UNIT 1 DEPENDENCE, INDEPENDENCE AND COMPETENCE

Structure

1.0 OBJECTIVES

After the completion of this unit, you should be able to:

- define types of dependence and distinguish it from disability;
- identify and assess functional abilities;
- discuss measures to promote functional competence in an elderly; and
- describe factors promoting independence in the above categories of older persons.

1.1 INTRODUCTION

People in the geriatric age group suffer from number of clinical ailments. However, there is much more to an aged patient. An elderly often has multiple chronic diseases and complex health care needs. A proportion of these patients might even be the "well elderly" who may be without pathology. However, as a broad term, "well elderly" are those older patients living in the community, having some form of chronic disease (coronary artery disease, arthritis, diabetes) and accomplishing most activities of daily living(ADL) independently, without need for rehabilitation.

In this unit, we will discuss physical dependency in an older patient, his functioning ability inspite of his handicaps and the assessment of his functional status. We shall also learn about the ways of promoting independence by improving functional ability in the patient.

1.2 FUNCTIONAL ABILITY AND DEPENDENCE

Dependence in single terms in an elderly person implies that he or she will not be able to undertake his or her responsibility without the help of others.

Dependency in an elder person may be of four kinds:

a) *Physical Dependency*: This dependency arises from the simple fact that in the process of advanced age, muscle strength inevitably diminishes, sensory acuity decreases, reflexes are slower, co-ordination is poorer and the general level of energy is lower. The elderly person feels the need for — "little something" to help him do certain things, which very long ago, he could do without help. The ordinary chores of living — personal self care and grooming, keeping up one's living quarters, preparing or securing food, transporting oneself from place to place, shopping, participating in social functions etc. become increasingly difficult, strenuous and eventually impossible to perform entirely without aid.

   If an elderly person is suffering from an illness, the physical dependency becomes greater.

b) *Economic Dependency*: Suddenly from being an earning person or the spouse of an earning member the elderly has to survive either on pension, or from money coming in from children and other younger relatives. He thus becomes economically dependent.

c) *Mental Dependency*: Mental dependency arises from the decline in the power of mental ability paralleling the decline in physical power, but occurring more slowly or not reaching such magnitude as to be seen as a source of dependency which is not observed till quite advanced old age, or in some cases never. Some functional decline in the central nervous system brings in varying marked deficits in memory, orientation, comprehension and judgement.

d) *Social Dependency*: With advancing age, there is loss of known and loved ones and gradually loss of social participation occurs. This may lead to social isolation and dependency.

With advancing age, chronic degenerative disease and the disabilities caused by the disease process become the most common health problems.

Heart conditions, diabetes, arthritis and related conditions affecting the back, joints sight and hearing defects are the most widely reported illnesses that might restrict functional capacity. These in turn have their affect on the performance of activities of daily living (ADLs) where bending and stooping are required. The ability to cope with everyday tasks of personal hygiene and domestic tasks at home becomes critical to the maintenance of an independent existence.

There is a distinct difference between disability and functional dependence. All disabilities do not result in dependence.

Disabilities resulting in an inability to ambulate, feed oneself or manage basic ADLs, like toileting or self-hygiene (i.e. bathing) are strong predictors of the loss and functional dependence. Persons with healthy lifestyle survive longer and in such persons, disability is postponed and compressed into fewer years at the end of life.

Mental health problems are prevalent in all ages, however, there is a cumulative effect that manifests itself in higher levels within post retirement populations. It is usual to separate organic syndromes (those with a physical cause) from affective diseases. Within the organic syndromes, dementia in its various forms and that of the Alzheimer's type in particular are both very disabling and relatively common in later life. These conditions lead to severe dependency during the course of their illness. Functional Competence is linked to the psychological problems and mental health of the older persons.

The "use it or lose it" concept applies to mental processes as well as physical. When an elderly is involved in some activity, his mind and body, both are working, and that is what leads to lesser problems of functional dependence and leads to a positive mental attitude.

Check Your Progress 1

1) What are various kinds of normal dependencies in an older person?

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2) Name the common diseases which restrict the functional capacity of an elderly.

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1.3 EVALUATION OF FUNCTIONAL ABILITY

Functional ability is the ability to function in the arena of everyday living. By "functional" we do not mean the ability of body parts, organs or body systems to do what they are supposed to do. We are referring to the ability of an individual to perform a simple or complex task.

Functional ability is usually seen in a variety of daily living tasks which are generally grouped under three major categories i.e., Mobility, Personal Self Care (ADL) and Instrumental Self Care (IADL).The evaluation of functional ability is often referred as functional assessment.

Another factor that should be kept in mind is that functional assessment does not only measure the person's ability to perform tasks that are personally meaningful to the individual. It also depends on social expectations of what is "normal" functioning for an adult. In some social groups, a man might never be expected to do housecleaning. This is because performing these activities runs counter to what a man or a woman "should" do. It is therefore necessary that the overall approach to functional assessment of an older person include items that take into account what is "normal" in that person's social spheres. That brings us to the evaluation of functional ability, known as functional assessment.

1.3.1 Functional Assessment

Functional assessment is any systematic attempt to measure objectively the level at which a person is functioning in a variety of daily living tasks. Functional assessment can be used as a quick screen to identify the need for more extensive evaluation by a physical therapists or by practitioners.

Goals of Functional Assessment

There are definite goals of functional assessment which may be :

1) To improve diagnostic accuracy

2) To guide the selection of interventions to restore or preserve health

3) To recommend an optimal environment for care

4) To predict outcomes and

5) To monitor clinical change over time.

The assessment has to be done keeping the five sub-factors in mind:

a) *Mobility*: The primary concern for you should be to identify any functional limitation in mobility: ambulation on level surfaces within the home, stairs climbing, negotiating uneven surfaces and even walking for long distances.

b) *Basic Activities of Daily Living (ADL)*: Basic ADL include all the fundamental tasks and activities necessary for survival, hygience and self-care within the home. A typical ADL battery, which may be administered by you must cover eating, bathing, grooming, dressing, bed mobility and transfers. Incontinence and the ability to use a bathroom are especially important elements in the assessment of physical function in some older individuals. You have to take care of certain specific aspects which might need further exploration like—to get to the bathroom in an appropriate period of time, to move safely on and off the receptable and to perform self-hygiene tasks.

c) *Instrumental Activities of daily Living (IADL)*: An evaluation of IADL addresses multiple areas that are essential to living independently as an adult e.g., cooking, shopping, washing, housekeeping and the ability to use public transport or drive a car.

d) *Work*: There may be a need to work for a lot of older persons. Therefore, elders who want to, or need to, remain in the work force may do so if they are physically able to perform the tasks of their employment. The ability to work may be investigated in two ways. You could, in one way, always consider the conditions of work itself; whether an individual is working the anticipated number of hours each day, whether the requirements of the job have been modified in any respect to allow the individual to work and whether the quality of work done has met the anticipated standard of performance. Another way of assessing work is to examine the ability to perform following particular physical tasks that are associated with work disability: (1) walking up 10 steps without resting (2) walking quarter of a Km. (3) sitting for two hours (4) stooping or kneeling (5) standing for two hours (6) reaching up over head (7) reaching out to shake hands (8) grasping with fingers (9) lifting or carrying weight.

   Using this data, you can always infer what an older person's capacity to work would be.

e) *Recreation*: You have to realize that recreational activities are no less important than work to maintain a sense of well being. Functional assessment of recreational activities, however, is not limited to sports. Many older persons might enjoy gardening, which require a relatively high degree of balance, flexibility and strength. Even sedentary activities, such as stamp collecting or playing chess, require a certain degree of physical ability of the hand and the upper extremity and therefore may be functional measures of the out comes of treatment for many patients.

1.3.2 Modes of Assessment

There are three primary methods for measuring functional status: a) self report, (b) gathered by the interview or (c) observed by asking. The subject to perform a function under a specific set of conditions. By this you get a clear-cut objective evidence of the ability to perform a task.

As you are aware, with increasing age, chronic illness and commonly occurring age changes often impair function and in the process threaten the independence of the person. Close to 50% of people aged 65 and over and 60% of people aged 85 and above have some degree of limitation in daily activities.

Development and Implementation of Assessment in a Care Plan

Functional assessment is a dynamic, ongoing process. After the initial assessment, a list of patient's needs and strengths may be prepared. Recommendations and then integrated into an individualized plan of interventions and desired outcomes.

The patient may then given therapy and watched over a period of time for more improvements.

1.3.3 Selected Instruments for Functional Assessment

There are several specific assessments instruments for Geriatric functional assessments. Desirable characteristics of instruments for Geriatric functional screening are efficiency, simplicity, flexibility for use under a variety of circumstances and portability. There are reliable and valid instruments to assess functional impairment.

Some of these are:

1) Katz Index of Activities of Daily Living
2) Functional Independence measure
3) Obgler American Resources and Services (OARS) Multi dimensional functional Assessment Questionnaire.
4) Philadelphia Geriatric Care Multilevel Assessment Instrument.
5) Barthel Index (Table 1.1)
6) Physical Self-Maintenance Scale (ADL)
7) IADL Scales (Table 1.2).

Barthel Index lists 10 ADL such as feeding, transfers, bathing, walking on level surface, ascending and descending steps, dressing, controlling bowels, controlling bladder, personal toilet (shave, clean teeth, comb hair etc.) getting on and off the toilet. Each function is graded as 5,10 or 15 points if done independently. If done only with help, it will usually be graded with 5 points less. An activity that could not be done at all is scored a 0. A person who could perform all the listed activities independently would have a score of 100.

Table 1.1: Barthel Index of the Activities of Daily Living (ADL)

Function	Score	Description
Bowels	0	Incontinent (or needs to be given enema)
	1	Occasional accident (once a week)
	2	Continent
Bladder	0	Incontinent or catheterized and unable to manage
	1	Occasional accident (maximum once per 24 hr.)
	2	Continent (for more than 7 days)
Grooming	0	Needs help with personal care: face, hair, teeth, shaving
	1	Independent (implements provided)
Toilet use	0	Dependent
	1	Needs some help, but can do something alone
	2	Independent (on and off, wiping, dressing)
Feeding	0	Unable
	1	Needs help in cutting, spreading butter etc.
	2	Independent (food provided within reach)
Transfer	0	Unable (no sitting balance)
	1	Major help (physical: one or two people)-can sit
	2	Minor help (verbal or physical)
	3	Independent
Mobile	0	Immobile
	1	Wheelchair dependent, including corners etc.
	2	Walks with help of one person (verbal or physical)
	3	Independent
Dressing	0	Dependent
	1	Needs help but can do about half unaided
	2	Independent (including buttons, zips, laces etc.)
Stairs	0	Unable
	1	Needs help (verbal, physical, carrying aid)
	2	Independent up and down
Bathing	0	Dependent
	1	Independent (bath: must get in and out unsupervised and wash self. Shower: unaided/unsupervised)

IADL Scale(Table 1.2): This Lawton IADL scale differentiates as whether the activity is performed with no, minimal, or substantial assistance or not at all.

Table 1.2: Scale for Instrumental Activities of Daily Living (IADL)*

Ability to Telephone

1) Operates telephone on own initiative: looks up and dials numbers etc.
2) Dials a few well-known numbers.
3) Answers telephone but does not dial.
4) Does not use telephone at all.

Shopping

1) Takes care of all shopping needs independently.
2) Shops independently for small purchases.
3) Needs to be accompanied on any shopping trip.
4) Completely unable to shop.

Food Preparation

1) Plans, prepares and serves adequate meals independently.
2) Prepares adequate meals if supplied with ingredients.
3) Heats and serves prepared meals, or prepares meals but does not maintain adequate diet.
4) Needs to have meals prepared and served.

Housekeeping

1) Maintains house alone or with occasional assistance (e.g., heavy work done by domestic help).
2) Performs light daily tasks such as dishwashing and bed making.
3) Performs light daily tasks but cannot maintain acceptable level of cleanliness.
4) Needs help with all home maintenance tasks.
5) Does not participate in any housekeeping tasks.

Laundry

1) Does personal laundry completely.
2) Launders small items: rinses socks, stockings etc.
3) All laundry must be done by others.

Mode of Transportation

1) Travels independently on public transportation or drives own car.
2) Arranges own travel via taxi but does not otherwise use public transportation.
3) Travels on public transportation when assisted or accompanied by another.
4) Travels limited to taxi or automobile, with assistance of another.
5) Does not travel at all.

Responsibility for Own Medication

1) Is responsible for taking medication in correct dosages at correct time.
2) Takes responsibility if medication is prepared in advance in separate dosages.
3) Is not capable of dispensing own medication.

Ability to Handle Finances

1) Manages financial matters independently (budgets, writes checks, pays rent and bills, goes to bank); collects and keeps track of income.
2) Manages day-to-day purchases but needs help with banking, major purchases, etc.
3) Incapable of handling money.

* Start by asking the patient to describe her/his functioning in each category; then complement

1.3.4 Advantages and Disadvantages of Functional Assessment Instruments

Listed below are the advantages and disadvantages of functional assessment instruments.

Advantages

— Focusses the encounter on what patients can and wish to do.

— Elicits data of greatest concern to patients.

— Standardizes the functional history.

— Yield consistent data collected by same professional over time and by different professionals who see the patient.

— Provides objective data for use in flow sheet.

— Yields quantifiable data on which to base and evaluate therapeutic recommendations to patients and families.

— Identifies potentially reversible functional deficits.

— Improves diagnosis and treatment.

— Focusses health care team on uniform outcome goals.

— Broadens data base on which to make decisions regarding resource utilization, referrals and placement.

— Provides benchmark for decisions to use or withhold treatment.

— Objective data which can move across health care settings.

Disadvantages

— Do not reflect reasons why an activity is not performed, frequency of performance or relative importance of activities.

— Capture neither the range of activities of very active adults or small changes in activity.

— Fall to address people's fears about revealing functional deficits.

— Do not show how people actually function in the "real world".

— Measure actual function rather than performance capacity.

— Are subject to errors of recall and mood.

There are many aspects of Health Assessment not included in most functional assessment instruments. These are:

— Use of functional aids

— Leisure activities

— Rest and sleep pattern

— Injury potential

— Nutrition

— Medication use

— Impaired cognition/stress/depression

— Sensory changes

— Functional changes associated with specific diseases

Check Your Progress 2

1) What is functional assessment?

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2) Name the primary methods for measuring functional status.

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1.4 IMPROVING FUNCTIONAL COMPETENCE

For improving functional competence, intervention can be so designed to either restore the lost function or to facilitate compensatory strategies that can substitute for the physical loss.

This may be done in three ways — a) improving physical activity, b) having leisure activity c) Undertaking a productive activity.

a) Physical activities must be adopted early in life, rather than initiated in old age. However, an elderly may also begin by starting an appropriate physical activity.

b) Leisure Activity is a central focus during old age: Leisure activities of elderly are as diverse as the population itself. Activities that range from watching television to caring for grandchildren, they serve many purposes. While some activities are purely enjoyable, others fulfill higher cognitive or psychological needs.

   However, you as a geriatrician have to be careful while considering /promoting a leisure activity in different e.g., in a patient who has experienced a physical loss recently.

c) Productive Activity- One type of Productive activity that the elderly may choose is volunteering. It offers productive roles in a variety of settings that can provide the older persons with feelings of usefulness, mental challenge, and social integration. These can result in elderly feeling that they are productive members of the society, and lead to the older persons being valued by the larger society.

   When an elderly's physical function declines, volunteer positions offer a substitute to physical activity that may serve as an avenue for enhancing the individual's self concept.

1.5 ROLE OF FAMILY

The family network since it is closest to the elderly is important in helping them to remain both active and independent. The family network, since it is closest to the elderly patient is important in helping them to remain both active and independent.

A family's involvement in care of an older person can begin slowly or suddenly. In situations where there is not an immediate problem, families sometimes have trouble in deciding whether there is any problem or not. This is because many families observe changes associated with aging, do not know if they are normal or not, and start to worry. You as a professional can help them in that direction and logically decide where and how to intervene. Attention to other very basic issues can also help families assess if there is a problem, and how serious it is. Some warning signs include :

— falls

— short term memory problems

— weight loss the past year

— periods of confusions or disorientation

— calls from your parent's neighbours or friends (if family is not living with them) expressing concern about them

— difficulties performing normal daily activities.

If a family member notices any of these signs, it is time to take a closer look at the elderly person. You, with certain professional assessments can guide the family member to appropriate help.

1.6 PLANNING FOR RETIRED LIFE

As a geriatrician, your patients are largely those who have retired, or are on the verge of retiring. Apart from health problems you are faced with a lot of social and psychological problems that they might seem to have. These problems emerge primarily from the fact they have not been able to adjust to their retired life.

Retirement is both a legal right and a social act and it involves a withdrawal from the working force. The status of being retired does not imply that a person is completely unemployed . It simply means that the retiree is less than fully employed for the entire year and is receiving a pension from government and/or private source that was earned by previous years of labour. The negative aspects of retirement if not handled well are loss of status, rolelessness, loneliness and availability of free time.

A 65 year old man whose job gives him a sense of importance and meaning may view retirement as an insulting indication that society considers him worn out and useless, ready to be put "on the shelf". When people are religiously devoted to their work, the experience of suddenly becoming unemployed and presumably unproductive can be damaging to their sense of self-esteem. In such cases, retirement is often accompanied by feelings of diminished usefulness, insignificance and dependence and sometimes a sense that life is essentially over. The loss of meaningfulness may, like any prolonged stress, accelerate the process of age related decline.

Planning for a retired life by an individual facilitates smooth transition from his work to a retired life and reduce the stress created by change in economic, social and psychological uncertainty associated with retirement. Pre retirement plans are very essential to cope up with post retirement stages. One should plan early, be physically active, and be flexible in interest and social roles.

The ideal age to prepare for retired life is anywhere between 40-45 or 10-15 years before retirement. Financial management is very crucial i.e., adequate financial resources to meet your daily requirements and emergencies and a house of your own for later years. Financial resources can be built in form of pension, savings and or property to meet the rising cost of living.

Planning for retirement leads to more realistic expectation and greater preparedness in terms of finances, attitude and constructive use of time. Some informal planning and preparation almost always occupy but it is usually on a hit-or-miss basis and does not cover all matters that should be of concern to pre-retirees. In addition to financial security, limited retirement planning should be concerned with health maintenance and activities during retirement. These may be taken care of by (a) physical activity and (b) undertaking leisure activities, as has been discussed earlier.

It is very essential that an individual accepts retirement without regrets about the past so that he/she can find new task and cultivate new relationships to occupy his/her time as well as relaxing and enjoying the old age.

Viewed from a sociological perspectives, retirement is a time when people exit from certain roles and seek other roles to replace those that have been terminated. A retiree may increase his level of participation in household chores and work in the yard and the

garage. An individual should feel relaxed as he is no more governed by a busy schedule of work as in past.

1.7 CHANGES IN SOCIAL ROLES

Social Roles are patterns of behaviour that individuals are expected to display under certain conditions or in certain situations involving other people. They also change as one ages. Just as life themes change from adolescence to early adulthood, then to full maturity, older age brings another set of changes. Parenting evolves into grandparenting, and each "typical" household returns to its original dyad. Emphasis on career roles becomes less important or non existence, at times, which brings not only changes in major life goals, but changes in social contacts, interactions and time structuring. Again the aged individual is required to make adjustments, to keep a balance between inner harmony and changing external circumstances, and these at a time when physical and mental resources for adjustment are declining.

Social and role changes experienced are either good or bad, more likely as both. Retirement from work force, for example, may bring in devastating loss of status and decline in income. The empty nest feeling may mean a major role loss and loneliness, but it may also signal freedom from responsibilities for the first time in years and money for personal expenses and rewarding forms of leisure.

As life style studies show, changes, with their potential for satisfaction or frustration, occur at all stages of life. Adaptation is as necessary as possible in old age as at other times. Typically, however, old persons need to adapt to losses associated with former sources of pleasure and satisfaction. Sometimes these are personal like lost relationships with relatives and friends, sometimes, they are material like loss of income. When these events are many and frequent, they may well force an elderly person into patienthood.

In very old age, a person's adjustments may revolve around autonomy. Because of physical and mental frailities, it may be necessary to relinquish control to others. The life long capacity to cope effectively with stresses may diminish late in life, when remaining mental and physical strengths are unequal to coping with intense and frequent demands for adjustment. The cumulative effects of losses or other stresses, occurring during a short time span, may lead to decompensation and illness.

Check Your Progress 3

List ways of improving functional competence.

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1.8 LET US SUM UP

Normal dependency in an older person may be of four kinds—physical, mental, economic and social. While there is increased incidence of chronic illness with advancing age, there is also an associated vulnerability towards restriction of functional capacity which threatens to deprive the older patients of their independence. Disability is the inability of an individual to perform a task successfully because of an insufficiency in one or more areas of functional capability. Dependency on the other hand is something that arises as a result of disability. Functional ability is the ability of an individual to perform a sample or complex task, and is generally grouped under three categories, i.e., Mobility, Activities of daily living (ADL and Instrumental activities of daily living (IADL). Functional assessment is a quick screening for more extensive evaluation to measure an individual's functional ability. Functional assessment is done by self report, interview or observed by asking the subject to perform a function under a specific set of conditions. There are various instruments for Geriatric Functional Screening which are efficient, simple and

flexible for use under a variety of circumstances. Functional competence in an older person can be improved by having a physical activity and giving some time towards leisure activity. Exercise is important for both primary and secondary prevention of disease. Family plays a very important role in the life of a physically dependent older person and family may be seen as the main course of emotional strength and companionship. An elderly also needs to plan towards a retired life well in advance wherein financial, health and emotional management can be taken care of.

1.9 KEY WORDS

Activities of Daily Living (ADLs) : Personal care necessary for daily living, such as oral hygiene, dressing , toileting, transferring between bed and chair, eating and bathing

Assessment : The evaluation, usually of mental, emotional and social status to determine an individual's abilities. Its objectives may be diagnostic, to update a care plan or solve a particular situation.

Functional Ability : It is an ability of body parts or body system to function in the field of everyday living.

Functional Competence : Capability to carry out a smooth and successful physical activity.

Retirement : It is both a legal right and a social act and it involves a withdrawal from the working force.

1.10 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) The various kinds of normal dependence in an elderly are:

   — physical dependence, economic dependence, mental dependence and social dependence.

2) The most common diseases which restrict functional capacity are—heart conditions, diabetes, arthritis and related conditions affecting the back joints, sight and hearing defects.

Check Your Progress 2

1) Functional assessment is a systematic attempt to measure objectively, the level at which a person is functioning in a variety of daily living tasks.

2) The methods for measuring functional status are:

   Self-report , interview and observed by asking.

Check Your Progress 3

The ways of improving functional competence are:

— Improving physical activity

— Having leisure activity

— Productive activity.

1.11 FURTHER READINGS

Rehabilitation of the Older Patients (ed.) Amanda J. Squires, Croom Helm, London.

Dant, T.(1988). *Dependency and Old Age: theoretical accounts and practical understandings*. Ageing and society. 8:171.