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Editorial

Dr Abdul Abyad
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This is the first issue this year dealing with important issues in elderly care. A paper from Eygpt, investigates the relationship between frailty and health-related quality of life (HR-QOL) among community dwelling non demented elderly. The authors stressed that frailty is a common, heterogeneous, geriatric syndrome associated with adverse health events. There is a lack of knowledge concerning the relationship between two multidimensional variables: frailty and quality of life (QOL). A total of 115 non demented elderly, 60 years and older recruited from outpatient geriatric clinic at Al Mansoura General Hospital, Dakahlia, Egypt. Each participant underwent Comprehensive geriatric assessment, assessing the health related Quality of life (HR-QOL) by the RAND-36 health survey and assessing frailty by Edmonton frail scale (EFS).

The authors found that frailty significantly correlates with all the 8 dimensions of the HR-QOL even after controlling for covariates, also frailty status significantly correlates with age, education, Body Mass Index (BMI), function, depression and cognition. By linear Correlation coefficient a significant correlation between frailty and HR-QOL, age, function, cognition and depression was found. They concluded that dimensions of HR-QOL were negatively affected by frailty and that possible correlates of frailty status were age, low socioeconomic status, low body mass index, functional dependence, depression and cognitive impairment. Effort to improve quality of life for frail elders in this population is important.

A paper from Dubai looked at the Health profile of elderly patients registered in the Elderly Home Based Primary Care. The author stressed that the proportion of the elderly population in United Arab Emirates is constantly growing. The aging population presents a challenge for the public healthcare system. Accurate health data is required both from an epidemiological and strategic health care planning perspective. Objectives: To estimate the prevalence of disease, impairment and disability among elderly. A retrospective study was carried out and records of comprehensive assessment form of elderly patients aged 60 years and over registered in the elderly home based

primary care at Dubai Health Authority were reviewed and analyzed. The authors found that the gender ratio of the elderly patients in the study was 2.1 female: 1.0 male. The mean (SD) age was 78.77 (9.50) years. The majority of elderly patients (70.4%) had 4 or more multiple chronic conditions. The most common prevalent disease was hypertension (67.5%), followed by dementia (57.8), diabetes mellitus (52.4%), osteoarthritis (45.6%) and cerebrovascular accident (38.8%). Almost 70% of elderly patients were either bed bound or chair bound. Functional Assessment (ADL) showed that, only 5.8% of elderly patients were independent. The author concluded that this study provides a valuable insight into the magnitude of disease, impairment and disability among elderly patients. It revealed that, the prevalence of multiple chronic conditions is high. The aging population continues to need high quality care program, focused on managing multiple chronic conditions and preventing impairment and disability in order to improve health and quality of life of elderly.

A paper from Iran looked at the Impact Factor of Death on Quality of Life of the Remaining Women/ Men in the Family in Tehran City. The authors explores how loneliness is a complex and usually unpleasant emotional response caused by the death of a spouse in the family. Lack of companionship due to such an event impacts the whole quality1 of life of the remaining spouse with special reference to women, both in the present and extending into the future. The causes of loneliness are varied and include social, mental or emotional factors. The paper explores who the death of a spouse contributes to loneliness, and is reflected as a social pain. The research is based on the vulnerability hypothesis , i.e. "Women are more vulnerable than men due to the impact of the death of one's spouse". In completing the research, a total of 584 lonely widows and widowers were randomly selected, and interviewed through questionnaires. The paper denotes how the state of being alone detaches the remaining spouse from others.

A paper from Iraq looked at ageing predicament and promise. O mankind! if ye have a doubt about the resurrection,(consider)that We created you out of dust, then out of sperm, then out of a leech-like clot, then out of morsel of flesh, partly formed and partly unformed, in order that we may manifest (our power) to you; and We cause whom we will to rest in the wombs for an appointed term, then do We bring you out as babes, then (foster you) that ye may reach your age of full strength ;and some of you are called to die, and some are sent back to the feeblest old age ,so that they know nothing after knowing (much), and (further), thou seest the earth barren and lifeless, but when We pour down rain on it, it is stirred(to life),it swells ,and it puts forth every kind of beautiful growth(in pairs).This is so, because Allah is the Reality: it is He Who gives life to the dead, and is He Who has power over all things.

Correlation of Frailty Status to Health Related Quality of Life in the elderly: a cross-sectional study on community-dwelling older adults referred to an outpatient geriatric service in Egypt

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ABSTRACT

Frailty is a common, heterogeneous, geriatric syndrome associated with adverse health events. There is a lack of knowledge concerning the relationship between two multidimensional variables: frailty and quality of life (QOL).

Aim: was to investigate the relationship between frailty and health-related quality of life (HR-QOL) among community dwelling non demented elderly.

Method: 115 non demented elderly, 60 years and older recruited from outpatient geriatric clinic at Al Mansoura General Hospital, Dakahlia, Egypt. Each participant underwent Comprehensive geriatric assessment, assessing the health related Quality of life (HR-QOL) by the RAND-36 health survey and assessing frailty by Edmonton frail scale (EFS).

Results: Frailty significantly correlates with all the 8 dimensions of the HR-QOL even after controlling for covariates. Also frailty status significantly correlates with age, education, Body Mass Index (BMI), function, depression and cognition. By linear Correlation coefficient a significant correlation between frailty and HR-QOL, age, function, cognition and depression was found. Conclusion: Dimensions of HR-QOL were negatively affected by frailty and that possible correlates of frailty status were age, low socioeconomic status, low body mass index, functional dependence, depression and cognitive impairment. Effort to improve quality of life for frail elders in this population is important.

Key words: Community dwelling elderly, Frailty, Quality of life.

Introduction

Aging involves progressive decline in the functional reserve of multiple organs and systems due to limitation in functional reserve, damage from environmental agents, increased prevalence of chronic diseases and the emergence of a number of conditions termed geriatric syndrome (1). One of these syndromes is Frailty. It is a syndrome of decreased reserve and resistance to stressors, resulting from cumulative declines across multiple physiologic systems, causing vulnerability to adverse health outcomes including falls, hospitalization, institutionalization and mortality (2-8). The frailty phenotype model(4) has been defined as any three of weight loss, self-reported exhaustion, low activity levels, low walking speed and low grip strength.

Frailty is multidimensional, heterogeneous and unstable, thus distinguishing it from disability or ageing alone (9). Rather, it is widely conceived of as a state of vulnerability. Frailty is measured in many ways, including 'rules based' instruments, summative impairment lists and algorithms derived from clinical judgment (10-12).

Frailty is highly prevalent in older people; up to 40% of older people can be considered as frail and an increasing trend can be expected (13). Next to its high prevalence, frailty is characterized by its seriousness as it is related to an increased risk of adverse health outcomes such as disability (14), functional decline, hospitalization and death (15,16). These poor outcomes, in turn, can have negative implications on health related quality of life (HRQOL) (17-19).

HR-QOL is defined as: "The value assigned to the duration of life as modified by the impairments, functional states, perceptions and social opportunities that are influenced by disease, injury, treatment or policy (20) HR-QOL, however, it involves more than a self-assessment of functional status; it also conveys an individual's sense of satisfaction with that level of functioning" (21).

Only very few randomized controlled trials targeting frail older people have considered QOL among outcomes (22).

Until now, research on frailty has largely ignored the effect of frailty on psychosocial outcomes such as health related quality of life. In order to explore the extent to which frailty permeates a person's life, we examined the relationship between frailty and health related quality of life in a sample of older Egyptians.

As intervention in the early stages of frailty may lead to reversal of the syndrome and minimize if not prevent some of its associated adverse outcomes (23), so interventions to prevent, delay, or reverse frailty may have a beneficial impact on the health related quality of life in the elderly.

The current study examines the relationship between frailty and HR-QOL in community dwelling non demented elderly, while accounting for other domains of clinical importance such as cognition, functional limitation and depression.

Subjects and Method

Study population was 115 non demented elderly patients 60 years and above recruited from the outpatient geriatric clinic at Al Mansoura General Hospital, Egypt, both males and females, with consent to participate and able to answer the questionnaire during the interview.

Participation was based on informed consent from all participants and the study was approved by the scientific board of Geriatrics and Gerontology department, Faculty of Medicine, Ain Shams University.
Each participant was assessed by an experienced clinician and underwent Comprehensive Geriatric Assessment (CGA) in the form of;

a) Detailed medical history, and clinical examination.

b) Assessment of cognitive function using the -
1) Mini Mental state Examination (MMSE) (24). The MMSE is a brief 30-point questionnaire test that is used to screen for cognitive impairment. It is commonly used in medicine to screen for dementia. The MMSE examines orientation, immediate and short-term memory, attention and calculation, language and praxis. An Arabic version was used (25).

Age, education, cultural and socioeconomic background can cause a considerable bias in the MMSE's scores (26), so results were correlated with the age and educational level of the participants.

c) Screening for depression by Geriatric depression scale 15 items (27), using an Arabic version (28).

d) Functional assessment
By Activities of Daily Living (ADL) (personal care, clothing, moving, going to the toilet, eating) were measured with the Katz scale (29). The total score ranges from 0 to 6 with higher scores meaning better function (29) . The Lawton's assessment scale was used to assess abilities in Instrumental Activities of Daily Living (IADL), such as making phone calls, shopping, driving and using money (30). The scores range from 0 to 8 with higher scores meaning better function (30).

e) Assessment of Health Related Quality of Life (HR-QOL)
HR-QOL is measured with the RAND-36 Arabic version (31). The tool includes the same items as those in the SF-36 and the MOS-36 (32). It is a frequently used instrument in the research of HR-QOL in relation to aging (33). The RAND- 36 measures the perception of health on eight dimensions: physical functioning, social functioning, role limitations due to physical problems, role limitations due to emotional problems, emotional well-being, energy/fatigue, bodily pain and general health perception. The scores are converted to a 0 to 100 scale, with higher scores indicating higher levels of well-being or functioning (31).

The RAND-36 has proven to have a good validity (31).

f) Assessment of frailty by the Edmonton Frail Scale (EFS),
The EFS (34) samples 10 domains; Two domains are tested using performance-based items: the Clock test (35) for cognitive impairment and the 'Timed Get Up and Go' (36) for balance and mobility. The other domains are mood, functional independence, medication use, social support, nutrition, health attitudes, continence, burden of medical illness and quality of life (all standard historical items in geriatric assessment). The maximum score is 17 and represents the highest level of frailty, on a proposed five-level categorization (robust = 0-4, apparently vulnerable (pre-frail) = 5-6, mildly frail = 7-8, moderately frail = 9-10, severely frail = 11-17 (34).

The EFS correlated significantly (r= 0.64, p<0.001) with the Geriatrician's clinical impression of frailty (based on a 1 hour CGA) and medication count (r= 0.34, p<0.001) (34).

A unique characteristic of the EFS as a clinical frailty instrument is its inclusion of the domain of social support, suggesting an endorsement of the dynamic model of frailty (37).

g) Assessment of body mass index (BMI):
We classified subjects as regards to BMI according to National Institutes of Health guidelines regarding body size classification (38). Body mass index (BMI) categories (underweight, normal weight, overweight, or obese)

The following subjects were excluded from the study:
- Those with severe cognitive impairment as detected by MMSE ≤10 = severe impairment (39).
- Those with either severe hearing, visual and functional impairments preventing them from completing the questionnaires.

There have been reports about the adverse effects of age, severe cognitive impairment and physical status on rates of self-completion of the SF-36 (40-42).

All the questionnaires were done with face-to-face interview with each participant, as high illiteracy level was present between the participants and to avoid the problems associated with self-completion.

Statistical analyses
Statistical presentation and analysis of the present study was conducted, using the chi-square for qualitative data and T- test and ANOVA for quantitative data and Linear Correlation Coefficient; also ANCOVA for analysis of co variants by SPSS V18.

Results

Among the 115 non-demented participants, 74.78% (n=86) were 60 to 74 years old, 25.22% (n=29) were 74 to 85 years, mean age was 67.452 ± 5.382, 37.39% (n=43) were males and 62.61% (n=72) were females. The majority of the participants were illiterate 59.13% (n=68), 29.57% (n=34) can read and write and only 2.61(n=3) had primary education, 7.83% (n=9) had secondary education and 0.87% (n=1) had high education.

According to EFS, robust represented 44.35% (n=51), pre frail was 20.87% (n=24), while mild frailty represented 15.65% (n=18), moderate frailty was 13.91% (n= 16) and severe frailty was 5.22% (n=6) of the studied sample.

Table 1 (next page) presents baseline characteristics of the participants stratified by frailty status.

Regarding demographic data and past medical history, it was found that the frail group were older, had greater prevalence of stroke, widowhood and had lower education than the non frail group.

Regarding MMSE, ADL and IADL those who were frail had lower scores than the non-frail and pre-frail participants, and the increase in the level of frailty was associated with worse scores in MMSE, ADL and IADL, that is to say that the severely frail had lower scores than those with moderate and mild frailty. (Table 2, page 7)

Regarding GDS, those who were frail had lower scores than the non-frail and pre-frail participants and the highest GDS scores were found in the severe frailty group compared to the moderate and mild frailty groups. (Table 2)

The same pattern was found for HR-QOL scores on the RAND-36 scales, in that those who were frail had lower scores than the non-frail and pre-frail participants, and the worst scores were found in the severe frailty group compared to the moderate and mild frailty groups. (Table 2)

Regarding BMI, it was found that the frail groups (mild, moderate and severe) were significantly more underweight than the robust group. (Table 1)

We wanted to determine the true correlation between frailty and HR-QOL, therefore we performed multiple regression analyses by analysis of co-variants (ANCOVA) controlling for confounders (age, ADL, IADL, GDS, MMSE and education) and we found that still there is a significant correlation between RAND-36, assessing HR-QOL, and frailty assessed by EFS (Table 3, page 8)

By Linear Correlation Coefficient, there was a negative significant correlation between EFS and all the 8 RAND-36 subscales (assessing HR-QOL), ADL, IADL and MMSE while there was a positive significant correlation between EFS and age and GDS.(Table 4, page 8).

BMI significantly correlates to Edmonton frail scale scores. Underweight elderly show higher EFS scores than normal weight elderly as shown in Table 5, page 8.

Table 1: Characteristics of participants according to Edmonton frail scale (EFS) by number and % (n (%)

		Normal	Pre-frail	Mild frail	Moderate frail	Severe frail	Chi-Square
SEX	Male	24(47.06%)	7(29.17%)	7(38.89%)	5(31.25%)	0	0.072
	Female	27(52.94%)	17(70.83%)	11(61.11%)	11(68.75%)	6(100%)	
Marital status	married	31(60.78%)	11(45.83%)	7(38.89%)	3(68.75%)	0	0.005*
	single	4(7.84%)	5(20.83%)	1(5.56%)	2(12.50%)	0	
	widow	14(27.45%)	8(33.33%)	10(55.56%)	11(68.75%)	6(100%)	
	divorced	2(3.92%)	0	0	0	0	
Living arrangement	alone	2(3.92%)	1(4.17)	1(5.56%)	0	0	0.195
	with family	47(92.16%)	22(91.67%)	17(94.44%)	12(75.00%)	6(100%)	
	with care giver	2(3.92%)	1(4.17)	0	4(25.00%)	0	
Education	illiterate	16(31.37%)	17(70.83%)	15(83.33%)	14(87.50%)	6(100%)	
	can read and write	25(49.02%)	5(20.83%)	3(16.67%)	1(6.25%)	0	<0.001*
	1ry education	0	2(8.33%)	0	1(6.25%)	0	
	2ry education	9(17.65%)	0	0	0	0	
	high education	1(1.96%)	0	0	0	0	
Smoking	smoker	12(23.53%)	2(8.33%)	3(16.67%)	2(12.50%)	0	0.249
	non smoker	39(76.47%)	22(91.67%)	15(83.33%)	14(87.50%)	6(100%)	
OA		18(35.29%)	13(54.17%)	7(38.89%)	8(50.00%)	1(16.67%)	0.331
COPD		3(5.88%)	1(4.17%)	0	2(12.5.)	0	0.416
Cardiac diseases (heart failure- IHD)		7(13.73%)	5(20.83%)	5(27.78%)	5(31.25%)	0	0.218
stroke		2(3.92%)	3(12.50)	4(22.22%)	1(6.25%)	3(50.00%)	0.023*
cataract		3(5.88%)	4(16.67%)	4(22.22%)	3(18.75%)	0	0.183
BMI	less than 19 is under weight	1(1.96%)	2(8.33%)	6(33.33%)	11(68.75%)	3(50.00%)	<0.001*
	(19-25) is normal	34(66.67%)	11(45.83%)	5(27.78%)	4(25.00%)	3(50.00)	
	(25-30) is overweight	16(31.37%)	9(37.50%)	7(38.89%)	1(6.25%)	0	
	more than 30 is obesity	0	2(8.33%)	0	0	0	<0.001*

Table 2: Characteristics of participants according to Edmonton frail scale (EFS)(by Mean and SD) (M ± SD)

	Normal	Pre-frail	Mid-frail	Moderate-frail	Severe-frail	Chi-Square P-value
QOL-PF	66.373±15.559	54.375±13.131	45.00±11.376	31.563±12.072	15.00±13.416	< 0.001*
QOL-R P	81.863±19.415	58.333±22.921	38.889±17.620	32.813±15.052	20.833±10.206	< 0.001*
QOL-BP	59.137±12.957	46.500±12.025	44.222±11.430	37.813±11.962	31.333±8.501	< 0.001*
QOL-GH	53.451±8.443	45.917±11.275	41.111±7.962	36.133±7.511	28.333±6.831	< 0.001*
QOL-EF	58.137±10.098	48.125±10.715	38.056±8.069	34.063±9.349	21.667±9.309	< 0.001*
QOL-SF	67.892±9.439	57.813±11.547	48.611±5.893	35.156±11.382	20.833±10.206	< 0.001*
QOL-RE	88.245±17.403	66.683±19.669	50.00±17.84	56.244±16.018	38.867±13.635	< 0.001*
QOL-EW	70.745±5.741	65.667±9.721	60.667±11.083	64.500±9.675	59.333±5.888	< 0.001*
age	65.137±4.191	66.917±6.413	69.278±4.522	72.563±3.829	70.167±4.665	< 0.001*
ADL	6.000±0.00	5.833±0.381	5.278±0.752	4.438±1.094	2.167±2.483	< 0.001*
IADL	7.980±0.140	7.458±0.658	6.500±1.043	5.250±1.183	3.000±1.265	< 0.001*
GDS	3.000±0.872	3.667±1.007	4.056±0.938	4.500±0.966	5.333±1.033	< 0.001*
MMSE	24.510±2.436	22.958±2.368	20.778±1.353	20.188±2.562	19.500±0.837	< 0.001*

Table 3: Correlation between RAND-36 and Edmonton frail scale after adjustment for age, education, MMSE, ADL, IADL and GDS.

	ANCOVA (Edmonton frail scale)	
	F	P-value
QOL-PF	3.25	<0.001*
QOL-RP	5.97	<0.001*
QOL-BP	3.77	<0.001*
QOL-GH	3.77	<0.001*
QOL-EF	4.29	<0.001*
QOL-SF	4.76	<0.001*
QOL-RE	7.95	<0.001*
QOL-EW	5.61	<0.001*

QOL= quality of life,PF= Physical functioning, RP=Role limitation-physical, BP= Bodily Pain, GH= General health, EF= Energy/fatigue, SF=Social functioning, RE=Role limitation-emotional, MH= Mental health

Table 4: Linear Correlation Coefficient between EFS scores and different variables:

	Edmonton Frail Scale	
	r	P-value
MMSE	-0.622	<0.001*
Age	0.438	<0.001*
ADL	-0.677	<0.001*
IADL	-0.815	<0.001*
GDS	0.615	<0.001*
QOL- PF	-0.733	<0.001*
QOL-RP	-0.734	<0.001*
QOL-BP	-0.590	<0.001*
QOL-GH	-0.646	<0.001*
QOL-EF	-0.746	<0.001*
QOL-SF	-0.782	<0.001*
QOL-RE	-0.675	<0.001*
QOL-MH	-0.428	<0.001*

QOL= quality of life, PF= Physical functioning, RP=Role limitation-physical, BP= Bodily Pain, GH= General health, EF= Energy/fatigue, SF=Social functioning, RE=Role limitation-emotional, EW=emotional well-being, MMSE= mini mental state examination, GDS= geriatric depression scale, ADL= activities of daily living, IADL= instrumental activities of daily living

Table 5: Correlation between Edmonton frail scale and BMI

		BMI				ANOVA	
		Underweight	Normal weight	Overweight	Obesity	F	P-value
Edmonton	Mean	8.261	4.561	4.606	5.000	13.371	<0.001
Frail scale	SD	2.580	2.713	2.015	0.000		

BMI = Body mass index
P-values were calculated by ANOVA test.
Significant P-value (<0.05)

Discussion

In this cross-sectional study of the complex relationship between frailty status and HR-QOL in a sample of community-dwelling non demented older outpatients, we used two recently validated assessment tools: the EFS to assess frailty, it has five-level categorization of the frailty status from robust to pre-fail to mild to moderate to severe frailty, and this categorization is not found in most frailty scales as reported by Rolfson et al (34), and the RAND-36 health survey to assess HR-QOL. It is a frequently used instrument in the research of HR-QOL in relation to aging, Hickey et al (43).

The correlation between frailty and QOL; our results indicate that frail subjects (mild, moderate and severe frailty) had significantly poorer HR- QOL eight dimensions which are physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions, comparable to robust and pre-frail elderly even after controlling for possible confounders such as age, functional dependence, education, cognition and depression. Also by Linear Correlation Coefficient there was a significant negative correlation between EFS scores, assessing frailty, and all RAND-36 subscale scores, assessing HR-QOL. These results were consistent with other studies that found that frail subjects reported a worse overall QOL than pre-frail and non-frail subjects as detected by Fried et al(4), Eklund & Wilhelmson (22), Ravaglia et al (45), Avila-Funes et al (46), Masel et al (47), and Kanauchi et al (48) . A study done by Puts et al (49), reported that among a smaller group (n=25) of community-dwelling older adults, those who were frail reported worse health-related quality of life than those who were non-frail. The authors suggested that a larger study could confirm the findings.

On the other hand, Bilotta et al (50), found that frail subjects reported a worse overall QOL using old people quality of life (OPQOL), than pre-frail and non-frail subjects. They found that, five of the seven dimensions of QOL were found to be impaired in frail older participants which are health, independence, home and neighborhood, psychological and emotional well-being, and leisure, activities and religion, only the QOL domains of "social relationships and participation" and "financial circumstances" were not significantly different among the three "frailty status" groups. In our study QOL was assessed by RAND-36 which is a health related QOL questionnaire, while their study assessed QOL by OPQOL which assesses other domains of QOL as psychological well-being, home and neighborhood, and leisure activities and religion, which are the social context of QOL. There is a difference between QOL and health related quality of life (HR-QOL). Because QOL has a highly individualistic, subjective and multidimensional nature, it is difficult to define and measure as mentioned by Guse & Masesar (51). Therefore HR-QOL is used more regularly in research, Smith et al (52). But it is important to assess all domains of QOL and their correlation to frailty.

On the other hand some studies failed to find a strong correlation between frailty and QOL, such as a study by Andrew et al (53) on community dwelling elderly, where a social vulnerability index for living situation, language, social support, social and leisure activities, relationships, and socio-economic status was weakly correlated with a frailty index created by Rockwood & Mitnitski (15).

We can say that frailty, even mild degrees, has a negative effect on health related QOL, but the difference between studies can be due to the difference of the tests and scales used to assess QOL. Other differences might be the participants, either community dwelling elderly, or elderly in elderly caring facilities, along with the sample size. So, further studies are needed with a larger sample size and using scales assessing all the domains of QOL to assess the correlation of frailty to QOL.

Frailty and its correlates: Prevalence of frailty among the studied group as assessed by Edmonton frail scale was mild frailty which represented 15.65% (n=18), moderate frailty was 13.91% (n= 16) and severe frailty was 5.22% (n=6) of the studied sample, that is to say about 34.8% had frailty status.
This high prevalence agrees with a cross-sectional study by Bilota (50) where according to the Study of Osteoporotic Fractures (SOF) criteria (30%) were "robust", (37%) were "pre frail" and (33%) were "frail". While in another study by Fried et al (4), in which frailty was defined as the presence of three out of five criteria; shrinking/weight loss, weakness, poor endurance and energy, slowness and low physical activity, found a prevalence of 7% in men and women aged 65 years and older.

This high prevalence in frailty status found in our study can be explained by that our participants are outpatients; it was found that frail subjects make larger use of health and community services than subjects who are not frail, as shown by Rochat et al (54). Also the low socioeconomic status of the participants, as there is a high prevalence of illiteracy, has been associated with frailty in several cross-sectional studies such as Blaum et al (55), Newman et al (56), Burke et al (57) and Fried et al (58).

It was found that those who were frail were older, had lower education, had more prevalence of stroke, were more functionally dependent in ADL and IADL, had more depressive symptoms by GDS and had more cognitive impairment by MMSE, and the degree of frailty had an inverse relation to function, cognition, and a positive relation with age and depression. This was also found by Linear Correlation Coefficient that showed a significant negative correlation between the EFS scores and ADL, IADL, and MMSE scores and a positive correlation between EFS scores and age and GDS scores. Regarding age, Woods et al (59), found that increased chronological age has been associated with frailty, even after adjustment for medical co morbidities. Regarding prevalence of stroke, it was found to be a risk factor to frailty as detected by Woods et al (59) , while regarding cognition, Central nervous system (CNS) function and cognitive impairment have been hypothesized to be either components of frailty or risk factors as reported by Studenski et al (60). Regarding function, it was found that frailty is predictive of disability, as baseline frailty was strongly associated with ADL disability at 3- year follow-up study by Woods et al (59), while regarding depression, depressive symptoms have been shown to be associated with the frailty syndrome in cross-sectional analyses by Fried et al (4). Another found a strong prospective relationship between depressive symptoms and the

onset of frailty, suggesting that depression may contribute to the etiology of frailty as described by Woods et al (59). Further studies are recommended designed to assess correlates of frailty status, to support our findings.

Regarding BMI, it significantly correlates to the Edmonton frail scale, as about (87%, n=20) of the underweight elderly (n=23) were frail. Underweight elderly show higher EFS scores than normal weight elderly. Weight loss is one of the components of the frailty model proposed by Fried et al (4) and inadequate nutrition is commonly recognized clinically as a marker of frailty. Subjects in the Cardiovascular Health Study (CHS) by Walston et al (61) categorized as frail included both a subset who were underweight and a subset with higher body mass index (BMI) consistent with obesity.

Previous research has shown that frailty is a dynamic state that is responsive to focused interventions as found by Fried et al (23) and Newman et al (62), so, it may be possible to modify some of the factors associated with frailty, including socioeconomic status, strength and exercise tolerance, psychological wellbeing, cognition as well as comorbid illness and disability, and this may have desirable effects on perceived HRQOL. Further studies are needed to support this.

Study limitations included the small sample, only out patients, as well as the cross-sectional approach of our analyses, which is mainly due to lack of cooperation of elderly as the concept of doing scientific research is still not widespread in our community, which decreases the generalization of the current findings.

Conclusion

We can conclude that being frail was strongly associated with diminished health related quality of life. Possible correlates of frailty status were age, low socioeconomic status, low body mass index, functional dependence, depression and cognitive impairment.

Interventions to prevent, delay, or reverse frailty may have a beneficial impact on the health related quality of life in the elderly.

List of abbreviations
ADL = activities of daily living, BMI= body mass index,
EFS = Edmonton frail scale,
GDS = geriatric depression scale,
HRQOL = health related quality of life,
IADL = instrumental activities of daily living,
MMSE = mini mental state examination.

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Original Contribution/Clinical Investigation

Health profile of elderly patients registered in the Elderly Home Based Primary Care, Dubai, United Arab Emirates

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ABSTRACT

Introduction: The proportion of the elderly population in the United Arab Emirates is constantly growing. The aging population presents a challenge for the public healthcare system. Accurate health data is required both from an epidemiological and strategic health care planning perspective.

Objectives: To estimate the prevalence of disease, impairment and disability among the elderly.

Methodology: A retrospective study was carried out and records of comprehensive assessment forms of elderly patients aged 60 years and over registered in the elderly home based primary care at Dubai Health Authority were reviewed and analyzed.

Results: The gender ratio of the elderly patients in the study was 2.1 female: 1.0 male. The mean (SD) age was 78.77 (9.50) years. The majority of elderly patients (70.4%) had 4 or more multiple chronic conditions. The most common prevalent disease was hypertension (67.5%), followed by dementia (57.8), diabetes mellitus (52.4%), osteoarthritis (45.6%) and cerebrovascular accident (38.8%). Almost 70% of elderly patients were either bed bound or chair bound. Functional Assessment (ADL) showed that, only 5.8% of elderly patients were independent.

Conclusion: This study provides a valuable insight into the magnitude of disease, impairment and disability among elderly patients. It revealed that, the prevalence of multiple chronic conditions is high. The aging population continues to need a high quality care program, focused on managing multiple chronic conditions and preventing impairment and disability in order to improve health and quality of life of elderly.

Key words: Elderly, Diseases, Impairment, Disability, Dubai

Introduction

Ageing is a universal process and it affects every individual, family, community and society. It is a normal, progressive and irreversible process. Ageing is generally defined as a process of deterioration in the functional capacity of an individual that results from structural changes, with advancement of age. (1) Population ageing is a global phenomenon. The proportion of the elderly population is growing much faster than the overall population due to decreasing fertility and increasing life expectancy. (2)

The Eastern Mediterranean Region is witnessing an increase in the number and percentage of the population aged 60 and above. In 2000, the number of persons aged 60 and older in the region was around 26.8 million (5.8% of the total population). By 2025, it is projected that the percentage will increase to 8.6% and in 2050 the elderly will make up 15% of the population. (3)

The same trend is observed in the United Arab Emirates (UAE); the proportion of elderly population is increasing constantly. The proportion of elderly population in the UAE aged 60 years and above was 5.1% in 2000 and is expected to increase by more than four fold in 2025 (23.6%). In addition, life expectancy had increased from 74 years in 2000 reaching 78 years in 2013. This could be attributed to the improvements in the standards of living, health care facilities and prevention of many communicable diseases.(3)

Health status is an important factor that has a substantial influence on the quality of life of the elderly population. Many health problems are known to increase with age. The health problems of the elderly are usually multiple which results in a rapid decline in health status and a greater likelihood of disability. (4)

Understanding the disability process may help elucidate interventions needed to improve the elderly's general health status. Impairments have been considered an intermediary between chronic disease and disability. For example, elderly patients with chronic arthritis may develop mobility impairment. Due to mobility impairment, the elderly may become unable to carry out tasks which are essential for independent living. (5-7)

The aging population presents a challenge for the public healthcare system. Accurate health data is required both from an epidemiological and strategic health care planning perspective. Many countries have been making tremendous efforts to improve the understanding of the health status of this age group. This is especially important when characterizing elderly who are at greatest risk for disease, impairment and disability. (3,8)

There have been few studies on the health profile of the elderly in Arab countries in general, and in the Gulf Area in particular. A study was conducted in Saudi Arabia (2011) which reported that 50.4% of elderly had four or more chronic health conditions. (9)

Objective

Objective of the study is to estimate the prevalence of disease, impairment and disability among the elderly.

Methodology

Study design & setting
Retrospective study was conducted in Primary health care sector at Dubai Health Authority.

Target population
Elderly patients aged 60 years and over registered in the elderly home based primary care (EHBPC) at Dubai Health Authority from 2011- 2013.

Data collection
Records of comprehensive assessment forms of elderly patients were reviewed and analyzed. Indications for service were:

• Elderly patient with physical, cognitive or social disability which prevents them from attending health care.

• Elderly patients requiring follow up care post hospitalisation.

• Elderly patients who require special nursing care.

The comprehensive assessment form was filled in by the physician. It includes the following sections:

• System review section includes: cardiovascular, respiratory, gastrointestinal, endocrine, neurological, mental, musculoskeletal, cancer, kidney and liver diseases.

• Impairment section includes: vision, hearing, mobility (bed bound or chair bound) and urinary incontinence.

• Disability section includes: activities of daily living (ADLs) and focuses on six basic activities: bathing, dressing, toileting, transfer, continence and feeding. Each activity is categorized as follow (independent, assisted, totally dependent). A score of (1) means independent, score of (2) means assisted and score of (3) means totally dependent. The maximum total score of ADLs questions is 18 points and categorized as follows: score of 6 = independent, 7-17 = assisted and 18 = totally dependent.

Statistical Analysis
Statistical Package for social science (SPSS) program, version 20 was used for analysis of data as follows:

• Descriptive statistics were carried out in the form of mean, standard deviation, and range for quantitative values.

• Frequency and percentage was done for qualitative variables.

The present study comprised 206 elderly patients. The age ranged from 60-113 years with a mean of 78.77 ± 9.50. The gender ratio of the elderly patients was 2.1 female: 1.0 male. (Table 1)

Table 1: Distribution of elderly patients registered in EHBPC in Dubai according to socio-demographic characteristics

Socio-demographic characteristics		No. (%) (n=206)
Age (years)	60-	38 (18.4)
	70-	68 (33.0)
	80-	79 (38.3)
	90-	14 (6.8)
	>100	7 (3.4)
	$\overline{X}$ ±SD	78.77 ± 9.50
	Range	60-113
Sex	Male	67 (32.5)
	Female	139 (67.5)

Table 2 illustrates the prevalence of multiple chronic conditions among elderly patients. There was a high level of morbidity, with two chronic conditions experienced by 11.7%, three conditions by 18.0% and four or more conditions by 70.4% of the elderly patients. The number of elderly chronic conditions ranged from 2-8 with a mean of 4.62 ±1.62.

Table 2: Prevalence of multiple chronic conditions among elderly patients registered in EHBPC in Dubai

No. of chronic conditions	No. (%) (n=206)
Two chronic conditions	24 (11.7)
Three chronic conditions	37 (18.0)
Four or more chronic conditions	145 (70.3)
$\overline{X}$ ±SD	4.62 ±1.62
Range of chronic conditions	2-8

Table 3 (next page) reveals that, a total of 30 diseases were reported in this study; the most prevalent disease was hypertension (67.5%), followed by dementia (57.8), diabetes mellitus (52.4%), osteoarthritis (45.6%) and cerebrovascular accident (38.8%). Diseases of the neurological system were more prevalent among elderly males. Osteoarthritis and osteoporosis were more common among elderly females (48.2% and 25.9% respectively) in comparison to elderly males (40.3% and 10.4% respectively). The least prevalent diseases were colon cancer (0.5%), thyrotoxicosis (1.0%) and breast cancer (1.5%).

Table 3: Distribution of diseases among elderly patients registered in EHBPC in Dubai according to sex

Disease group	Specific Condition	Male No. (%)	Female No. (%)	Total No. (%)
Cardiovascular	Hypertension	45 (67.2%)	94 (67.6%)	139 (67.5%)
	Dyslipidemia	17 (25.4%)	42 (30.2%)	59 (28.6%)
	Ischemic heart disease	12 (17.9%)	19 (13.7%)	31 (15.0%)
	Peripheral vascular disease	7 (10.4%)	10 (7.2%)	17 (8.3%)
	Cardiac Arrhythmia	3 (4.5%)	11 (7.9%)	14 (6.8%)
	Pulmonary embolism	2 (3.0%)	12 (8.6%)	14 (6.8%)
	Heart failure	6 (9.0%)	7 (5.0%)	13 (6.3%)
	Deep venous thrombosis	2 (3.0%)	5 (3.6%)	7 (3.4%)
Respiratory	Chest infection	10 (14.9%)	11 (7.9%)	21 (10.2%)
	Chronic obstructive pulmonary disease	3 (4.5%)	11 (7.9%)	14 (6.8%)
Gastrointestinal	Gastritis	3 (4.5%)	5 (3.6%)	8 (3.9%)
	Oesophagitis	1 (1.5%)	3 (2.2%)	4 (1.9%)
Endocrine	Diabetes	35 (52.5%)	73 (52.5%)	108 (52.4%)
	Hypothyroidism	3 (4.5%)	9 (6.5%)	12 (5.8%)
	Thyrotoxicosis	1 (1.5%)	1 (0.7%)	2 (1.0%)
	Hyperparathyroidism	0 (0%)	6 (4.3%)	6 (2.9%)
Neurological	Dementia	40 (59.7%)	79 (56.8%)	119 (57.8%)
	Cerebrovascular accident	33 (49.3%)	47 (33.8%)	80 (38.8%)
	Parkinsonism	16 (23.9%)	19 (13.7%)	35 (17.0%)
	Epilepsy	9 (13.4%)	17 (12.2%)	26 (12.6%)
	Transient ischemic attack	6 (9.0%)	6 (4.3%)	12 (5.8%)
Mental	Depression	24 (35.8%)	55 (39.6%)	79 (38.3%)
	Psychotic disorder	9 (13.4%)	17 (12.2%)	26 (12.6%)
Musculoskeletal	Osteoarthritis	27 (40.3%)	67 (48.2%)	94 (45.6%)
	Osteoporosis	7 (10.4%)	36 (25.9%)	43 (20.9%)
Cancer	Prostate	4 (6.0%)	-	-
	Breast	0 (0%)	3 (1.5%)	3 (1.5%)
	Colon	0 (0%)	1 (0.7%)	1 (0.5%)
Others	Kidney Diseases	13 (19.4%)	15 (10.8%)	28 (13.6%)
	Liver Diseases	2 (3.0%)	3 (2.2%)	5 (2.4%)

Concerning the prevalence of impairments, Figure 1 displays that, more than two thirds of the elderly patients had mobility impairment and urinary incontinence. Moreover, one third of the elderly patients had visual impairment and almost one in five had hearing impairment.

Figure 1: Prevalence of impairments among elderly patients registered in EHBPC in Dubai
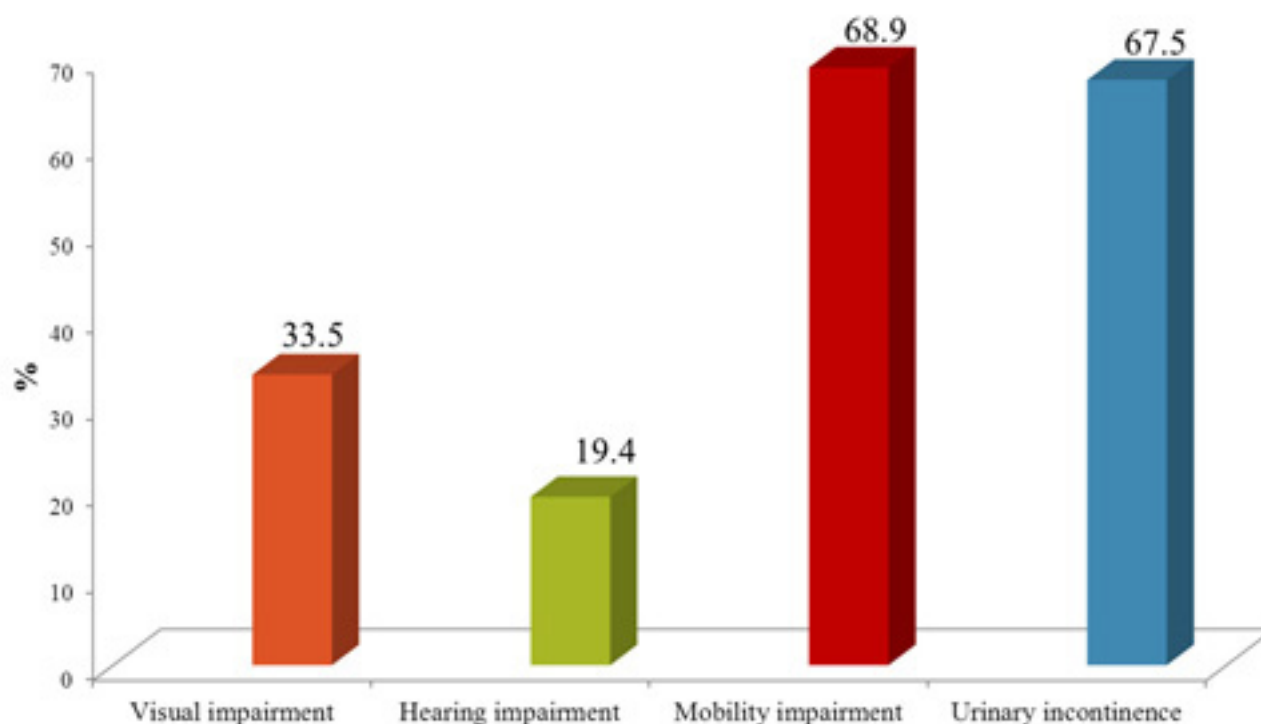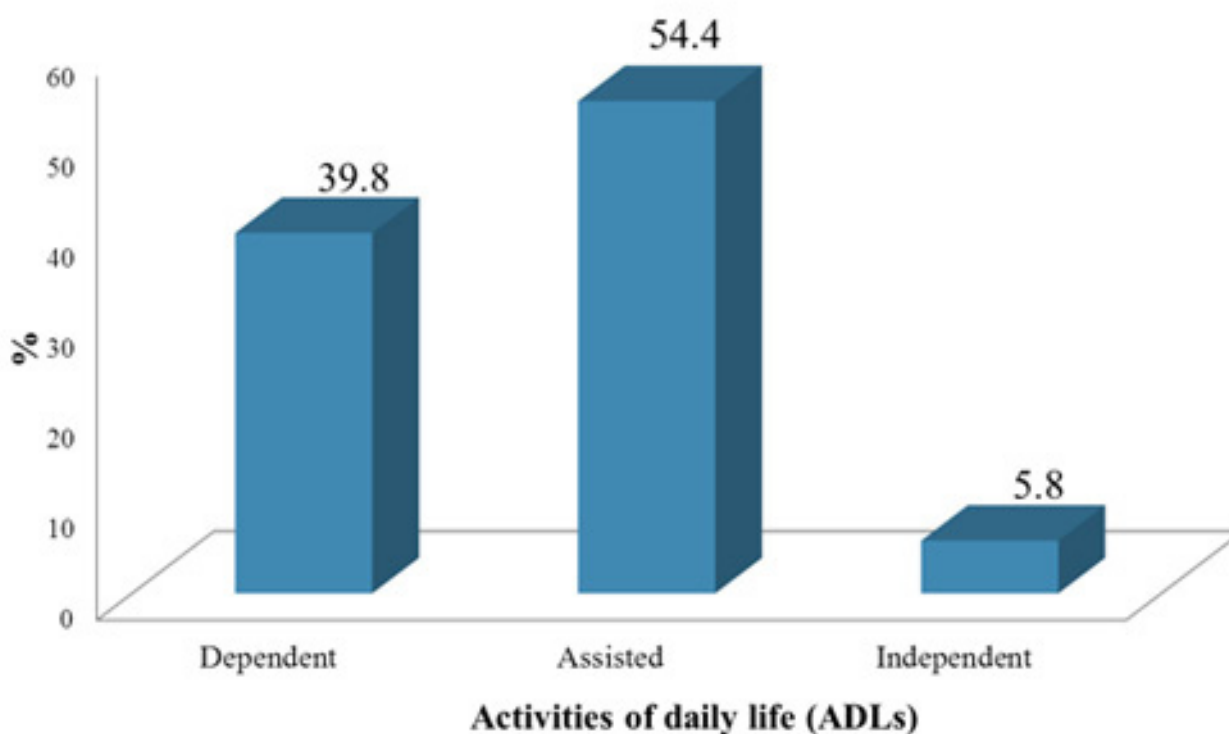

Figure 2 summarizes the distribution of elderly patients registered in EHBPC in Dubai according to Activities of daily life (ADLs). The figure demonstrated that only 5.8% of elderly patients were independent.

Figure 2: Distribution of elderly patients registered in EHBPC in Dubai according to Activities of daily life (ADLs)

Discussion

The United Arab Emirates like most countries in the world is facing the challenge of an ageing population. Elderly Primary home care service is a vital source of health care for the aging population which helps maintain elderly patients in their own homes with a multi-disciplinary team approach. The recent increases in the proportion of elderly has raised attention to issues concerning the morbidity profile of this potentially vulnerable age group. The Physical functioning and psychological wellbeing of elderly are influenced by their morbidities. (10)

In this study, it was observed that the average number of morbidities among elderly patients was 4.62 ±1.62, which is lower than an Indian study (2000) (10) but higher than other studies in Korea (2003) (11) and Saudi Arabia (2011) (9) where the mean number of morbidities among the elderly was 1.62 ± 1.35, 3.7 ± 1.70 and respectively.

The differences in morbidity can be partly explained by the differences in the racial and ethnic origin of the study population. Moreover, in this study, morbidity was assessed by a physician which could partly explain the reason for higher morbidity as physician assessment generally tends to be more comprehensive.

In the current study, hypertension was the most common chronic disease among the elderly. The finding is consistent with previous studies in India (1999) (12) , Korea (2003) (11) and Saudi Arabia (2011). (9) A systematic review of the overall worldwide prevalence of hypertension, showed no gender difference. (12) This study further supports this finding.

Diabetes mellitus is a public health concern in the United Arab Emirates. The increasing prevalence of diabetes mellitus is well documented. The risk of developing diabetes increases as the age increases. A study was conducted among the elderly population in the UAE by Margolis et al and reported that the prevalence of diabetes was high.(14) This finding is in accordance with the present study which revealed that diabetes mellitus was among the top most common chronic diseases among elderly patients.

The rapid urbanization and social modernization in the United Arab Emirates has brought transformation in the family structure from the extended family towards the nuclear family. This change has brought breakdown in the framework of family support and social isolation leading to a host of psychological illnesses among the elderly. Furthermore, impairments and disabilities among the elderly increase the likelihood of physiological illness. It has been documented that the elderly are more prone to psychological problems and depression is the commonest geriatric psychiatric disorder.(15,16)

In view of this fact, the current study showed that 38.3% of the elderly patients had depression.

The prevalence of depression is comparable with previous studies in the UAE (2004)(17), Jordan (2004)(18), Sudan (2010)(19), and India (2010).(20) Depression in the elderly is an illness that should be diagnosed and treated early in order to speed up remission rates, prevent relapse and improve the elderly's quality of life.

Visual impairment among the elderly is a major health problem. With advancing age, the normal function of eye tissues decreases and there is an increased incidence of ocular pathology. Visual impairment was the single most important cause of preventable impairment among the elderly aged 60 years and above as reported by Venkatorao et al in India study.(21)

In this study, one third of the elderly patients had visual impairment. This emphasises the urgent need to screen for visual impairment among the elderly population as elderly patients may not complain of or recognize that their vision is impaired.

ADLs refer to a basic set of everyday activities or tasks that an individual should be able to perform in order to live independently. ADLs are widely used in developed countries as predictors for the need for long-term care either in the community or in institutional settings. (22) In the current study, 39.8% of the elderly patients were dependent. This finding is higher than studies in Saudi Arabia (1995)(23) and Oman (2010)(24) where 18.8% and 25.2% of the elderly were respectively dependent. This could be explained by this study being conducted among elderly patients and not among the general elderly population.

Conclusion

This study provides a valuable insight into the magnitude of disease, impairment and disability among elderly patients. It revealed that the prevalence of multiple chronic conditions is high. This emphasises the need for high quality care programs, focused on managing multiple chronic conditions and preventing impairment and disability in order to improve health and quality of life of elderly.

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Impact Factor of Death on Quality of Life of the Remaining Women / Men in the Family in Tehran City

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ABSTRACT

The article explores how loneliness is a complex and usually unpleasant emotional response caused by the death of a spouse in the family. Lack of companionship due to such an event impacts the whole quality(1) of life of the remaining spouse with special reference to women, both in the present and extending into the future. The causes of loneliness are varied and include social, mental or emotional factors. The paper explores how the death of a spouse contributes to loneliness, and is reflected as a social pain. The research is based on the vulnerability hypothesis, i.e. "Women are more vulnerable than men due to the impact of the death of one's spouse". In completing the research, a total of 584 lonely widows and widowers were randomly selected, and interviewed through questionnaires. The paper denotes how the state of being alone detaches the remaining spouse from others.

Key words: Loneliness. Vulnerability. Social pain. Death event. Quality of life.

Aim of the study

The research reflects various aspects of the quality of life of women and men after the death of a partner. Loneliness as a social reality happens to women and men mostly in later ages. The paper will also uncover some of the commonalities and similarities of such loneliness in Tehran City as a metropolitan composed of various social classes, races, social backgrounds etc. The article provides an overview of the theoretical perspectives concerning such women and men after a death. It will also reflect on relevant key themes and issues. Though the body of literature and research in sociology has touched various subject-matters, the pathological situations of such loneliness has been ignored. The paper also tries to cite the identifiable stages/phases of human development and the quality of life of such people.

It aims to reflect loneliness and death event in life cycle(2) by portraying the period as a time of loss, and as a life condition which stands in isolation from the rest of couples' lives. We will see such loneliness transition in terms of new roles and the lost roles. However, loneliness as a potential beginning and a new experience, will be explored and elicited. The article also tries to reflect a perspective of how to make later years of life worthwhile and successful for today's and tomorrow's lonely women and men.

Introduction

Loneliness appears as an effect of marital dissolution or death of a partner worldwide; in some cases it happens due to divorce, and in most cases, as a natural event, it appears because of the death of a spouse. Research shows that in both cases, women tend to suffer long-term negative social and economic consequences while men do not (Neubeck et al., 1996, 478). While marital dissolution tends to improve men's standard of living, the ratio of income of women drops to a large extent. Also, the widows' social relations drop since they are mostly left in an isolated atmosphere. So far as Iran and many other developing societies are concerned, the extent of lonely women's decline in economic status is quite considerable. The greatest decline following the death of a partner occurs for women whose pre-widowhood family incomes were high (before the death of the husband). Under such conditions, women suffered a 71-percent drop in income in the U.S. (Weitzman, 1985, 251). Researchers have also demonstrated that in many countries including Iran, the economic effects of widowhood are just as disadvantageous for women as divorce, i.e. their poverty rate tends to increase as compared to their pre-widowhood, and before the death of their husbands (Hurd et al., 1989, 177). While many husband-lost women in developing countries such as Iran do not have any social security at all, in the developed world like the U.S., widows under the age of 60 are more likely to fall into poverty. That is because in many insurance policies, greater benefits accrue to an older widow (Holden et al., 1991).

Upon losing a husband, women may experience a whole range of emotions including chaos, anger, resentment, denial and disbelief. This may be followed by intense grief, and a search for the lost person, and that usually happens in every society. Eventual acceptance of the death of one's partner can lead to depression and apathy. To successfully survive, the lonely woman or man has to recognize her/his life in an entirely new and unexpected way (Bernardes, 1997, 104). Under the hard social and economic conditions, many, especially women, fall into deep poverty from which the only escape is one's own death. Such a status may be more severe even in the industrial societies where the network of family relations does not function in a strong manner.

As a social phenomenon, loneliness must have been in existence as long as socially-regulated marriage. The consequences of loneliness are many and grave. Between birth and death of a person, the most important event in life is marriage; it changes the personalities, the attitudes and lifestyle of women and men. Marriage is entered into with great hopes and expectations. On the contrary, family dissolution due to the death of a partner, and the failure of marital life, has serious repercussions on the individual, family and the community. Much research and many observations have shown the negative results of loneliness after the death a partner. In a way, dissolution of marriage in the form of loneliness brings about personal, familial and social disorganization, the effects of which are more severe for women (Pothen, 1996, 26, 180, 182).

On the basis of research done, as a result of the emotional crises to which lonely women have been subjected, many develop symptoms of personality disorganization. These psycho-sociological manifestations include suppressions, repressions, regressions, ambivalent motivations, loss of self confidence, doubts, indecisions, nightmares etc. As a whole, loneliness for both women and men is nearly always a tragedy.

In the present article, the author tries to find out the socio-economic background of the partner-lost women and men, and know as to how far the age, education, income etc. affect their new life course. Likewise, through the research, the author hopes to trace the adjustment process of the widows in starting a new life. Loneliness as an institutionalized way of compulsory ending of a marriage, is demonstrated differently in various cultures and societies (Devir, 1998, 29). Howsoever, losing a husband is the largest social and emotional loss which the women face and suffer from it in the course of their ordinary life. It is initially an experience which we must live with, and secondly, it is a social condition which we should get used to, and put up with (Sadrusadat et al., 1999, 364).

Assuming that widowhood is such a major feature of later life, it is surprising to discover that research on the lives of older widows is so scarce 5(Bernard, 2000, 127). Under such conditions, the author was motivated to demonstrate a sociological perspective of the lonely women and men in Tehran. However, loss and bereavement felt by such lonely women and men, though problematic, is worth probing. The vast quantity of problems faced by widows in society, convincingly portrays widowhood as an experience fraught with poverty, ill-health, loneliness, grief and readjustment. However, poverty has many causes and manifestations, making it difficult to describe with a single indicator with reference to partner-lost women and men (Jaiyebo, 2003, 111). To better understand and identify the problem, the whole scenario needs scientific sociological research.

Methodology

The research techniques used in the present survey for specific fact-finding, and operations to yield the required social data, have been of a mixed-method strategy of investigation. While the main technique of study in this research is administering questionnaires, the author used interview method where necessary as well. Documents and books as major sources of evidence were used too, as primary source materials. While so far lesser attention has been paid to the loneliness studies in Iran, in the theoretical section, the author has referred to various theories and approaches, literature review and so forth. The survey based on questionnaire- design, attitude measurement and question wording, were as well accompanied by face to face interviews where necessary. In completing the research, lonely women and men were randomly selected, and for whom the questionnaires were filled in. Eventually 584 questionnaires were elicited and extracted. However, in completing the present research, and to produce a reliable and valid work, the procedure of research was followed through the fundamental methods mentioned. The research is based on the vulnerability hypothesis, i.e. "Women are more vulnerable than men due to the impact of the death of one's spouse".

It is often thought that loneliness is a common problem every-where regardless of race, religion, poverty or affluence, geo-graphical position etc. One of the main constraints of the lonely women and men, especially in countries like Iran, is their social isolation which highly stems from cultural4 norms and values prevalent in the society.

Loneliness is also reflected as a psycho-social transition in which the phenomenon is seen as a disruption to an accustomed way of life. Individuals will cope differently, depending on their personality, culture, education and social status (Kimmel, 1995, 48).

Increasingly, research on older lonely women and men is begin-ning to consider issues of reciprocity and/or exchange. In this model, older women are not seen as powerless victims. Social exchange theory (Antonucci, 1985) identifies loss of reciprocity as a condition under which social support may have negative consequences. For example, the support given to older partner-lost women, particularly by family, often leaves them in the role of passive recipients, or patients receiving treatment, and can leave them feeling powerless and dependent. Other social sci-entists like Watanabe, Green and Field (1989), who looked at the well-being of older partner- lost women linked to support, also found that too much support and lack of reciprocity had a negative effect on the women, perhaps because they felt they had less control. Such a focus on reciprocity allows us to see older widows as active participants in their social world, and thus builds in them the possibility of growth.

From the demographic perspective, the process of ageing is of-ten confounded with other associated factors, such as, deterio-rating physical health, poor nutrition, bereavement, social iso-lation and depression (Kuper and Kuper, 1996, 10), - all likely at the stage of losing a partner. That is to say, all the above situations are mostly experienced by the older lonely women and men in any society. To better elaborate the subject-matter, sociologists discuss the social changes brought about as succes-sive generations of people pass through life's stages, i.e. one of them being widowhood (Keller, 1994, 131). Widowhood and the solitude caused by that is also a period of change and new chal-lenges. It is a crisis for many women and men. It is a time for re-evaluating what has been accomplished so far, and for deciding what can realistically be achieved in the years remaining.

Another theory indicates that: as longevity is greater than the past, the number of widows and widowers depending on the timing and variance of death rates, are more than their overall level. If the ages of bride and groom at marriage are the same, and males and females are subject to the same life table, then according to present mortality trends, widowhood would di-minish. But, higher age at marriage of men, and specially the superior survivorship of women, introduces a strong element of asymmetry or lack of correspondence that makes the number of widows far greater than the number of widowers (Bongaarts, 1995,8). However, men and women are born, get married, and eventually die single. Regardless of divorce as a cause of mari-tal dissolution, a marriage persists until the death of one of the spouses, and that is when the state of widowhood, or widower-hood appears.

To further discuss the theoretical perspectives of later life widowhood, (Blau, 1973, 13) saw widowhood as a ''role-less status'', lacking any culturally prescribed rights and duties to-wards others in the social system. On the other hand, Ferraro also in 1984 identified some changes within family roles in the early stages of widowhood, particularly between mothers and daughters, when the daughter might take on the ''mothering'' role for a period of time. However, the effects of ''role loss'' in widowhood as Ferraro found, were not consistent, but were more likely to be the result of other factors surrounding wid-owhood, such as poverty, ill health, and/or very old age, rather than widowhood per se. Nevertheless, older women, though losing the role of ''wife'', compensate for this loss by adopting to other roles. By using these theoretical ideas, we can explore the cause-and-effect reflections of change in later life widow-hood. Finally, life-cycle theory rests on the belief that normal families go through normal stages of birth, growth, and decline. Marriage initiates the family, the arrival of children develops and expands it, their departure contracts it, and it ends with the death of one of the spouses (Bilton, et al., 2002, 255).

Literature Review

Through the review of relevant literature, the author was ena-bled to design his research. In this review, some research jour-nals, books, dissertations, theses and other sources of informa-tion were consulted. Hence, the main planned research was preceded by a review of related literature, followed by some of the works done by others. However, literature review helps the researcher to prescribe and define the proposed problem (Koul, 1993, 84).

So far as the author has investigated, much of the research on later -life loneliness has been conducted in the developed world in the 1970s and 1980s. The focus of the research has mainly been on the problems of loneliness and the support systems available for the lonely elders, and in many cases, studies were conducted within three years of the death of a spouse (Cham-bers, 1994). However, much of the literature on lonely women and men in the 1980s would be better construed as literature on "widows in bereavement".

The overall review of the literature indicates that lonely elders are a homogeneous group; and widowhood is synonymous with the acute state of bereavement. Older widows being not self-de-termining, are lonely and isolated. Generally speaking, elderly loneliness has been found out as a period of decline.

More recent qualitative research (Pickard, 1994) and others have started to question some of the prevailing myths of widow-hood, i.e. some of the numerous stereotypes and assumptions surrounding loneliness etc.

Extensive relevant literature reflects the fact of elderly loneli-ness as a major stressful life event (Holmes et al., 1967). On the other hand, Martin-Matthews (1991, 30) reports that a major characteristic of the Canadian widowhood research is its stress-related nature, with a focus on the event of becoming a widow.

However, widowhood is referred to, as the loss of a spouse, namely, a life event which requires most adjustment. Eileen Jones-Porter (1994) suggests that when it is assumed that the death of a spouse is a stressful event, researchers are more likely to frame data collection in terms of grieving and coping.

When we listen to the older lonely women and men talking about their present lives, they first express the difference that older women face in later life, and second, how their experience is shaped both by their own life expectation and the expectations of others. However, the challenges faced by the partner-lost women and men may include: family ties, friendship, residence, social interests, financial issues, loneliness, poor health, solo/alone living, and sometimes lack of confidence.

Although the lonely women and men used to comprise the largest group of the elderly people in the industrial world in the last three decades, many Asian countries including Iran are appearing the same in recent years. However, while the industrial societies have developed their social security systems to protect and handle the elderly widows and widowers, the developing societies including Iran, have a long way to go, to be able to handle these people favourably. It is remarkable that although the number of widows is increasing more due to the socio-demographic changes that have occurred, yet, very little information of these vulnerable people is within reach (Kinsella, 1996, 26). Therefore, to obtain a picture of the myths and realities of the widows, one must search a number of different sources of medical profession, research done by sociologists, psychologists, social workers, and many other different viewpoints.

However, in modern times, due to increasing socio-economic developments, governments have compulsorily intervened in the private affairs of families such as birth control etc. Though they compassionately try to promote social welfare, health and food standards, and quality of life of the families (Ezazi,2002,16), yet, the problems of the widows are not well recognized and touched, especially in Iran.

Historical literature review on widows denotes that in earlier centuries in the Western world, widows dominated the category of women without husbands, and death was a major source of instability in marriage. Estimates assert that, from medieval times to the mid 19th century, about half of those who married in their mid-twenties had lost their partner before they reached 60, and another view suggests that marriages in the last century were as fragile as those today: in the 1960s, a third of all marriages dissolved with the death of a partner within twenty years of being formed (Chandler, 1991, 15). However, widows are seen as an historically vulnerable group, with varied position due to their socio-economic structure.

Widowhood in its radical context could be found and followed in ancient India in the form of Sati5 wherein widows were obliged to burn themselves on the cremation ceremony/ funeral of their husbands. Though not practiced in modern era, yet, it could be sought among the very religious Hindus.

Gender and Marital Status

One of the most paining social problems that has long preoccupied sociologists of gender and mental health is that women have higher rates of depressive disorders than men due to the death of a partner. Recent studies indicate that women are twice as likely as men to experience such mental health (Kessler:2003). Similarly, in most studies conducted, from the 1970s to the present, women report significantly more symptoms of depression than men (Rosenfield and Mouzon:2013).

The present survey mainly depends on vulnerability hypothesis, with respect to the etiology of women's greater emotional distress after the death of one's husband. They usually express more emotional upset relative to men. By vulnerability hypothesis it is meant that: "Women are more vulnerable than men to the impact of the death of one's spouse". However, while women tend to be more reactive to family-related stress, men tend to be more reactive to employment-related stress (Simon and Lively:2010). Several longitudinal studies find that becoming married (and remarried) results in a significant decrease in symptoms of depression, whereas becoming divorced, widowed and losing spouse results in a significant increase in these symptoms of distress (Barrett:2000).

However, socio-structural, socio-psychological and socio-cultural factors contribute to persistent gender, marital status and quality-of-life differences in emotional well-being of women and men after the death of one of the partners. Loneliness after the death of one of the two spouses has also been described as a social pain; it is meant to alert an individual of isolation, and motivate her/him to seek social connections (Cacioppo:2008).

Gender Differences in Loneliness

Women in the industrialized world living seven to eight years longer on average than men do, is more or less becoming apparent in developing societies, and such a gap is widening further and further for the Iranian elderly lonely women too. This simple fact has many implications for the society's social structure. For example, there are five times as many widowed women in the U.S. as there are widowed men. Likewise, since women tend to marry older men in Iran as in many other societies, they are much more likely to be widowed during a large portion of their old age. As investigated in countries like the U.S., by their 65th birthday, about 25% of married women will be widowed; and half of the remaining ones will be widowed by age 75. Only one man in five will lose his wife during the same time span (Clausen, 1986, 55). Putting it another way, for people aged 65 or older, 75% of men, but only 40% of the women were living with their spouse (U.S. Bureau of the Census, 1990).

The experience of loneliness itself is different for women and men. Either of the partners after separation, i.e. loss of one spouse, will begin a difficult life, especially at the initial stages, and either woman or man will experience different phases/aspects, depending on one's social, familial and cultural conditions(Asgari, 2001, 315). In some ways, it is more difficult for men to adjust to, for they, not only lose their wives, but a system of domestic support is impaired as well; one that they

have always taken for granted. As many men currently in their sixties and seventies tend to be unfamiliar with cooking and household chores, so partner-lost lonely men may experience physical decline due to skipped meals and poor nutrition. Loneliness also clashes with men's self-definitions as independent and resourceful. They are not accustomed to asking for help, so they may get less assistance than they need from relatives and friends, because they are not seen as "needy". Among those over the age of 65, rates of suicide are much higher for widowed men than for those whose wives are still alive (Keller, 1994, 148). Though in this regard, there is not clear statistical evidence in Iran, but the case is very close to that of an industrial society with special reference to Tehran.

At the same time, remarriage however, being predominantly a male prerogative, for both demographic and cultural reasons, in 1981, there were only twenty-three unmarried men aged 65 and older for every one-hundred unmarried women in an industrial society like the U.S. which could be generalized to other developing societies like Iran. In addition, older men still have the further option of marrying younger women. As a result, men aged 65 and older are eight times more likely to remarry than women at this age (Horn, 1987). Interestingly, social status affects remarriage rates among the widows and widowers in opposite ways. The more education a woman has, and the higher her income, the less likely she is to remarry, while the reverse is true for men.

Statistically speaking, about half the women householders in Africa, Asia, the Pacific, and the industrialized regions are partner-lost. This is generally due to the trend for women to marry older men in most developing regions, and to greater female longevity.

Fewer Lonely Elders in Future

As life expectancy for both sexes is rising, the proportion of the elderly who are widowed at any given age will decline sharply. Women will be in particular affected because they are much more likely than men to be widowed. Today, for example, just over one-half (52%) of all South Korean women age 65 to 69 are lonely. This proportion is expected to drop to 17% in 2050. In Thailand too, 32% of women in this age group who are widowed today, is projected to drop to 17% in 2050. It is estimated, among men aged 65-69, only 8% are widowers in South Korea, and only 10% in Thailand. Since the proportions of men widowed are already low, the decline will be more modest for men than for women in future (East-West Center, 2002, 85). So far as Iran is concerned, loneliness will be increasing in the country for the next few decades, and then will drop as happened to South Korea and Thailand.

Findings and Data Analysis

Abridged Table 1: Classification of lost-spouse women/men by gender in Tehran City (No.,%)

Gender	Number	Percent
Total	584	100
Females	395	67.64
Males	189	32.36

Abridged Table 2: Classification of lost-spouse women/men by gender and the duration of loneliness in Tehran City (No.,%)

Age	Total		< 1 year		1-5 years		6-10 years		11-15 years		16-20 years		21-25 years		26-30 years		30+ years	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	584	100	92	15.75	178	30.48	130	22.26	67	11.47	51	3.73	32	5.48	16	2.74	18	3.08
Females	395	67.64	52	8.9	107	18.32	87	14.9	47	8.05	42	7.19	30	5.14	15	2.57	15	2.57
Males	189	32.36	40	6.85	71	12.16	43	7.36	20	3.42	9	1.54	2	0.34	1	0.17	3	0.51

Abridged Table 3: Classification of lost-spouse women/men by age , gender and the state of monthly pensions in Tehran City (No.,%)

Age	Total		Self pension		Own pension from ex-spouse		Without pension	
	No.	%	No.	%	No.	%	No.	%
Total	584	100	225	38.53	222	38.01	137	23.46
Females	395	67.64	80	13.7	218	37.33	97	16.61
Males	189	32.36	145	24.83	4	0.68	40	6.85

Abridged Table 4: Classification of lost-spouse women/men by age , gender and the state of safety/illness in Tehran City (No.,%)

Age	Total		Safe		Having 1 illness		Having 2 illnesses		Having 3 illnesses and more	
	No.	%	No.	%	No.	%	No.	%	No.	%
Total	584	100	216	36.99	202	34.59	93	15.92	73	12.5
Females	395	67.64	131	22.43	144	24.66	66	11.3	54	9.25
Males	189	32.36	85	14.55	58	9.93	27	4.62	19	3.25

Abridged Table 5: Classification of lost-spouse women/men by age , gender and the state of medical insurance in Tehran City (No.,%)

Age	Total		With medical insurance		Without medical insurance	
	No.	%	No.	%	No.	%
Total	584	100	445	76.2	139	23.3
Females	395	67.64	309	52.91	86	14.73
Males	189	32.36	136	23.29	53	9.08

Abridged Table 6: Classification of lost-spouse women/men by age , gender and their state of accommodation in Tehran City (No.,%)

Age	Total		Owning private residence		Tenant	
	No.	%	No.	%	No.	%
Total	584	100	479	82.02	108	17.98
Females	395	67.64	315	53.94	80	13.7
Males	189	32.36	164	28.08	25	4.28

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Fewer Lonely Elders in Future

Out of the 395 (67.64%) female samples, 1 (0.17%) of women declared that they had lost their husbands for less than one year, 14 (2.4%) asserted that they had lost their spouses for 6 to 10 years. Similarly, 19 (3.25%) of women denoted the loss of their husbands between 11 and 15 years. In another group, 35 (5.99%) of the sample women asserted to have lost their husbands for 16 to 20 years. While 28 (4.7%) of women declared that they had lost their spouses for 21 to 25 years, 41 (7.02%) of the sample women asserted the loss of their husbands for 26 to 30 years. Finally, 236 (40.41%) of the sample women asserted that the death of their husbands had happened 31 years ago or more.

Out of the 189 (32.36%) sample men studied, the highest number 147 (25.17%) is related to the men who had lost their wives for 31 years or more. High rate of maternal death and other health-related issues is responsible for the high frequency of loss of wives among the men.

So far as the problems of the widows and widowers are concerned out of the total 395 (67.64%) female samples, 177 (30.31%) stated their most serious problem as the loss of spouse, 76 (13.01%) declared their problem as the lack of enough income, 79 (13.53%) of the widows expressed their problems stemming from illness, and finally 63 (10.79%) of the sample women expressed their problems as others.

Similarly, out of 189 (32.36%) of the total male respondents, 111 (19.01%) declared their most serious problem as the loss of their wives, 32 (5.48%) suffered from inadequate income, 25 (4.28%) expressed their problem as suffering from some illness, and at last 21 (3.6%) declared their problems as others.

Some findings denote the quality of life of those who lost their spouses. Out of 395 (67.66%) female sample respondents, 141 (24.14%) suffered from social isolation, 148 (25.34%) suffered from material poverty, 35 (5.99%) had limited relationships with friends, and finally 71 (12.16%) of the females expressed to have limited relationships with the relatives.

As far as the male respondents are concerned, out of the total 189 (32.36%) male samples, 92 (15.75%) suffered from social isolation, 17 (2.91%) suffered from material poverty, 27 (4.62%) had limited relationships with friends, and 53 (9.08%) stated to have limited relationships with relatives.

Similarly, out of 395 (67.64%) of the female samples who had lost their husbands, only 10 (1.71%) were positive to reside in nursing homes, whereas 367 (62.84%) did not like to live in nursing homes, and finally 18 (3.08%) stated that they to some extent like to stay in nursing homes. Similarly, out of the 189 (32.36%) of male respondents, 19 (3.25%) were positive, and 149 (25.51%) were negative to stay in nursing homes, and finally 21 (3.6%) to some extent preferred to stay in nursing homes.

So far as leisure time pursuit of the widows and widowers is concerned out of the total number of 395 women, 133 (22.77%) preferred to participate at religious meetings, similarly, the same number of 133 (22.77%) used to spend their leisure time by visiting their children, 26 (4.45%) nursed their grandchildren, 39 (6.68%) used to spend their leisure time by seeing their kin, and 64 (10.96%) by other means. As far as male respondents in this category are concerned, out of a total of 189 lonely men, 30 (5.14%) expressed to spend their leisure time in religious meetings, 67 (11.47%) stated to spend their leisure time by visiting their children, 12 (2.05%) used to spend it by nursing their grandchildren, 14 (2.4%) used to spend their leisure time by visiting kin, and finally 66(11.3%) stated as others.

The survey tried to measure the feelings of such lonely women and men. Out of 395 such female sample respondents, 183 (31.34%) asserted to feel isolated and lonely, 32 (5.48%) felt poor, 107 (18.32%) used to feel dependent, and finally 73 (12.5%) stated to feel fortunate and happy. In the males section, out of 189 without - spouse men, 120 (20.55%) stated the feeling of isolation and loneliness, 15 (2.57%) stated to feel poor, 35 (5.99%) felt dependent, and finally 19 (3.25%) stated to feel fortunate and happy.

Discussion

As a result of the death of one of the spouses, the remaining other spouse, particularly the woman, faces various social, economic, psychological and emotional constraints. Therefore, widowhood is strongly associated with poor mental health (Das, Friedman and McKenzie: 2008). The state of having lost one's spouse to death could leave the wife with increasing problems regardless of where it happens. If we go back in history, widows in many cultures used to wear black for the rest of their lives to signify their mourning. Though it has been loosened in many societies and cultures, yet many widows comply with that. In the meantime, and as far as the remaining female spouses are concerned, their social networks are severely and negatively affected. Such an invisible group of women are usually excluded; they are painfully absent from the statistics of many developing countries. In such countries the exact number of such women (widows), their ages and other social and economic aspects of their lives are unknown.

Widows or those who lost their husbands comprise a significant proportion of all women; ranging from 7% to 16% of all adult women (UN: 2001). However, older women are far more likely than older men to be widowed. The proportion of which in Western Asia where Iran also is situated, is 48% for women aged 60+ as compared to 8% for men aged 60+ between 1985-1997. As far as women are concerned, the maximum proportion is 59% for women in Northern Africa and 39% in developed regions of the world. Similarly, as far as men are concerned, the lowest proportion is 7% in Africa and 14% in Eastern Europe. However, in order to achieve real advancement, women who have lost their husbands need support to get organized.

Conclusion

Not only in Iran, but across the globe, the women who have lost their husbands share two common experiences: a loss of social status and reduced economic circumstances. Even in developed countries the older generation of widows, those now over 60, may suffer a dramatic, but subtle change in their social position. Similarly, the monetary value of widows' pensions is a continuing source of grievance, since the value often does not keep up with fluctuations in the ever-changing cost-of-living indices. A global overview indicates that countries like India has the largest recorded number of widows in the world, 33 million, (10% of the female population, compared to only 3% of men); it is creating increasing problems for such women. Iran too, is in the same position relative to its population.

The data collected and their analysis, all reflecting different dimensions of the quality of life of those who lost their partners in Tehran, could help plan their lives in a better way; particularly under the circumstances that life expectancy is ever increasing, and women in their later life get the chance to remain alone for a longer course of time. As a result, many of the lonely women expressed satisfaction with their quality of life, and challenged the view that widowhood is a period of decline. They acknowledged that many changes had occurred in their lives. Many of them also acknowledged that they often were alone and isolated. Most of the widows studied, recognized that there had been changes from their married lives, adjusting to the new phase of life, network of friends, relatives, neighbours etc. The spouse-lost women surveyed, expressed that they had undergone a transition to another phase in their lives with new values and standards; some reflected positive aspects of their lives, while some dimensions caused them distress. Further research about such silent groups of elder women needs to be carried out; to listen to their voices and their needs in order to improve their quality of life and so forth.

End Notes

Quality of life: The concept being rather new in sociology, describes a social atmosphere in which standard of living lies in economic progress of a given society. In the course of quality of life, on a comprehensive and planned basis, however, social economy, social well-being, family happiness, national planning etc. could be expected and accessible. Quality of life also denotes to the manner in which an individual or group lives. It is currently used in a variety of contexts such as sociology, family, economics etc. The notion of quality of life among its other applications, is used to describe and distinguish between rural and urban, married and widowed life etc. Quality of life as a social manifestation has constitutive social elements; including social, economic and well-being indicators.

Life cycle: The process of personal change from infancy through to old age and death, brought about as a result of the interaction between "biological events" and "societal events".

The sociological concept of life cycle does not refer to the purely biological process of maturation, but to the transitions of an individual through socially constructed categories of age, and to the variations in social experiences of ageing. For example, while men and women have very different social experiences of biological ageing, the length and importance of "childhood" varies among cultures. In alternative sense, the life cycle of a family is a process which includes courtship, marriage, child-rearing, children leaving home, widowhood/widowerhood, and finally dissolution of the family unit.

Emotional crises: The term used for emotional behaviour in disconformity with, that expected from an individual's age level within a given society. However, emotional crises may be any disruptive life events, possibly entailing the loss of important relationships and social status, which may threaten the integrity of the self and its social relationships. An indicative list is bereavement, divorce, marriage, widowhood/widowerhood, job loss or change, disability, retirement, migration etc. which may involve stress and anxiety, are implicated in the causation of some diseases and emotional crises. They form an important area of study for sociology of health and medicine. It is also counted as a central factor for consideration in the fields of counselling and psychotherapy.

Cultural norms and values: These characteristics are essential for the survival of any society. Cultural norms are the prescriptions which are serving as guidelines for social action. Human behaviour exhibiting certain regularities, are the product of adherence to common expectations or norms. While deviation from norms is punished by sanctions, norms are acquired by internalization and socialization. The concept is central theories of social order. On the other hand, social order and cultural survival depend on the existence of general and shared values which are regarded as legitimate and binding, and act as a standard by the means of which the ends of action are selected. The linkage between norms and values is achieved through the process of socialization.

Sati or Suttee: A Hindu custom known as a solution to widowhood was found in ancient India. In that, Hindu women who had lost their husbands were obliged to commit suicide on the funeral pyres of their dead husbands. There are a number of explanations for this practice. Sati has an economic basis. It was customary in India for a husband's property to be distributed between his mother and his sons. The widow, not having any means to live on, and no support, her only option was suicide. Another explanation expresses Sati as a part of Hindu culture, and the caste system. It is an act of self-sacrifice to assist the spiritual progress of the husband after death, and was practised more by higher caste women (Chandler, 1991, 17).

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Medicine and Society

Ageing: Predicament and promise

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In the name of Allah, Most Gracious, Most Merciful

O mankind! if ye have a doubt about the resurrection,(consider) that We created you out of dust, then out of sperm, then out of a leech-like clot, then out of morsel of flesh, partly formed and partly unformed, in order that we may manifest (our power) to you; and We cause whom we will to rest in the wombs for an appointed term, then do We bring you out as babes, then (foster you) that ye may reach your age of full strength; and some of you are called to die and some are sent back to the feeblest old age, so that they know nothing after knowing (much),and (further), thou seest the earth barren and lifeless, but when We pour down rain on it, it is stirred (to life), it swells and it puts forth every kind of beautiful growth (in pairs). This is so, because Allah is the Reality: it is He Who gives life to the dead, and is He Who has power over all things.

*Sura Al-Hajj [the Pilgrimage] (The Holy Qur'an)

Old is a nebulous term. An active and fit eighty-year old woman can be as young as a sedentary, sixty-year old woman. We all have both a chronological age measured in years, as well as a psychological age that is expressed in our emotional and mental state. Furthermore, the ageing process does not occur at a uniform rate all over the body and is a very individualistic phenomenon. But what actually happens to us when we get older? Do we gradually disappear as our memory and eyesight fail us? As our bodies and minds begin to fail us what do we become? It is said when you are 80 year old you know everything, but remembering is the problem.

My grandmother a small woman in her mid nineties with rough worn hands and a warm smile; I love her raisin tea bun and the plateful of homemade cookies she offers every time I visit her in her room which is filled with unhurried peaceful stillness which encourages a slower pace of life. Wearing glasses magnifying her eyes she tells me that her legs are stiff and all hanged up; she can no longer perform her ritual prayer (genuflection) as she used to do before. She finds her hearing aids too bothersome to wear so she 'd rather avoid social events with large crowds of people, being in a large room with boisterous people where she is unable to follow a conversation is uncomfortable and distressing .However she is fortunate because I know people at her age require incontinence pads. For some of them their sense of pride often leads them to avoid social company (who can blame them!). Even though she has had to deal with many losses in her

life in the war torn country Iraq she has managed to create her own enjoyment out of simple things in life. I set out with questions only to arrive with handfuls of new questions. Ageing is too often like the process of peeling.

Layer by layer, year by year, we surrender yet another piece of our independence, another part of our identity, as our bodies and minds fail us and as we lose another ability, another friend, and another cherished memory. However, amongst these stories of losses, I sensed underlying optimism and determination. How can we turn each loss and each new hardship into an opportunity to reinvent ourselves, to create a new connection, to experience another facet of life?

Ageing, says Richard Suzman is "reshaping our world". Like climate change, "it seems inexorable, and is gradual", but the global impact of ageing on health, disability, wellbeing, and poverty might eventually turn out almost as profound for society as rising temperatures. Awareness is growing that the world's population is rapidly ageing. Although much of the related policy debate is about the implications for high-income countries, attention is broadening to less developed settings. Middle-income country populations, in particular, are generally ageing at a much faster rate than was the case for today's high-income countries, and the health of their older populations could be substantially worse.

Recently, a medical student entered an operating room in a tertiary care medical centre affiliated with a leading American medical school. The room had pale walls, bright lights, lots of chrome, and a gurney on which lay a large, unconscious man, his abdomen open. A surgeon greeted the student enthusiastically. He had a reputation as an outstanding teacher and explained the procedure so the student could understand what he would be doing and how she could help. Until that moment, the student hadn't considered surgery as a career option. As if he could read her thoughts, the surgeon asked, "So, do you know what you want to go into?"

"I think I do," replied the student. "Geriatrics." The surgeon's head jerked up. Then he raised his voice to a high pitch whine and intoned, "Doctor, I'm constipated. Doctor, I'm constipated." Laughing, he scanned the room for agreement before returning to work. At regular intervals during the surgery, the surgeon repeated the same phrase in the same tone as if by doing so he could communicate everything a young almost-doctor needed to know about older patients. Although some might argue that this story represents nothing more than the indiscretions of a misguided physician or attitudes at a single institution, conversations with colleagues nationally and internationally suggest otherwise.

In such anecdotes, replace the older patient with a black or female or disabled patient, and you get a sense of the scope of the problem-derision, segregation, and discrimination. But as Harvard psychologist Gordon Allport pointed out more than a half century ago in his seminal book, The Nature of Prejudice, "People who are aware of, and ashamed of, their prejudices are well on the road to eliminating them." This is not a new problem-either for medicine or for society. During the 1960s, US physician Robert Butler coined the term ageism, which he defined as: "A process of systematic stereotyping of and discrimination against people because they are old, just as racism and sexism accomplish this with skin color and gender". "Aging," wrote Butler "is the neglected stepchild of the human life cycle. Though we have begun to examine…death, we have leaped over that long period of time preceding death known as old age." He ascribed this neglect to ageism, noting that older adults are often viewed as universally sharing certain negative attributes, including senility and rigid thoughts and beliefs. In fact, older age is the most varied time of life; there are the 80 year olds who hold public office or run marathons, and there are those who live in nursing homes because they can no longer walk, think, or care for themselves. Why then might people ascribe such uniform negativity to older age? Butler had the following explanation: "Ageism allows the younger generations to see older people as different from themselves; thus they subtly cease to identify with their elders as human beings." This makes sense, but it doesn't fully explain what seems to be a widespread need to hold older adults apart. It's also true that we feel sympathy for-and those of us in medicine may devote our careers to caring for-people with malaria, lung disease, or cancer perhaps in part because many of us don't and won't have those challenges. We are safe. Not so for old age. Barring an early death, old age is every human's fate, and not one generally met with eager anticipation. In some ways, even death might be more attractive. It is more clear-cut we are either alive or dead. For many, it is the way in which life might

be compromised by advanced age, limping slowly rather than leaping towards death that brings the greatest dread. In reality, most older adults are content, productive, and living independently. But we rarely acknowledge how well old age can and often does go, with years and decades offering new opportunities for work, pleasure, family, relaxation, and self-knowledge. Instead, in everyday life, we see grey hair and baldness, limps and stooped posture and slowed paces, wrinkles and canes and hearing aids. In medicine, we see the disquieting extremes: the acutely ill, the multi-morbid, and chronically disabled, and the almost, but not quite, dead. Perhaps it is because the effects of age are so visible, even in the healthiest older adults, and because most people do become ill or disabled in some way before death that we reduce the last, decades-long phase of life to a single, noxious state, despite overwhelming evidence about its joys and variety. The English literary humanist, William Hazlitt, described prejudice as "the child of ignorance". This comment rings true for certain sorts of prejudice. But we all know older people. We have parents and grandparents, friends and mentors. Sometimes, it seems, prejudice is borne less of ignorance than of fear and dread. I am inclined to go with Voltaire who said, "We are all formed of frailty and error let us pardon reciprocally each other's folly."While elimination of prejudice is utopian, recent advances in the rights, achievements, and medical care of other systematically marginalized groups offer precedents for how we can reduce bias and improve care for older adults. The first step toward overcoming ageism in medicine is acknowledging the problem. As Allport pointed out: "If a person is capable of rectifying his erroneous judgments in the light of new evidence he is not prejudiced…A prejudice, unlike a simple misconception, is actively resistant to all evidence that would unseat it." To combat ageism in medicine, we cannot tolerate speech and jokes based on stereotypes and fear, or allow isolation and avoidance of patients on the basis of age (or other inherent characteristics), or continue age-based and age-blind policies, research agendas, and care plans. The care of older patients may differ from that of younger patients, but older people are no less deserving of our respect, compassion, and highest quality care.

Finally in Muslim culture, respect and esteem increase with age. Elderly parents are respected on account of their life experiences and hierarchic position within the family unit. The opportunity to attend to the needs of one's parents in their later years is viewed as a gift from the mighty Allah. In the Muslim community one is astonished that so much emphasis was put on the relationship with the parents. Here are a few sayings of the prophet Muhammad on this subject.

May his nose be rubbed in the dust! May his nose be rubbed in the dust! (an Arabic expression denoting degradation). When the Prophet was asked who he meant by this, he said " The one who sees his parents, one or both, during their old age but does not enter Paradise"(by doing good to them).

A man came to prophet Muhammad and asked him permission to go to battle. The Prophet asked him, "Are your parents alive". The man replied "yes'. The Prophet responded, 'Then strive to serve them".

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