Health Needs of Elderly People at Primary Health Care Centers in Antalya, Turkey

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Abstract

Background: Elderly Friendly Primary Health Care Centers is a World Health Health Organisation (WHO) sponsored initiative to support low resourced primary health care (PHC) organisations for the provision of high quality care to suffering people with disability, frailty and chronic conditions. The aim of this study was to evaluate health needs of patients > 60, who were attending primary health care centers in Antalya, Turkey.

Methods: This cross-sectional study included 438 participants attending PHC centers and 1 outpatient clinic of a private hospital. Patients > 60, without an acute and psychiatric condition or terminal condition, speaking Turkish, and voluteers were included in this study. The "10 Minute Comprehensive Screening" Tool of "WHO-Age Friendly PHC Toolkit" was used. Ten subgroups of the 10 Minute Comprehensive Screening were identified for the scoring process. The data of this study was analysed with descriptive, Chi-Square, T Test and Anova statistics. The level of significance was set to p< 0.05.

Results: Participants were 69.4+/-6.06 (61-94) years old. Different subdomains of the "10 minute comprehensive screening" tool revealed that health problems (cognition, urinary incontinence, affective symptoms, mobility, fall risk, malnutrition, hearing impairement, and visual impairment) in participants were frequent and cognitive scores, IADL mobility, total mobility and hearing impairment worsened with increasing age (p<0.05). Female participants suffered more urinary incontinence, depressive symptoms, fall proneess, and visual impairment; and male participants more hearing impairment (p<0.05).

Discussion: The "WHO-Age Friendly PHC Toolkit" is an important tool to detect unmet health needs of elderly people in the community. The determination of these geriatric problems will help elderly patients and their caregivers/relatives to seek further support from the health system. Family physicians in primary health care and if needed secondary care physicians, will certainly welcome these pre-evaluated patients with a certain management focus.

Key words: Family Practice, Primary Health Care, Geriatric Assessment, Screening, Prevention, Frailty, WHO, Turkey

Introduction

Elderly Friendly Primary Health Care Centers is a World Health Health Organisation (WHO) sponsored initiative to support low resourced primary health care (PHC) organisations for the provision of high quality care to people suffering with disability, frailty and chronic conditions [1,2]. Health authorities of various countries have well accepted the need for equal access to clinical, evidence-based, socially acceptable, and sustainable PHC services. The concept of active aging has been well addressed in the last years and an implementation to PHC services is urgently recommended. At least preparedness to two most frequent chronic conditions (DM, HT) and four geriatric giants (dementia, depression, falls, and urinary incontinence) have been called for action [3].

Periodic evaluation of aging people could contribute to the active aging efforts. The evaluation of functional abilities, psychological status, social parameters and frequently observed conditions of the elderly should be performed with a patient-centred effort. Since PHC facilities are commonly low resourced settings with a heavy workload and insufficient number of staff, pragmatic approaches are needed to address the needs of aging people. By screening and case-finding strategies preventive services, health risk estiamtes and counseling services could be delivered and frequent health problems managed in the PHC setting. Any progression of the condition and need for further evaluation should be referred for consultation to appropriate specialists [4]. No study has addressed this issue by using the 10 minute screening instrument of the WHO Elderly Friendly Primary Health Care Toolkit [3,5]. The aim of this study was to evaluate health needs of patients > 60, who were attending primary health care centers in Antalya, Turkey.

Material and Methods

The data of this study originated from a specialisation thesis in family medicine entitled "The Pilot Implementation of World Health Organisation Age-Friendly Primary Health Care Center Toolkit in Antalya" [6], which was defended at Akdeniz University, Faculty of Medicine in 2008. The data originally covered the range of people between 60-94 years, the "10 Minute Comprehensive Screening" Tool, SF-36 and EUROPEP questionnaires. To provide a better distribution of the dataset, in this study participants between 61-94 years were considered.

This cross-sectional study was performed between 01.06.2007 to 06.12.2007. First the translated version of "WHO-Age Friendly PHC Toolkit" was piloted in a small sample. In July 2007 this study was performed in a larger sample covering 10 PHC centers (≥ 65 population >6%) and 1 outpatient clinic of a private hospital. Patients ≥ 60, without an acute and psychiatric condition or terminal condition, speaking Turkish and volunteers were included in this study. The "10 Minute Comprehensive Screening" Tool of "WHO-Age Friendly PHC Toolkit" was used to screen elderly people attending the PHC centers [3].

The "10 Minute Comprehensive Screening" Tool: This screening tool has 3 sections. The first section comprises the name, age and gender of the patient. The second section includes questions on cognitive status (first 3-Item Test and second 3-Item Test) (3-Item Test for the 1st minute PPV =0.60 and NPV=0.92) [7,8], urinary incontinence (positive answers to both questions revealed a PPV=0.86 and NPV=0.96) [7,8], depressive symptoms (a positive answer revealed a PPV=0.70 and NPV=0.91) [7,8], mobility (Positive response to all 6 items had a PPV=0.88 and NPV=0.77) [7,8] and falls (Timed Stand-Up and Walk Test has a sensitivity of 0.88 and specificity of 0.94. The test of this study is a modification of this test) [9,10]. Additional questions and tests in the third section evaluated for nutritional status (loss of 4.5 kg or <45 kg had a sensitivity of 65-70 and spesifify of 87-88) [7,8]; hearing test (Whisper Test: sensitivity 0.80-1.00 and specificity 0.82-0.89) [7,8] and vision test (Screening Question and Snellen Test: PPV=0.75 and NPV=0.89) [3,7,8] (Figure 1). The internal reliability Cronbach alpha was 0.67 (10 subgroups: Cognitive Score, Urinary Incontinence, Depressive Symptom, IADL Score, ADL Score, Total Mobility Score, Falls Score, Nutrition, Hearing, Vision Score) [5].

Scoring of the "10 Minute Comprehensive Screening" Tool: 10 subgroups have been identified for the scoring process [3,7]:

Cognitive Score: The recall of all three items were scored with 0 points and failure to recall 1 points. The summation of the points of the first and second cognitive tests scores (3-item test) revealed the cognitive score. Patients with a score ≥ 1 points were referred for further evaluation.

Urinary Incontinence Score: "Yes" answer revealed 1 point and "no" answer 0 point to the questions "In the last year have you ever lost your urine and gotten wet?" and "Have you lost urine over the past week?". Patients with a score of 2 points were referred for further evaluation.

Depressive Symptom: A "yes" answer to the question "Do you often feel sad or depressed?" were scored with 1 point and were a reason for further evaluation.

Mobility: Four items comprised the IADL Score (Instrumental Activities of Daily Living) and two the ADL (Activities of Daily Living). Each "yes" answer was scored 1 and "no" answer 2 points. The IADL Mobility Score (min-max=4-8 points), ADL Mobility Score (min-max=2-4 points) and Total Mobility Score (IADL Mobility Score+ ADL Mobility Score; min-max=6-12 points) was calculated by summing up all appropriate item scores. Participants who had at least one deficit in the mobility scores were referred for further evaluation.

Fall Score: Patients giving a positive answer to "Have you fallen 2 or more tims in the past 12 months?" were directly referred for further evaluation and scored with 6 points. A negative answer was the reason for the chair test (Rise from the chair, walk around it without holding on). Positive

performance was scored with 1 point and negative with 2 points. Positive performers were evaluated for steadiness (1 point) and unsteadiness (2 points). Summing up three items and substraction of 3 points revealed the fall score (min-max=0-3).

Nutrition: Answers to the question "Have you noticed a change in your weight over the past 6 months?" were scored with 2 points for "increased", 3 points for "decreased" and 1 point for unchanged. The actual body weight was measured and a body weight below 45 kg or a change of body weight during the last 6 months was a reason for referral.

Hearing Test: The whisper test was applied (Standing behind a person and asking the person to repeat after you - 6, 1, 9; softly, then in normal voice)" and participants with hearing problems were referred for further evaluation.

Vision Score: Positive answers received 1 point (negative response = 0 point) to the question "Do you have difficulty reading or doing any of your daily activities because of your eyesight?" and were examined with SNELLEN eye chart test (without glasses & then with glasses). Vision problems revealed 1 point (normal examination 0 point). Vision score was calculated by summing up both and a vision score of 2 points (min-max=0-2).

Age groups: The variable "age" was grouped into subgroups 61-64, 65-69, 70-74 and ≥75. The data of this study was analysed with descriptive, Chi-Square, T Test and Anova statistics. The level of significance was set to $p < 0.05$.

Results

The age of participants (n=438) was 69.4+/-6.06 (61-94). The distribution of age subgroups and genders are shown in Table 1. Positive screening results of the "10 minute comprehensive screening" tool are shown in Table 2.

Table 1: The distribution of age subgroups and gender

	n	%
Age		
61 – 64	106	24.2
65 – 69	133	30.4
70 – 74	116	26.5
75 +	83	18.9
Total	**438**	**100**
Gender		
Male	223	50.9
Female	215	48.1
Total	**438**	**100**

Comparing the changes of different subdomains of the "10 minute comprehensive screening" tool with different variables revealed the following results: Cognitive, IADL

mobility, Total Mobility and hearing scores worsened with increase of aging ($p < 0.01$). Urinary incontinence, depressive symptoms, fall proneness and vision problems were more frequent in women ($p < 0.01$); and hearing problems in males ($p < 0.01$). IADL and Total Mobility scores and hearing test was worse in participants with lower cognitive test score ($p < 0.01$). Urinary incontinence, vision problems and fall risk was more frequent in patients with depressive symptoms ($p < 0.01$). IADL mobility was worse in participants with cognitive, urinary incontinence and hearing problems ($p < 0.01$). ADL Mobility was worse with vision problems ($p < 0.05$). Total Mobility Score was decreased with cognitive, risk of falls and hearing problems ($p < 0.01$). Higher risk of falls was increased in women, and urinary incontinence, depressive symptoms, lower IADL Mobility, lower ADL Mobility, lower Total Mobility, body weight decrease, hearing problems, vision problems, in women ($p < 0.01$). More vision problems were observed in participants with body weight loss during the last 6 months ($p < 0.01$). Cognitive problems, lower IADL Mobility, lower Total Mobility and vision problems were found in participants with hearing problems ($p < 0.01$). Older participants had more frequent hearing problems ($p < 0.01$). Urinary incontinence, depressive symptoms, lower ADL Mobility, loss of body weight and hearing problems were more frequent in participants with vision loss ($p < 0.01$).

Discussion

This study revealed a worsening of the three-item recall test and an increased frequency of undiscovered health problems (cognition, urinary incontinence, affective symptoms, mobility, fall risk, malnutrition, hearing impairment, and visual impairment in participants. Cognitive scores, IADL mobility, total mobility and hearing impairment worsened with increasing age. Female participants suffered more urinary incontinence, depressive symptoms, fall proneness, and visual impairment; and male participants more hearing impairment.

Cognitive capacity declines with increasing age [11] and saving cognitive capabilities are needed to prevent handicaps and dependency [12]. Our findings are smillar to those findings. The change of failing to achieve the three-item recall tests ranged from 5.5 to 53.2% within one minute. Delay in recall is an important symptom for early dementia or mild cognitive impairment [13]. Single domain tests like the three-item recall test is accepted as an efficient method for screening [14]. The prevalence according to a single domain test has been found at 10.6% (sensitivity 68.5% and specifity 85.9%) [13].

The screen for urinary incontinence in women revealed 28.5 % positivity. This conforms to the prevalence of urinary incontinence in women in different countries, which is estimated to be between 5-69% [15]. Participants (14.4%) screened positive for depressive symptoms. Depression is frequently observed in elderly people and the prevalence in the elderly varies between 7-49 % [16,17]. Patients with depressive symptoms suffered more urinary incontinence, visual impairment and falls risk. The knowledge that

Table 2. Positive screening results of the "10 minute comprehensive screening" tool

Domain		Positive Results; n (%)
Cognitive		
	1. Three-Item Recall (1st)	24 (5.5)
	2. Three-Item Recall (2nd)	233 (53.8) (missing; n=5, %1.1)
	Memory Score (>0 score)	233 (53.8) (missing; n=5, %1.1)
Urinary Incontinence		
	1. In the last year have you ever lost your urine and gotten wet?	120 (27.4)
	2. Have you lost urine over the past week?	37 (28.5) (missing; n=309, %71)
	Urinary Incontinence Score (>1 score)	37 (28.5) (missing; n=309, %71)
Depression		
	1. Do you often feel sad or depressed?	63 (14.4) (missing; n=1, %0.2)
Mobility-IADL	1. Are you able to Run/fast walk to catch the bus?	211 (48.2) (No)
	2. Are you able to do heavy work around the house, like washing windows, walls or floors?	237 (54.1) (No)
	3. Are you able to go shopping for groceries or clothes?	56 (12.8) (No)
	4. Are you able to get to places out of walking distance? (drive, take a bus)	58 (13.3) (No) (missing; n=1, %0.2)
	Mobility-IADL Score	247 (61.2) (at least one deficit)
Mobility-ADL	1. Are you able to bathe, either in a tub bath or shower?	5 (1.1)
	2. Are you able to dress, like putting on a shirt, buttoning and zipping, or putting on shoes?	5 (1.1) (missing; n=1, %0.2)
	Mobility-ADL Score	8 (1.9) (at least one deficit) (missing; n=1, %0.2)
	Total Mobility Score	267 (61.2) (at least one deficit) (missing; n=2, %0.5)
Falls		
	1. Have you fallen 2 or more times in the past 12 months?	42 (9.6) (missing; n=1, %0.2)
	2. Rise from the chair, walk around it without holding on. Able to do:	2 (0.5) (missing; n=50, %11.4)
	3. Rise from the chair, walk around it without holding on. Unsteady:	4 (1.3) (missing; n=128, %29.2)
	Fall Score	45 (12.7) (missing; n=86, %19.6)
Nutrition		
	1. Have you noticed a change in your weight over the past 6 months?	159 (27) (missing; n=8, %1.8)
	2. Weight Change	Increase: 53 (12.3) Unchanged: 271 (63.0) Decrease: 106 (24.7)
	3. Body Weight (<45 kg)	1 (0.2)
Hearing		
	1. Stand behind person and ask the person to repeat after you - 6, 1, 9; (softly then in normal voice)	134 (30.4) (missing; n=4, %0.9) (Needs Audiogram)
Vision		
	1. Do you have difficulty reading or doing any of your daily activities because of your eyesight? (even with wearing glasses)	207 (49.9) (missing; n=23, % 5.3) (Needs Snellen Exam)
	2. If positive screen, if available, ask to complete SNELLEN eye chart (without glasses & then with glasses)	63 (33.3) (missing; n=249, % 56.8) (Needs Eye Exam)
	Vision Score	63 (33.3) (missing; n=249, % 56.8) (Needs Eye Exam)

depression increases morbidity and mortality might support these findings [18]. Similar to our study, depression has been reported higher in women than men [19].

Screening for mobility revealed positivity for IADL in 61.2%, ADL in 1.1%, and total mobility in 61.2%. In a study by Bahat G et al. IADL was found at 64% and ADL 23.4% [20]. Disability and the increase of prevalence with age is well described in older people and is well reported in the literature [21].

Fall risk was positive in 12.7% and more frequent in female participants. The increased risk of fall risks could be explained with the change of gait patterns in aging people [22]. The question on perceived weight change during the last six months revealed 27% positivity. Weight changes are frequently observed in elderly people. In a study, weight increased until 70 years of age and declined in both sexes afterwards [23]. These changes are explained by different factors such as physiological, psychological and social factors [24].

The screen for hearing impairment was positive in 30.4% of participants. Loss of 25 dB and more involves 37 % of older people 61-70 years, 60 % of 71- 80 years, and over 80 % > 85 years [25]. This might have negative effects on functioning and wellbeing in people [18]. Hearing impairment is also increasing with age [26]. Men, such as those in our study, suffer more and have an earlier onset of hearing deficits than women [27].

Visual examination with the Snellen eye chart revealed a positivity of 33.3%. Different levels of frequencies have been detected in older people, but commonly the prevalence of visual impairment is increased [28]. Visual impairment in elderly people is associated with increased risk of falls and cognitive impairment [29]. Visual impairment and risk of falling was more frequent in women. One study made an observation on visual impairment and lower extremity deficits. Shared background factors might cause vision and lower extremity impairment [30].

Conclusion

The aged-friendly primary health care toolkit is an important instrument to detect unmet health needs of elderly people in the community. The ten minute screening instrument contained items, which were previously validated [7]. The definition of these geriatric problems will certainly help elderly patients and their caregivers/relatives to seek further support in the health system. Family physicians in primary health care and if needed secondary care physicians, will certainly welcome thses pre-evaluated patients with a certain management focus.

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