a list of problems and complaints that people sometimes have. Listen to each one carefully and tell me how much discomfort that problem has caused you during the past week, including today.

- 0 = not at all
- 1 = a little bit
- 2 = moderately
- 3 = quite a bit
- 4 = extremely

How much were you distressed by:

1. \_\_\_\_\_ nervousness or shakiness inside
2. \_\_\_\_\_ suddenly scared for no reason
3. \_\_\_\_\_ feeling fearful
4. \_\_\_\_\_ feeling tense and keyed up
5. \_\_\_\_\_ spells of terror and panic
6. \_\_\_\_\_ feeling so restless you couldn't sit still

E. ANXIOUS THOUGHTS INVENTORY: METAWORRY

Now I would like to ask you some questions about worry. I am going to read out some statements and ask you to tell me how often this happened to you.

- 1 = Almost never
- 2 = Sometimes
- 3 = Often
- 4 = Almost always

1. \_\_\_\_\_ I take disappointments so keenly that I can't put them out of my mind.
2. \_\_\_\_\_ Unpleasant thoughts enter my mind against my will.
3. \_\_\_\_\_ I have difficulty clearing my mind of repetitive thoughts.
4. \_\_\_\_\_ I think that I am missing out on things in life because I worry too much.

5. \_\_\_\_\_ I worry that I cannot control my thoughts as well as I would like to.
6. \_\_\_\_\_ In general, how often do you worry?

**F. WORRY QUESTIONNAIRE FOR CONTINUING CARE RESIDENTS**

I am going to read you a list of things that people may worry about. For each item please tell me whether or not you worry about it. Do you worry about . . .

**Freq. Rating**

- |         |   |       |
|---------|---|-------|
| 1. Y N  | Your eyesight or hearing getting worse?   | _____ |
| 2. Y N  | Being able to enjoy your food?  | _____ |
| 3. Y N  | Being able to sleep at night?   | _____ |
| 4. Y N  | Your physical health getting worse?   | _____ |
| 5. Y N  | Being able to remember important things?  | _____ |
| 6. Y N  | Do you worry about feeling sad?   | _____ |
| 7. Y N  | Feeling lonely?   | _____ |
| 8. Y N  | The health of loved ones?   | _____ |
| 9. Y N  | Keeping in touch with family and friends?   | _____ |
| 10. Y N | How family members are getting along with each other?                               | _____ |
| 11. Y N | Do you worry about your relationship with a family member?                          | _____ |
| 12. Y N | Being a burden to your family financially?  | _____ |
| 13. Y N | Having enough money to help family members who may be in need?                      | _____ |
| 14. Y N | Your relationships with other residents (e.g. roommate)?                            | _____ |
| 15. Y N | Your relationships with staff members?  | _____ |
| 16. Y N | Having to be cared for by people other than your loved ones?                        | _____ |
| 17. Y N | Do you worry that staff may not respond to your needs as quickly as you might like? | _____ |
| 18. Y N | Do you worry about being able to express your opinions freely?                      | _____ |

19. Y N That others may not listen to your ideas or opinions? \_\_\_\_\_
20. Y N That others will make decisions for you that you would rather make yourself? \_\_\_\_\_
21. Y N Your personal belongings going missing? \_\_\_\_\_
22. Y N Having enough room for personal things you may want to have near you? \_\_\_\_\_
23. Y N Missing meals or other activities you may want to join? \_\_\_\_\_
24. Y N Do you worry about having enough privacy? \_\_\_\_\_
25. Y N Finding enough to do - not being bored? \_\_\_\_\_

26. Is there anything else that you worry about?

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27. Now I am going to go back to those items that you worry about, and ask you to tell me how often you worried about them over the past week:

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

(To interviewer: Please review the endorsed items for frequency ratings.)

#### G. GERIATRIC DEPRESSION SCALE

Choose the best answer for how you felt over the past week (Y=Yes, N=No):

1. Y N Are you basically satisfied with your life?
2. Y N Have you dropped many of your activities and interests?
3. Y N Do you feel that your life is empty?
4. Y N Do you often get bored?
5. Y N Are you hopeful about the future?

6. Y N Are you bothered by thoughts you can't get out of your head?
7. Y N Are you in good spirits most of the time?
8. Y N Are you afraid that something bad is going to happen to you?
9. Y N Do you feel happy most of the time?
10. Y N Do you often feel helpless?
11. Y N Do you often get restless and fidgety?
12. Y N Do you prefer to stay in your room, rather than going out and doing new things?
13. Y N Do you frequently worry about the future?
14. Y N Do you feel you have more problems with memory than most?
15. Y N Do you think it is wonderful to be alive now?
16. Y N Do you often feel downhearted and blue?
17. Y N Do you feel badly about yourself (e.g. guilty)?
18. Y N Do you worry a lot about the past?
19. Y N Do you find life very exciting?
20. Y N Is it hard for you to get started on new projects?
21. Y N Do you feel full of energy?
22. Y N Do you feel that your situation is hopeless?
23. Y N Do you think that most people are better off than you are?
24. Y N Do you frequently get upset over little things?
25. Y N Do you frequently feel like crying?
26. Y N Do you have trouble concentrating?
27. Y N Do you enjoy getting up in the morning?
28. Y N Do you prefer to avoid social gatherings?
29. Y N Is it easy for you to make decisions?

30.    Y        N        Is your mind as clear as it used to be?

.We're just about finished our interview but before we do I would like to ask you about the things that make you happy or bring you joy? Describe some of these for me. (Anything else?)

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Thank you for spending the time talking with me today. As I mentioned when we began, the purpose of the interview was to find out more about the health and well-being of residents in continuing care. For example, we are interested in learning more about how best to assess symptoms of depression or worry in persons like yourself. Our goal is to improve our assessment measures so that they give us a better idea of how people are feeling. The time that you spent answering my questions will benefit others who live in continuing care and we really appreciate the time you spent with us. Thank you again. Do you have any questions for me?

Would you like to receive a copy of our results? Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, we will send these to you in approximately 6 months, when the study has finished.



- |  |     |    |      |
|--|-----|----|------|
| 7. Insomnia (difficulty sleeping)  | Yes | No | Sub. |
| 8. Hypersomnia (sleeping more than usual)  | Yes | No | Sub. |
| 9. Fidgety or restless   | Yes | No | Sub. |
| 10. Talking or moving more slowly than usual   | Yes | No | Sub. |
| 11. Feeling tired  | Yes | No | Sub. |
| 12. Feeling badly about self   | Yes | No | Sub. |
| 13. Guilt about things done or not done  | Yes | No | Sub. |
| 14. Trouble thinking or concentrating  | Yes | No | Sub. |
| 15. Difficulty making decisions about everyday things  | Yes | No | Sub. |
| 16. Recurring thoughts of own death  | Yes | No | Sub. |
| 17. Thoughts of ending own life or wishing he/she could<br>Check here if suicide attempt _____   | Yes | No | Sub. |
| 18. ( <u>If symptoms are present</u> ) have these symptoms made it difficult<br>for your family member/friend to do things or get along with others? | Yes | No | Sub. |
| 19. ( <u>If symptoms are present</u> ) when did you first notice these symptoms (indicate approx. date)?   |     |    |      |

---

20. (If symptoms are present) please specify any circumstances or life events that may have precipitated these symptoms, or might account for them.

---

Now we would like to ask you about symptoms that may be related to anxiety or worry. Has your family member/friend experienced any of the following symptoms over the past six months.

- |  |     |    |      |
|--|-----|----|------|
| 21. Has he/she been particularly nervous or anxious?   | Yes | No | Sub. |
| 22. Does he/she worry a lot about bad things that might happen,<br>(more days than not, over the past six months)? | Yes | No | Sub. |
| 23. (If yes to 22) when he/she worries, does he/she find that it's<br>hard to stop?                                | Yes | No | Sub. |
| 24. Felt physically restless – can't sit still?  | Yes | No | Sub. |
| 25. Felt keyed up or on edge?  | Yes | No | Sub. |

- |   |     |    |      |
|---|-----|----|------|
| 26. Easily tired (over the past six months)?  | Yes | No | Sub. |
| 27. Trouble concentrating or mind going blank?  | Yes | No | Sub. |
| 28. Irritable?  | Yes | No | Sub. |
| 29. Muscle tension?   | Yes | No | Sub. |
| 30. Trouble falling or staying asleep?  | Yes | No | Sub. |
| 31. (If symptoms are present) have these symptoms made it hard for him/her to be with other people? | Yes | No | Sub. |
| 32. (If symptoms are present) when did you first notice these symptoms (indicate approximate date)? |     |    |      |

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33. (If symptoms are present) please specify any circumstances or life events that might have started these symptoms or might account for them.

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C. Geriatric Depression Scale (Collateral)

The following questions also pertain to your family member's/friend's well-being and focus specifically on symptoms that may be related to depression. As I read out each statement, please answer yes or no for how you think he/she has felt in the past week.

- |   |     |    |
|---|-----|----|
| 1. Is he/she basically satisfied with his/her life?                     | Yes | No |
| 2. Has he/she dropped many of his/her activities and interests?         | Yes | No |
| 3. Does he/she feel that his/her life is empty?                         | Yes | No |
| 4. Does he/she often get bored?   | Yes | No |
| 5. Is he/she hopeful about his/her future?                              | Yes | No |
| 6. Is he/she bothered by thoughts he/she can't get out of his/her head? | Yes | No |
| 7. Is he/she in good spirits most of the time?                          | Yes | No |
| 8. Is he/she afraid that something bad is going to happen to him/her?   | Yes | No |
| 9. Does he/she feel happy most of the time?                             | Yes | No |
| 10. Does he/she feel helpless?  | Yes | No |

11. Does he/she often get restless and fidgety?	Yes	No
12. Does he/she prefer to stay in his/her room, rather than going out and doing new things?	Yes	No
13. Does he/she frequently worry about the future?	Yes	No
14. Does he/she feel that he/she has more problems with memory than most?	Yes	No
15. Does he/she think it is wonderful to be alive now?	Yes	No
16. Does he/she feel downhearted and blue?	Yes	No
17. Does he/she feel badly about himself/herself (e.g. guilty)?	Yes	No
18. Does he/she worry a lot about the past?	Yes	No
19. Does he/she find life very exciting?	Yes	No
20. Is it hard for him/her to get started on new projects?	Yes	No
21. Does he/she feel full of energy?	Yes	No
22. Does he/she feel his/her situation is hopeless?	Yes	No
23. Does he/she think that most people are better off than he/she is?	Yes	No
24. Does he/she frequently get upset over little things?	Yes	No
25. Does he/she frequently feel like crying?	Yes	No
26. Does he/she have trouble concentrating?	Yes	No
27. Does he/she enjoy getting up in the morning?	Yes	No
28. Does he/she prefer to avoid social gatherings?	Yes	No
29. Is it easy for him/her to make decisions?	Yes	No
30. Is his/her mind as clear as it used to be?	Yes	No

D. Worry Questionnaire for Continuing Care Residents (Collateral)

We're also interested in symptoms of anxiety, in particular the issues that continuing care residents worry about. In general, how often does your family member/friend worry: almost never, sometimes, often, or almost always?

- 1 = almost never
- 2 = sometimes
- 3 = often
- 4 = almost always

Now I am going to read you a list of things that your family member/friend may worry about. For each item please tell me whether or not you think that he/she worries about this.

Do they worry about . . .

Frequency

- 1 = Almost never
- 2 = Sometimes
- 3 = Often
- 4 = Almost always

1. His/her eyesight or hearing getting worse?	Yes	No	_____
2. Being able to enjoy his/her food?	Yes	No	_____
3. Being able to sleep at night?	Yes	No	_____
4. His/her physical health getting worse?	Yes	No	_____
5. Being able to remember important things?	Yes	No	_____
6. Does he/she worry about feeling sad?	Yes	No	_____
7. Feeling lonely?	Yes	No	_____
8. Does he/she worry about the health of loved ones?	Yes	No	_____
9. Keeping in touch with family and friends?	Yes	No	_____
10. How family members are getting along with each other?	Yes	No	_____
11. Does he/she worry about their relationship with a family member?	Yes	No	_____
12. Being a burden to his/her family financially?	Yes	No	_____
13. Having enough money to help family members who may be in need?	Yes	No	_____
14. His/her relationships with other residents (e.g. roommate)?	Yes	No	_____
15. His/her relationships with staff members?	Yes	No	_____
16. Having to be cared for by people other than his/her loved ones?	Yes	No	_____
17. Does he/she worry that staff may not respond to his/her needs as quickly as he/she might like?	Yes	No	_____

1 = Almost never  
 2 = Sometimes  
 3 = Often  
 4 = Almost always

- |  |     |    |       |
|--|-----|----|-------|
| 18. Does he/she worry about being able to express his/her opinions freely?       | Yes | No | _____ |
| 19. That others may not listen to his/her ideas or opinions?                     | Yes | No | _____ |
| 20. That others will make decisions for him/her that he/she would rather make?   | Yes | No | _____ |
| 21. His/her personal belongings going missing?                                   | Yes | No | _____ |
| 22. Having enough room for personal things he/she may want to have near him/her? | Yes | No | _____ |
| 23. Missing meals or other activities he/she may want to join?                   | Yes | No | _____ |
| 24. Does he/she worry about having enough privacy?                               | Yes | No | _____ |
| 25. Finding enough to do - not being bored?                                      | Yes | No | _____ |
| 26. Is there anything else that he/she worries about?                            |     |    | _____ |

---

27. Now I am going to go back to those items that they worry about, and ask you to tell me how often you think they worried about them over the past week: (To interviewer: Please review the endorsed items for frequency ratings.)

How would you rate your own emotional well-being at the present time?

- |   |           |
|---|-----------|
| 1 | excellent |
| 2 | good      |
| 3 | fair      |
| 4 | poor      |

**The Assessment of Depression and Anxiety in Continuing Care Residents**  
 (Staff version with supplement from Monthly Review - revised June 10, 1998)

Resident's name: \_\_\_\_\_

A. 1. Staff's I.D.: \_\_\_\_\_ 2. Date of interview: \_\_\_\_\_

3. Employee position (e.g. Team Leader, Program Leader, etc.) \_\_\_\_\_

4. How long have you known this resident?

Since his/her admission date \_\_\_\_\_  
 or (if different) No. of years \_\_\_\_\_ No. of months \_\_\_\_\_

5. How long have you been the team leader or primary staff caregiver for the resident?

Since his/her admission date \_\_\_\_\_  
 or (if different) No. of years \_\_\_\_\_ No. of months \_\_\_\_\_

6. How well do you feel you know this resident?

- 1 very well
- 2 somewhat well
- 3 not at all well

B. Now we would like to ask you some questions about the resident's general level of well-being, including symptoms that may be related to anxiety and/or depression. Has he/she experienced the following symptoms, nearly every day for at least two weeks during the past month? (If the staff member has not known the resident for one month, please check here \_\_\_\_\_ and continue assessing for the time period for which they have known them.)

Note that subthreshold responses indicate that the symptom is present but does not meet criteria (e.g. not inearly every dayi or ias long as two weeks,i or weight loss/gain but without meeting 5% criteria, etc.). **For every subthreshold response, indicate the reason for not meeting full criteria.**

- |  |     |    |      |
|--|-----|----|------|
| 1. Depressed or down most of the day nearly every day, for at least two weeks during the past month?                               | Yes | No | Sub. |
| 2. Loss of pleasure or interest in things he/she normally enjoys (nearly every day, for at least two weeks during the past month)? | Yes | No | Sub. |
| 3. Significant weight loss (5% of body weight in a month) without special diet. Specify: _____ lbs. or _____ kgs. lost             | Yes | No | Sub. |

- |  |     |    |      |
|--|-----|----|------|
| 4. Significant weight gain (5% of body weight in a month) without special diet. Specify: _____ lbs. or _____ kgs. gained             | Yes | No | Sub. |
| 5. Decreased appetite  | Yes | No | Sub. |
| 6. Increased appetite  | Yes | No | Sub. |
| 7. Insomnia (difficulty sleeping)  | Yes | No | Sub. |
| 8. Hypersomnia (sleeping more than usual)  | Yes | No | Sub. |
| 9. Fidgety or restless   | Yes | No | Sub. |
| 10. Talking or moving more slowly than usual   | Yes | No | Sub. |
| 11. Feeling tired  | Yes | No | Sub. |
| 12. Feeling badly about self   | Yes | No | Sub. |
| 13. Guilt about things done or not done  | Yes | No | Sub. |
| 14. Trouble thinking or concentrating  | Yes | No | Sub. |
| 15. Difficulty making decisions about everyday things  | Yes | No | Sub. |
| 16. Recurring thoughts of own death  | Yes | No | Sub. |
| 17. Thoughts of ending own life or wishing he/she could<br>Check here if suicide attempt _____                                       | Yes | No | Sub. |
| 18. ( <u>If symptoms are present</u> ) have these symptoms made it difficult for the resident to do things or get along with others? | Yes | No | Sub. |
| 19. ( <u>If symptoms are present</u> ) when did you first notice these symptoms (indicate approximate date)?                         |     |    |      |

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20. (If symptoms are present) please specify any circumstances or life events that might have precipitated these symptoms, or might account for them.

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Now we would like to ask you about symptoms that may be related to anxiety or worry. Has the resident experienced any of the following symptoms over the past six months. (If the staff member has not known the resident for six months, please check here \_\_\_\_\_ and continue assessing for the time period for which they have known them.)

- 21. Has he/she been particularly nervous or anxious? Yes No Sub.
- 22. Does he/she worry a lot about bad things that might happen, (more days than not, over the past six months)? Yes No Sub.
- 23. (If yes to 22) when he/she worries, does he/she find that it is hard to stop? Yes No Sub.
- 24. Felt physically restless – can't sit still? Yes No Sub.
- 25. Felt keyed up or on edge? Yes No Sub.
- 26. Easily tired (over the past six months)? Yes No Sub.
- 27. Trouble concentrating or mind going blank? Yes No Sub.
- 28. Irritable? Yes No Sub.
- 29. Muscle tension? Yes No Sub.
- 30. Trouble falling or staying asleep? Yes No Sub.
- 31. (If symptoms are present) have these symptoms made it hard for him/her to be with other people? Yes No Sub.
- 32. (If symptoms are present) when did you first notice these symptoms (indicate approximate date)?

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33. (If symptoms are present) please specify any circumstances or life events that might have started these symptoms or might account for them?

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34. In general, how often does he/she worry, almost never, sometimes, often, or almost always?

- 1 = almost never
- 2 = sometimes
- 3 = often
- 4 = almost always

C. Now we would like to ask you some questions about the resident's physical health. Please indicate which of the following diseases the resident currently has. (Do not list old/inactive diagnoses.)

**HEART/CIRCULATION**

- \_\_\_\_\_ Arteriosclerotic heart disease  
(ASHD)  
\_\_\_\_\_ Cardiac dysrhythmias  
\_\_\_\_\_ Cerebrovascular accident (stroke)  
\_\_\_\_\_ Congestive heart failure  
\_\_\_\_\_ Hypertension  
\_\_\_\_\_ Hypotension  
\_\_\_\_\_ Peripheral vascular disease  
\_\_\_\_\_ Other cardiovascular disease

**NEUROLOGICAL**

- \_\_\_\_\_ Alzheimer's  
\_\_\_\_\_ Dementia other than Alzheimer's  
\_\_\_\_\_ Parkinson's Disease

**PULMONARY**

- \_\_\_\_\_ Emphysema/asthma/COPD  
\_\_\_\_\_ Pneumonia

**NONE OF THE ABOVE:** \_\_\_\_\_

**OTHER CURRENT DIAGNOSES:**

\_\_\_\_\_

\_\_\_\_\_

**SENSORY**

- \_\_\_\_\_ Cataracts  
\_\_\_\_\_ Glaucoma

**OTHER**

- \_\_\_\_\_ Anemia  
\_\_\_\_\_ Arthritis  
\_\_\_\_\_ Cancer  
\_\_\_\_\_ Diabetes mellitus  
\_\_\_\_\_ Explicit terminal prognosis  
\_\_\_\_\_ Hypothyroidism  
\_\_\_\_\_ Osteoporosis  
\_\_\_\_\_ Seizures  
\_\_\_\_\_ Septicemia  
\_\_\_\_\_ Urinary tract infection  
in last 30 days



### G. Activities of Daily Living

Code for performance during last month:

- 0 = independent or no assistance
- 1 = some assistance, mostly supervision/oversight
- 2 = limited/intermittent supervision
- 3 = extensive/constant supervision
- 4 = total dependence/assistance

1. EATING \_\_\_\_\_

How the resident eats and drinks (regardless of skill).

2. TOILETING \_\_\_\_\_

How resident uses the toilet room (or commode, bedpan, urinal); transfers on/off toilet, cleanses, changes pad, manages ostomy or catheter, adjusts clothes.

3. TRANSFER \_\_\_\_\_

How resident moves between surfaces - to/from bed, chair, wheelchair, standing position (excludes to/from bath/toilet).

4. MOBILITY/LOCOMOTION \_\_\_\_\_

How resident moves between locations in his/her room and adjacent corridor on same floor. If in wheelchair, self-sufficiency once in chair.

5. BATHING/HYGIENE \_\_\_\_\_

How resident manages personal hygiene including full-body bath/sponge bath (not tub transfer).

6. DRESSING/GROOMING \_\_\_\_\_

How resident puts on, fastens, and takes off all items of street clothing (including donning/removing prosthesis, if applicable). How resident manages personal hygiene, including combing hair, brushing teeth, shaving, applying make-up.

H. Medical Chart Data

Participant I.D. \_\_\_\_\_

1. Resident's Date of Birth: \_\_\_\_\_

2. Resident's Date of Admission to this Facility: \_\_\_\_\_

Please take the following information from the most recent MONTHLY REVIEW in the chart.

3. Date of monthly review: \_\_\_\_\_

CCL Communication

- |   |        |
|---|--------|
| 4. Does patient easily understand others  | Y or N |
| 5. Express him/herself without difficulty | Y or N |
| 6. If no, is this due to language         | Y or N |
| 7.                      physical          | Y or N |
| 8.                      cognitive         | Y or N |

Activities of Daily Living

Code for performance during last month:

- 0 = independent or no assistance  
 1 = some assistance, mostly supervision/oversight  
 2 = limited/intermittent supervision  
 3 = extensive/constant supervision  
 4 = total dependence/assistance

- |                       |       |
|-----------------------|-------|
| 9. Eating             | _____ |
| 10. Toileting         | _____ |
| 11. Transfer          | _____ |
| 12. Mobility          | _____ |
| 13. Bathing/Hygiene   | _____ |
| 14. Dressing/Grooming | _____ |

EDL (circle one)

15. Family supports/assists patient

- |                  |        |
|------------------|--------|
| Daily            | Y or N |
| At least weekly  | Y or N |
| Less than weekly | Y or N |
| Never            | Y or N |
| (No family)      |        |

16. Family behaviours requiring staff time

- |                  |        |
|------------------|--------|
| Daily            | Y or N |
| At least weekly  | Y or N |
| Less than weekly | Y or N |
| Never            | Y or N |
| (No family)      |        |



27. Please list the medications that the resident currently receives, including the medication schedule:

PRN = as needed  
OD = once per day  
BID = twice per day  
TID = three times per day  
QID = four times per day  
HS = bedtime only

<u>Medication</u>	<u>Dose</u>
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____
11. _____	_____
12. _____	_____