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Editorial

Dr Abdul Abyad

Chief Editor



This is the first issue this year and we are glad with the progress the journal has made but the field of research on aging in the region is still deficient as is clear from the number of papers received and the number of papers on ageing coming from the region and published in international journals as well.

In this issue we have a cross sectional study from Egypt that studied the prevalence of polypharmacy and inappropriate medication use among elderly persons in an Egyptian rural area. The authors stressed that Polypharmacy contributes to medication errors, non-compliance and increased risk of hospitalization leading to poor quality of life. The authors noted that the percentage of polypharmacy was 56%. In addition inappropriate medication use was reported in 41% of the participating elderly. The authors concluded that polypharmacy is an important problem in the elderly population. There is a high significant association between the number of physicians' consultations and polypharmacy. There is significant relation between polypharmacy and inappropriate medication use.

Using an internationally developed instrument for the elderly in the Arabic culture is not possible without proper validation. A paper from Mansoura University looked at Validation of the Arabic version of the Berg Balance Scale. The authors translated Berg Balance scale (BBS) to the Arabic language (A-BBS) and evaluated its reliability and validity. The authors found that the Arabic version of BBS shows high internal consistency with a Cronbach's α of the total scale of 0.91. The correlation coefficient values for intra-rater and inter-rater reliability of the total score are 0.97 and 0.95, respectively. The authors concluded that despite the sample size of our study population (n=60), the Arabic version of BBS appears to be a

reliable and valid instrument with high internal consistency to be used in the elderly living in a community setting.

A paper from Bangladesh looked at the Problems and Needs of Elderly People. The authors estimated that 7.3 million people are currently 60 years on older, and it is projected that these number will increase by 173 percent by 2025. Around 34 percent of the Bangladeshi population lives below the national poverty line (UNDP 2003), and 36 percent of the population earns less than \$1 a day. It is one of the poorest countries in the world. The author focuses on various problems and needs of elderly people in Bangladesh, like health problems, mental problems and problems of health care services, housing, security and so on. At the end he gives some recommendations on how to eradicate major problems and needs of the elderly people in Bangladesh.

A randomized double blind study from Jordan looked at the effect of Transversus abdominis block on decreasing pain following laparoscopic cholecystectomy in elderly patients. The authors found that the amount of morphine consumption postoperatively was significantly less in transversus abdominis block. They concluded that preoperative transversus abdominis block improves postoperative pain outcome after laparoscopic surgeries .

A second prospective, controlled double blind study from Jordan looked at the use of Tramadol to compare the analgesic effect of morphine and tramadol for postoperative pain after thoracic surgeries. The authors found that Morphine and Tramadol has the same equipotency to reduce post operative pain following thoracic surgical procedures over the first three hours.

Validation of the Arabic version of the Berg Balance Scale (A-BBS) among elderly residents in a rural community

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ABSTRACT

Objectives: To translate Berg Balance scale (BBS) to the Arabic language (A-BBS) and to evaluate its reliability and validity.

Methods: Two persons proficient in English independently translated the original scale into Arabic and a consensus version was generated. Two translators performed a back transformation. Discrepancies were discussed and solved by a panel. The final Arabic version was then tested on sixty elderly, 60 years and more, male and female, were interviewed. Reliability of the measure was assessed twice by one researcher (with a one-week interval between assessment) and once by another researcher.

Results: The Arabic version of BBS shows high internal consistency with Cronbach's α of the total scale of 0.91. The correlation coefficient values for intra-rater and inter-rater reliability of the total score are 0.97 and 0.95, respectively. The intra-rater correlation of different score items ranges from 0.75 to 0.96 and the inter-rater correlation of different items ranges from 0.71 to 0.98. Factor analysis revealed that the total matrix variance was 72.9% of the three factors (factor 1, 49.3%, factor 2, 13.0% and factor 3, 10.6%).

Conclusion: Despite the sample size of our study population (n=60), the Arabic version of BBS appears to be a reliable and valid instrument with high internal consistency to be used in elderly living in a community setting.

Keywords: Berg Balance Scale, Reliability, Validity, Arabic Version.

Introduction

The performance of all activities of daily living requires good balance control while at rest or when moving from one position to another. Maintenance of balance requires the coordination of sensory, neural and musculoskeletal systems.(1,2) Many of these systems undergo deterioration as people age and this has the potential to affect balance, restrict safe mobility, increase the likelihood of a fall and adversely affect quality of life.(1,3,4) Falls in older people are a major public health concern in terms of morbidity, mortality and health care costs.(5) Fear of falls may discourage the elderly from being active and the inactivity, in turn, may reduce their functional abilities.(6) Therefore, the multi-factorial assessment of balance is important to direct appropriate interventions to improve balance performance and to reduce the risk of falling.(7-9)

The Berg Balance Scale (BBS) was developed as a performance-oriented measure of balance in elderly individuals, and to predict multiple falls in community-dwelling and institutionalized older adults. It is also widely used in many fields of rehabilitation. (1,10,11) The scale comprises 14 items assessing the static sitting and standing balance, as well as anticipatory balance during activities commonly performed in daily function, including transfers, turning, and retrieving objects from the floor.(1) The scoring is done on a 5-point scale, that considers whether the elderly can perform the task safely and independently, often based on a definite time span. Normal performances are graded from 0 (unable to perform) to 4 points (normal performance). Scores on individual items are summed for a total score, with a maximum of 56 points.(1) The assessment takes 20-30 minutes, depending upon the sensorimotor and cognitive function of the subjects. The scale has been shown to possess very good inter-rater and intra-rater interclass correlation coefficients and very good internal consistency. Prognostic and concurrent validities have demonstrated moderate statistical correlations.(1,10-14) The ease with which the BBS can be administered makes it an attractive measure for clinicians; it involves minimal equipment (chair, stopwatch, ruler, and step) and space and requires no specialized training.(15)

The BBS has been translated into many languages e.g. Norwegian (16), Italian (17), Brazilian (18-20), Chinese (21), Korean (22), Turkish (23), and Farsi. (24) To the best of the authors' knowledge BBS has not been translated into Arabic language. The objectives of the present study were to translate BBS to Arabic and to test the reliability of its scores among rural community-dwelling elderly.

Population and Methods

This study was done in Met Kamise village, about 5 km away from Mansoura city, Egypt.

The study subjects included sixty elderly of both sexes with a history of fall within the last year, living in Met Kamise village. The exclusion criteria are: chronic diseases (e.g. cardiac, respiratory, neurologic, severely limiting arthritis, severe psychiatric diseases, and cancer), surgery, limb amputation, chemotherapy or radiotherapy within the past year; and acute illness on the days of the assessment.

The BBS was initially independently translated by two researchers proficient in English, whose native language was Arabic. The two translations were compared and when differences were identified, the texts were modified to obtain consensus between the two translations regarding the initial translation. The consensus Arabic version was again translated back into English by the other two researchers who were unaware of the original version. The two English versions were compared with the original English version. The differences were analyzed, and questions and/or response choices were rewritten when necessary, thus approving a second Arabic version. All the items involving misunderstanding were replaced and discrepancies were resolved by the four authors (see appendix).

The participants were interviewed and tested in their own homes or in the corridor outside their rooms. They were informed that they could stop the testing session whenever they wanted and that they were allowed to rest between tasks, if necessary. They also were told to wear stable and comfortable shoes.

To test the reliability of the Arabic BBS, the final version was applied to the 60 elderly during three assessments. The first two assessments were performed consecutively on the same day by two observers (inter-observer reliability), at an interval of approximately 15 minutes, with either observer 1 or observer 2 applying the first assessment, thus preventing a habituation bias in terms of the tasks performed. The third assessment was applied after seven days by observer 1 (intra-observer reliability).

The study was approved by the College of Nursing and the local Directorate of Health. An official letter was declared to the director of Met Kamise Health Center. Before the interview the elderly were informed about the objective of the study and assured about confidentiality of data. The participation was voluntary.

Data was analyzed using SPSS (Statistical Package for Social Sciences, version 16). Descriptive statistics (minimum, maximum, mean and standard deviation) were carried out for the total score and its items. The internal consistency of the total score was assessed using Cronbach's α coefficient. To confirm internal consistency, a correlation was done between each item and the total score, using Pearson's correlation coefficients and their 95% confidence intervals. The correlation coefficients and their 95% confidence intervals were used to calculate the intra- and inter-rater correlations for each item and for the total BBS scale. Factor analysis with varimax rotation was used to evaluate construct validity and dimensionality of the BBS. $P < 0.05$ was considered to be statistically significant.

Results

The age of the elderly who participated in the study ranged from 60 to 77 years with a mean of 67.95 ± 5.4 years. The majority of them were males (61.7%), currently married (60.0%) and either illiterate (48.3%) or could just read and write (41.7%). Only 10% had attended the primary level of education.

Item	Rater 1(test)		Retest		Second rater	
	Min-Max	Mean ± SD	Min-Max	Mean ± SD	Min-Max	Mean ± SD
BBS1	1-3	1.6±0.7	1-3	1.8±0.6	1-4	1.7±0.7
BBS2	0-4	2.2±1.4	1-3	2.1±0.8	1-4	2.1±1.0
BBS3	1-4	1.8±0.8	1-4	1.8±0.6	1-3	1.6±0.5
BBS4	0-4	1.6±0.9	0-4	1.6±0.8	0-3	1.5±0.8
BBS5	0-4	1.5±0.7	0-4	1.5±0.7	0-4	1.4±0.7
BBS6	1-4	2.2±1.1	1-3	2.1±0.8	1-3	2.1±0.8
BBS7	0-4	1.6±0.8	0-4	1.6±0.8	1-3	1.6±0.8
BBS8	0-2	0.8±0.6	0-2	0.8±0.6	0-3	0.9±0.7
BBS9	1-3	1.5±0.8	0-3	1.5±0.7	1-3	1.5±0.7
BBS10	1-3	1.4±0.7	0-2	1.3±0.5	1-3	1.4±0.5
BBS11	0-2	0.7±0.7	0-2	0.8±0.8	0-2	1.0±0.8
BBS12	0-4	1.2±0.9	0-3	1.1±0.8	0-3	1.3±0.7
BBS13	0-4	1.5±0.9	0-2	1.3±0.6	0-2	1.3±0.7
BBS14	0-4	0.8±0.8	0-3	0.8±0.8	0-4	1.0±0.8
BBS Total score	6-39	20.4±8.4	8-36	20.0±5.8	9-37	20.3±6.2

Table 1: Descriptive statistics of the test, retest and second rater of Berg Balance Scale Items

Item	Intra-rater	Inter-rater	Item/total score
	r (95% CI)	r (95% CI)	r (95% CI)
BBS1 (sitting to standing)	0.77 (0.64-0.86)	0.89 (0.82-0.93)	0.67(0.50-0.79)
BBS2 (standing unsupported)	0.76 (0.63-0.85)	0.93 (0.89-0.96)	0.87(0.79-0.92)
BBS3 (sitting unsupported)	0.75 (0.61-0.84)	0.80 (0.69-0.88)	0.56(0.36-0.71)
BBS4 (standing to sitting)	0.84 (0.75-0.90)	0.92 (0.87-0.95)	0.58(0.38-0.73)
BBS5 (transfers)	0.89 (0.82-0.93)	0.76 (0.63-0.85)	0.73(0.58-0.83)
BBS6 (standing with eyes closed)	0.88 (0.81-0.93)	0.87 (0.79-0.92)	0.40(0.16-0.60)
BBS7 (standing with feet together)	0.90 (0.84-0.94)	0.95 (0.92-0.97)	0.85(0.76-0.91)
BBS8 (reaching forward with outstretched arm)	0.96 (0.93-0.98)	0.96 (0.93-0.98)	0.31(0.06-0.52)
BBS9 (retrieving object from floor)	0.83 (0.73-0.90)	0.84 (0.75-0.90)	0.88(0.81-0.93)
BBS10 (turning to look behind)	0.83 (0.73-0.90)	0.77 (0.64-0.86)	0.48(0.26-0.65)
BBS11 (turning 360 degrees)	0.82 (0.72-0.89)	0.81 (0.70-0.88)	0.74(0.60-0.84)
BBS12 (placing alternate foot on stool)	0.81 (0.70-0.88)	0.73 (0.58-0.83)	0.89(0.82-0.93)
BBS13 (standing with one foot in front)	0.77 (0.64-0.86)	0.71 (0.56-0.82)	0.73(0.58-0.83)
BBS14 (standing on one foot)	0.87 (0.79-0.92)	0.76 (0.63-0.85)	0.78(0.66-0.86)
BBS Total score	0.95 (0.92-0.97)	0.98 (0.97-0.99)	

CI = Confidence Interval

Table 2: Intra-and inter-rater and item/total score correlation coefficients of items and the total score

Rotated component matrix	Component		
	1	2	3
BBS1 (sitting to standing)		0.596	
BBS2 (standing unsupported)	0.604		
BBS3 (sitting unsupported)	0.738		
BBS4 (standing to sitting)		0.841	
BBS5 (transfers)		0.603	
BBS6 (standing with eyes closed)	0.4444		
BBS7 (standing with feet together)	0.778		
BBS8 (reaching forward with outstretched arm)			0.799
BBS9 (retrieving object from floor)	0.693		
BBS10 (turning to look behind)	0.840		
BBS11 (turning 360 degrees)		0.687	
BBS12 (placing alternate foot on stool)	0.786		
BBS13 (standing with one foot in front)	0.935		
BBS14 (standing on one foot)	0.676		
Total	6.902	1.826	1.479
Initial Eigen values (% of variance)	49.3	13.0	10.6

Table 3: Results of factor analysis of each Arabic BBS item

Table (1) shows the mean and SD of the total BBS and each item the test, retest and second rater. The total score was 20.4, 20.0 and 20.3 in the test, retest and second rater, respectively.

The Arabic version of BBS shows high internal consistency with Cronbach's α of the total scale of 0.91. The results of the intra-and inter-rater reliability tests related to total BBS and its items are shown in Table 2. The correlation coefficient values for intra-rater and inter-rater reliability of the total score are 0.97 and 0.95, respectively. The intra-rater correlation of different score items ranges from 0.075 to 0.96 and the inter-rater correlation of different items ranges from 0.71 to 0.98. The correlation coefficients of different items and the total score ranged from 0.31 to 0.89. All the correlation coefficients are statistically significant.

Construct validity: Factor analysis of the 14 items of the Arabic BBS revealed 3 factors above Eigen value 1 were more prominent. The total matrix variance was 72.9% of the three factors (factor 1, 49.3%, factor 2, 13.0% and factor 3, 10.6%). Factor 1 involved mostly static activities where feet were motionless such as standing unsupported, sitting unsupported, standing with eyes closed, standing with feet together, retrieving object from floor, turning to look behind, placing alternate foot on stool, standing with one foot in front and standing on one foot. However, factors 2 and 3 were usually related to dynamic activities involving sitting to standing, standing to sitting, transfers and turning 360 degrees (Table 3).

Discussion

BBS is frequently used to evaluate postural control and estimate risk of falling in older adults both community dwelling and in residential care facilities.(10,16,19,21-26) The BBS was originally written in English with questions pertaining to the

Canadian culture.(10) The English and other non-Arabic versions of the measure have been examined for use in assessing individuals with stroke (27-30); brain injury (31,32), rheumatology patients (18), hemiplegia and diplegia (33,34) and Parkinson's disease.(20,35,36) Up to now there has been no validated Arabic version of BBS to be tested in different diagnoses. In this work we translated the BBS into Arabic language and validated it in the elderly of rural residences. The BBS was originally written in English; therefore, in order to apply the scale to the Arab population, we translated it into the Arabic language in terms that could be well interpreted by both the elderly and the examiner.

The determination of the reliability of the Arabic version of BBS indicates that it has high internal consistency with Cronbach's α coefficient high (0.91) for the BBs total score. The Cronbach's α coefficient provides us with the internal consistency of the scale tested where the values over 0.80 are accepted as a higher index of consistency.(26) Higher values of Cronbach's α were reported for the other versions of BBS e.g. 0.96 for the original version (1), 0.98 for the Turkish version (23), 0.95 for the Italian version (17), 0.9 for the Iranian version.(24) On the other hand some versions of the BSS showed lower Cronbach's α e.g. 0.87 for Norwegian version (16), 0.77 for the Taiwan version.(21)

The test-retest (or intra-rater) and inter-rater reliability are used to assess the consistency of a measure from one time to another and from one observer to another, respectively. Correlation coefficients above 0.80 are indicators of higher reliability.(37) The intra-rater and inter-rater correlation coefficient of the total score were 0.95 and 0.98, respectively. This is consistent with previous findings evaluating the original scale (1,10) as well as Turkish (23), Brazilian (18,19), Taiwan (Chinese) (21), Norwegian (16), Italian (17), Iranian (24) translated

versions. Strong Cronbach's α and correlations of the Arabic version of BBS imply the homogeneity of variables and reproducibility of the items like the original scale.(10,11)

The intra-rater correlation of different score items ranges from 0.075 to 0.96. These high correlation coefficients are consistent with previous results evaluating the original (1) as well as other versions of the scale e.g. Turkish (23), Korean (22), Brazilian (18,19), and Iranian (33,34) versions.

The inter-rater correlation of different items ranged from 0.71 to 0.98. These high correlation coefficients are consistent with previous results evaluating the original (1,6,36) as well as other versions of the scale e.g. Turkish (23), Korean (22), Brazilian.(18,19) Furthermore, the correlation coefficients of different items with the total score ranged from 0.31 to 0.89. In the Iranian version item-to-total correlations for all items were higher than 0.6.(33,34)

Factor analysis revealed that three factors had a 72.9% matrix variance. Factor 1 involved in mostly static activities where feet were motionless, such as standing unsupported, sitting unsupported, standing with eyes closed, standing with feet together, retrieving object from floor, turning to look behind, placing alternate foot on stool, standing with one foot in front and standing on one foot. However, factors 2 and 3 were usually related to dynamic activities involving sitting to standing, standing to sitting, transfers and turning 360 degrees. Factors with similar constructs were reported in studies of Norwegian (3 factors) (16), Turkish (2 factors) (23), Italian (2 factors) (17) versions of the BBS.

In conclusion the Arabic version of BBS is a reproducible, reliable and valid measure of postural control for Arabic speaking rural elderly in community settings. However, this version needs further evaluation in large scale study community settings, in residential care facilities, and clinical settings as well as in rehabilitation of patients with disabling diseases.

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Morphine Versus Tramadol for postoperative pain control after thoracoscopic surgery

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ABSTRACT

Objectives: To compare the analgesic effect of morphine and tramadol for postoperative pain after thoracic surgery during the first three postoperative hours in the recovery room.

Methods: This prospective, controlled double blind study was conducted at KHMC (King Hussein Medical Center) Amman, Jordan from March- 2009 to March 2011.

In this study, we enrolled 100 patients with ASA (American Society of Anesthesiologists) Physical Classification System I-II, of both sexes, aged 18-72. All patients were scheduled for various elective thoracic surgical procedures.

General anaesthesia with endotracheal single lumen or endobronchial double lumen tubs was induced and maintained with Propofol, fentanyl and cisatracurium using a gas mixture of N₂O/O₂ supplemented with Sevoflurane.

Postoperatively, patients were randomized to be given a starting bolus dose of intravenous Morphine 5mg (Group M, n=50) or tramadol 100mg (group T, n=50). If needed, a rescue dose of intravenous Morphine 5mg or Tramadol 50mg was given during the first three hours in the recovery room.

During the first three hours the severity of postoperative pain was evaluated and classified using the Visual Analogue Scale (VAS) (0-10 cm) as:

Responsives (no to mild pain:0-3 cm)

Non-responsives (moderate to severe pain: 4-10 cm)

Results: Regarding the responsive frequency between the two groups (group M: 77.35% and group T:70.4% P >0.05) at postoperative three hours. There was no significant difference between the two groups.

Conclusion: Morphine and Tramadol has the same equipotency to reduce postoperative pain following thoracic surgical procedures over the first three hours.

Key words: Analgesia. Morphine. Postoperative pain. Tramadol

Introduction

Pain is an extremely complex sensation which is difficult to define and measure in an objective fashion. It has been defined as the sensory appreciation of afferent nociceptive stimulation which elicits an affective (or autonomic) component; both are subjected to rational interpretation by the patient (1).

Postoperative pain is a major cause of ineffective breathing after major lung surgery predisposing patients to hypoxemia. Pain treatment after major surgery is particularly important because the postoperative recovery is dependent on the maintenance of respiratory function.

Postoperative pain differs from other types of pain in that it is usually, but by no means always, transitory with progressive improvement over a relatively short duration of time. Typically, the affective component tends towards an anxiety state associated with diagnosis of the condition and fear of delay in provision of analgesic therapy by attendants (2).

Methods of improving postoperative analgesia include : parenteral and non-parenteral administration of opioids and non steroids, local and regional anesthetic techniques and non pharmacological methods (1). Many of these methods depend on the traditional standard opioid, Morphine. Other agents include Tramadol hydrochloride which is thought to produce analgesia by two distinct actions. Firstly, it has agonist activity at the mu and Kappa opioid receptors. Secondly, it enhances the descending inhibitory systems in the spinal cord by inhibiting noradrenaline reuptake and releasing serotonins from nerve endings (1).

Few investigations have compared the analgesic potency between the standard Morphine and Tramadol equi-analgesic effective doses (3).

The aim of our study was to compare the three postoperative hours of analgesic effectiveness between equi-analgesic doses of Morphine and Tramadol administered intravenously following thoracic surgical procedures.

Methods

Our prospective double blind study included 100 patients, ASA I-II, of both genders, aged 18-72 years and assigned for different elective thoracic surgical procedures at KHMC during the period from March 2009 to March 2011 after obtaining written informed consent from all patients and local ethics board committee approval. Pregnant patients or patients with any contraindications to the administration of opioids, were excluded.

Under general balanced endotracheal anesthesia with single lumen tube or endobronchial with double lumen tube, the patient was induced using intravenous Propofol 2 mg/kg, cistracurium 0.2mg/kg and Fentanyl 3 mcg/kg with a mixture of gases N₂O/O₂:70%/30% and Sevoflurane 1-2%. Maintenance of anesthesia was achieved using intravenous cistracurium 0.01 mg/kg with Sevoflurane 1-2% mixed with N₂O 70%/O₂ 30%. The last bolus of intraoperative Fentanyl had to be administered at least 60 minutes before the first bolus of postoperative Morphine or Tramadol was requested according

to visual analogue scale. During the surgical procedure, local anesthetics to the surgical wound, the administration of long acting benzodiazepines and non-steroidal anti-inflammatory agents were not allowed. Regional blocks were not permitted in any of the study groups. Non-invasive blood pressure, heart rate, oxygen saturation and end tidal CO₂ were monitored throughout the whole procedures.

Postoperatively, patients were randomized into two groups. Group M (n=50) patients received a starting intravenous dose of Morphine 5 mg (Morphine sulphate, 10 mg in 1 ml, Martindale, POM, CD) and group T (n=50) patients received a starting dose of Tramadol 100 mg (Tramadol hydrochloride, Mabron 100mg/2ml, MAB/CP 120 AH1) as soon as patients reported pain according to a 4-10 score on VAS. During the first postoperative three hours, another two intravenous doses of 5 mg Morphine and 50 mg Tramadol were administered for analgesia if needed.

At three hours postoperatively, responses were classified as having no or mild pain or were asleep. Non-responders are patients having moderate to severe pain.

Pain severity was assessed using a visual analogue scale of 0-10 cm, where : no pain = 0, mild pain = 1-3, moderate pain = 4-7 and severe pain = 8-10. The time to onset of adequate analgesia (0-3) was recorded where the first dose was taken as time zero. Sleeping subjects were recorded as responders assuming that they should not be asleep if they had no or mild pain. A double blind method was used in which the anesthetist and patient were not aware of the investigation.

Statistics

Treatment groups were compared using descriptive statistical methods. Chi-square and Students t test were used. P<0.05 was taken as statistically significant.

Results

Regarding number, age, ASA, weight, gender and procedure, there was no significant differences between the two groups (M,T).

The mean duration time from the last bolus of intraoperative intravenous Fentanyl to the first bolus of Morphine or Tramadol was 85 minutes (P>0.05). The mean time interval between skin closure and the first bolus dose of Morphine or Tramadol was 12 minutes (P>0.05).

At three postoperative hours the responsive incidence was not significant and less in the Tramadol group (70.21%-39) than that of the Morphine group (77.35%-39).

Mean onset of adequate analgesia (no or mild pain) was 21 minutes in the Morphine group and 18 minutes in the Tramadol group (P>0.05). The first intravenous dose produced analgesia in 10% of the Morphine patients (5/50) and 14% of the Tramadol subjects (7/50). The second dose achieved proper analgesia during the first three hours in 36% (18) of patients in the Morphine group and 30% (15) of patients in the Tramadol group.

		Group M	Group T
Number		50	50
ASA	I	18	21
	II	32	29
Gender	M	28	26
	F	22	24
Age(yr)	18-45	33	27
	46-72	17	23
Weight(kg)	55-65	19	22
	66-85	31	28

Table 1: Patient study related data

The duration between the initial and second bolus of Morphine was shorter (72 minutes) than of Tramadol (83 minutes). There were no significant differences regarding the interval time between the second (42 minutes) and third bolus (44 minutes) in groups T and M respectively.

Mean total volume of Morphine administered to responsiveness was 17.2 mg while of Tramadol to responsiveness was 187.3 mg over the first 180 minutes. Over the first 24 hours, the total volume received by responsiveness of Tramadol was 340.5 mg and of Morphine was 35.1 mg. Patients requested almost 40-50 % of the 24 hours dose of Morphine and Tramadol respectively, by the end of the first three hours.

Patients in the Tramadol group were asleep (4/36) at three hours evaluation less than in the Morphine group (6/42). The responsive incidence did not differ significantly at the time of procedures.

Discussion

This study has shown that Morphine is equipotent to Tramadol in the first three hours of postoperative analgesia protocol used. There are few pharmacological discrepancies between the two agents. The characteristic of wakefulness with Tramadol is attributed to its non-opioid mode of action. Morphine has increased sedation effect over Tramadol (4). The study demonstrated a non-significant decreased responsive rate in the Tramadol group, more than in the Morphine group.

IASP (International Association for the Study of Pain) defines pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage. It is clear from this definition that the degree of tissue damage and perception of pain are not necessarily correlated. Pain perception

is a complex phenomenon, involving sensory, emotional and cognitive processes. There is considerable evidence that patients continue to suffer pain, despite a wide range of available analgesic drugs. Effective and repeated assessment of patients is essential in determining optimal analgesic management (5). A recent survey showed that most adults still expect to have significant postoperative pain after surgery. Such concern may be justified because traditional management of postoperative pain using intramuscular or subcutaneous opioid administration was given on demand and often failed to produce good analgesia. Methods of treating postoperative pain are diverse. Of these there is parenteral administration of opioids by : intravenous bolus, continuous intravenous infusion, patient controlled analgesia (by bolus intravenous or bolus and infusion) and subcutaneous. It is possible to improve the quality of analgesia in the postoperative period by giving small incremental doses of opioid intravenously when required. In general, this technique is employed only by anesthetists and experienced nursing staff in the immediate recovery period. The boluses of 50 mg Tramadol and 5 mg Morphine are their respective analgesic efficacy (6). Houmes RJ, et al found that a starting dose of 100 mg of Tramadol attained a therapeutic action in the relief of acute postoperative pain (7). An effect equivalent to a starting bolus of Morphine 10 mg carries high risk of hazards. Therefore, in our study we used a starting 100 mg bolus of Tramadol and 5 mg of Morphine, bearing in mind that consecutive needs for analgesia during the next 2 hours should be equal to the boluses needed for proper analgesia. The analgesia volumes received by responsiveness in this study recommend an effect ratio of Tramadol to Morphine of 11:1, which is similar to other studies (8). Proper analgesia in the early postoperative period is crucial in controlling the consecutive pain of general and thoracic surgical procedures. Opioids are the most frequently used analgesics for the treatment of

postoperative moderate to severe pain (9). Tramadol is a centrally acting analgesic with an opioid and a non-opioid way of action(10). The non-opioid action is delivered via enhancement of descending inhibitory pathways and the two actions are synergistic for analgesia(11). It is potent in moderate to severe postoperative pain using single boluses of 50-100 mg.

The time interval between the starting and second bolus of Morphine was shorter than that of Tramadol and this was attributed to the reduced comparative initial bolus of Morphine 5 mg compared to that of Tramadol 100 mg. Vickers and Paravicini showed a responder frequency of 72.6% and 81.2% in the respective Tramadol and Morphine groups (3).

Our study is limited due to a small study group of population, short time of investigation and lack of other investigated analgesic agents. New agents should be compared with standard drugs. In our study, Morphine was chosen as the comparator because it is the agent most frequently used for early postoperative pain management following surgery.

Conclusion

In our study we concluded that the analgesic potency of Morphine is equal to that of Tramadol following different types of thoracic surgical procedures if administered in proper intravenous boluses during the first postoperative three hours.

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Polypharmacy and inappropriate medication use among elderly persons in an Egyptian rural area

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ABSTRACT

Polypharmacy contributes to medication errors, non-compliance and increased risk of hospitalization leading to poor quality of life. Financial burden on patients and the economy may also occur.

Aim: Studying the prevalence of polypharmacy and inappropriate medication use among elderly persons in an Egyptian rural area.

Methods: a cross sectional design, at Dar-Alsalam village, Mansoura city, Dakhlia governate, Egypt. Subjects included all individuals aged 60 years and over living in the village during the time of the study (395 elderly individual). Measurements included detailed interview including medical history, previous hospital reports, available investigations and medication review. Screening for polypharmacy, as the use of five or more drugs, is an inappropriate prescription according to Beers criteria 2003.

Results: The percentage of polypharmacy was 56%. There is a high significant association between the number of physicians and Polypharmacy ($p < 0.01$). Inappropriate medication use was reported in 41% of the participating elderly; 32% of these medications are present in Table 1 with high severity, while 2.9 % are present in Table two. There was a significant relation between polypharmacy and inappropriate medication use $p < 0.01$.

Conclusion: Polypharmacy is an important problem in the elderly population. There is a high significant association between the number of physicians' consultations and polypharmacy. There is a significant relation between polypharmacy and inappropriate medication use.

Keywords: polypharmacy, elderly, inappropriate medication, rural area

Introduction

Polypharmacy refers to the use of multiple medications by the patient and is commonly defined as using more than a certain number of drugs [1, 2]. Many use a cut point of three to five drugs per patient [3]. The most common definition is the concurrent use of five or more drugs [4,5] and screening for inappropriate drug prescription was done by using Beers criteria 2003. 49% of elderly women and 45% of elderly men take five or more drugs [6]. Polypharmacy is regarded also as an important risk factor for falling in the elderly population [7-11]. Polypharmacy contributes to medication errors, drug interactions, non-compliance, and increased risk of hospitalization. They all lead to poor quality of life, increases morbidity, mortality, geriatric syndromes, decline of functional status and complexity of care. They also impose a huge financial burden on both the patient and the economy either directly due to medications or indirectly due to treating adverse events [12-15].

Inappropriate medication use was defined as prescribing medication that does not agree with accepted medical standards, has greater potential to harm than to benefit the patient in regular doses regardless of patient diagnoses or conditions, has contraindication for specific conditions, has potentially harmful drug-drug interactions, or is therapeutically duplicative to other medications [13, 15-16].

Several studies have examined the prevalence of inappropriate medication use in the elderly (older patients take at least 1 inappropriate drug); it ranged from 14% to 44% [17-18].

This study aimed at studying the prevalence of Polypharmacy and inappropriate medication use among elderly persons in an Egyptian rural area.

Materials and Methods

-Study locality: The study was carried out in Dar-alsalam village, which is 15 kilometers from Mansora city, the capital of Dakhliya governate, Egypt.

- All individuals aged 60 years and over living in the village during the time of the study were considered subjects. The number of elderly living in Dar El-Salam village, Dakhliya, governate was estimated to be 418 elderly [19]. Most of the subjects' localization (395) was done with the help of nursing and social workers of the village primary health care unit. Eighteen of them were not included (11 subjects were not present at the time of the study while 7 subjects refused to participate) and the rest of the subjects (377) were included. Almost 6 % (n=23) of the subjects' addresses could not be recognized.

All participants underwent a home interview and we reviewed the following:

- Medical history including lists of active medical conditions. Reviewing the available outpatient notes, emergency department notes, hospital discharge summaries and recent laboratory or diagnostic test results from the year before inclusion in the study.
- Number of managing physicians and hospital admissions in the last year.

- Medication review to determine current actually used medications
- Matching the complete list of chronic medical conditions to the prescribed medications.
- Screening for Polypharmacy as the use of five or more drugs
- Screening for inappropriate prescription according to Beers criteria 2003[20]. This criteria classifies inappropriate drug use in elderly persons into 2 tables; Table 1 describes 48 drugs or drug classes to be avoided in older adults, while Table 2 describes 20 diseases/conditions and medications to be avoided in older adults with these conditions.

Statistical Analysis

The statistical analysis of data was done by using Excel program and SPSS program (Statistical Package for Social Science) version 10. One way ANOVA test was done to compare more than two groups, followed by Post Hoc test LSD (least significant difference) for inter group comparisons. For quantitative data, student t-test was used to compare between the two groups. Paired sample t-test was done to compare one group at different times. Chi square test was used for qualitative data. Correlation coefficient was done to detect association between variables.

N.B: P is significant if < 0.05 at confidence interval 95%.

Ethical issues:

- 1- This study was approved by Ain Shams University ethical committee
- 2- Informed oral consent was taken from the subjects

Results

The participants were divided into four groups according to age: group A; 60-64years, group B 65-70 years, group C 71-74 years and group D > 75 years. Nearly 50% of subjects' previous occupation was as farmers while the rest were working as: employees 21%, manual workers 17% and 21% were housewives (Table 1).

Studying the distribution of the chronic medical diseases revealed that there is no significant difference between groups as regards the presence of chronic medical illnesses. The most common disease was hypertension 32% (n =122) then diabetes mellitus, chronic liver disease each representing 28% (n =104), and lung diseases 12% (n= 48).

There is no significant difference between groups as regards the number of total medications (p=.525). The average number of medications was 4.9 3.1 per person. The percentage of polypharmacy (> 5 medications) was 56 % (Table 2 - page 16).

There is no significant difference between groups as regards the number of over the counter drugs OTC (p=.234). In all of the participants; the average number of Over The Counter (OTC) medications per patient was 0.351 0.68 and maximum number per patient was 5 OTC medications. The percent of elderly taking OTC was 30 % (n=114). The most common OTC was NSAIDs which represented 43.7% of the total OTC medications followed by antacid and H2 blockers which represents 16.9%.

Variable											test	
	<u>NO</u>	%	<u>NO</u>	%	<u>NO</u>	%	<u>NO</u>	%	<u>NO</u>	%	X ²	P-value
Number	147	39.0	103	27.3	65	17.2	62	16.4	377	100		
Gender												
Male	84	57.1	46	44.7	31	47.7	30	48.4	191	50.7		
Female	63	42.9	57	55.3	34	52.3	32	51.6	186	49.3	4.31	.230
Occupation												
Employee	28	19.0	14	13.6	5	7.7	1	1.6	48	12.7		
farmer	57	38.8	54	52.4	37	56.9	39	62.9	187	49.6	24.7	.003
house wife	34	23.1	19	18.4	9	13.8	16	25.8	78	20.7		
worker	28	19.0	16	15.5	14	21.5	6	9.7	64	17.0		

Table 1: Personal characteristics of the participants

There is a high significant association between the number of physicians consulted per person and Polypharmacy ($p = .000$). Polypharmacy was associated with general practitioner, internal medicine, cardiologist, and rheumatologist consultation but not with chest medicine, and orthopedic physician's consultation (Table 3 - page 17).

Patients with musculoskeletal diseases are 15 times more liable to polypharmacy than those without. While Patients with chronic liver diseases are 7.9 times more liable to polypharmacy than those without (Table 4 - page 18).

Inappropriate medication use was reported in 41% ($n= 155$) of the participating elderly, 32% ($n=120$) of these medications present in Table one with high severity, while 2.9% ($n=12$) present in Table two. There is no significant difference between groups ($p=.360$). (Table 5 - page 19).

40% of the reported inappropriate medications are OTC. There is significant relation between Polypharmacy and inappropriate medication use. 71% ($n=110$) of elderly take inappropriate medication and have Polypharmacy and so, 51.9 % ($n= 110$) of elderly with polypharmacy ($n= 212$) have inappropriate medication use $P =0.000$.

Discussion

Very few interventions in medicine are completely without the potential for harm thus quality depends on whether the benefits of an intervention outweighs the harm, and whether this benefit harm balance compares favorably to the balance associated with alternative treatments [21].

It is not surprising that patients taking multiple medications are more likely to experience medication-related adverse events. As

described, bad things happen to people taking multiple medications [17]. However, the totality of a patient's medication regimen can have important effects beyond the sum of risks associated with the individual drugs and include problems of medication costs and adherence to complex medication regimens. In contrast, Polypharmacy can be appropriate when multiple drug regimens are necessary for the treatment of conditions and are carefully monitored by clinicians for achieving a therapeutic goal and for drug-related problems [22]. These considerations increase the need to prove that the potential benefits of therapy outweigh the adverse effects.

We performed the current study in a rural area which was known to have marked different demographic, cultural and medical criteria than those living in the big cities. The response proportion (96%) is considered high compared to the usual response proportion in population-based studies [23].

It is worth mentioning that of the remaining 4% ($n=18$), seven subjects refused to participate in the study and the remaining (11 subjects) were not present during neither the 1st nor a 2nd visit trial which was conducted one month after the first visit.

In the current study the average number of medications was 4.9 3.1 per person which is comparable to other studies with an average number ranging from 3-8 [24-25].

In the current study the percentage of polypharmacy (> 5 medications) was 56%.

There is a variable estimate of polypharmacy prevalence among different studies ranging from 19% to 64 %. The variation between different studies can be explained by; difference in the population characteristics (urban or rural citizens, community

Variable	A		B		C		D		Total		Significance test	
	NO	%	NO	%	NO	%	NO	%	NO	%	X2	P-value
NO of total medications												
0	13	8.8	12	12	8	12.3	9	15	42	11		
1	10	6.8	6	5.8	3	4.6	1	1.6	20	5.3		
2	8	5.4	4	3.9	3	4.6	3	4.8	18	4.8	42.4	.525
3	16	11	3	2.9	6	9.2	7	11	32	8.5		
4	21	14	14	14	11	17	7	11	53	14		
≥5	79	54	64	62	34	52	35	57	212	56		
Mean	4.9		5.1		4.5		5.0		4.9			
Std. deviation	3.2		2.9		2.6		3.3		3.1			
Minimum												
Maximum	.00		.00		.00		.00		.00			
	27		13		9		15		27			

Table 2: Number of medications taken by elderly

dwelling or hospitalized), differences in polypharmacy definition [5, 27-30].

The relatively high percentage of polypharmacy may be referred to, population characteristics, high prevalence of OTC medications, more visits to general practitioner (56% of elderly visit general practitioners with a tendency to prescribe more drugs per illness) more frequently than other specialists and the high prevalence of diseases as those with > one medical condition represent 88% of the population.

In the current study, the percent of elderly taking OTC was 30 %. Generally the use of OTC is increasing [30] especially among elderly [26, 32].

The current study supported the previous findings that NSAIDS are considered the commonly used drugs without prescription [33] which spots light on the importance of health education about the indications and the side effects of NSAIDS in geriatric practice.

The current study found that; chronic liver disease, hypertension, and stroke, heart failure, and dementia increased the risk of the presence of polypharmacy. Higher values in the current study may

be because these diseases are managed mostly by general practitioners who usually prescribe more drugs than specialists, and patients are also managed by multiple physicians without coordination in between leading to multiple prescriptions. On the other hand there is an insignificant association between Polypharmacy and diabetes mellitus, Parkinsonism, depression, COPD, urinary incontinence, and benign prostatic hyperplasia.

Using Beers' criteria to determine inappropriate medication prescribing is useful. Beers' criteria helps the clinician identify adverse reactions and medications that should be avoided or used with caution in the older population. Beers' criteria were utilized in several research studies addressing inappropriate prescribing [28, 34-36]

In the current study the prevalence of inappropriate medications in older people was 41% of the participating elderly, which is comparable to other studies using the same method (Beers' criteria) to assess drug inappropriateness and reported percentages were very close to ours [37-38].

On the contrary, utilizing the Medication Appropriateness Index showed that 58.6% of patients had > 1 unnecessary prescribed drug [39]. It is also worth mentioning that evaluation of inappropriate

Variable	Polypharmacy				Total		Significance test	
	Not Polypharmacy		Polypharmacy					
	NO	%	NO	%	NO	%	X ²	P-value
General practitioner	66	31	146	69	212	56	31.19	.000
Internal medicine	39	32	81	68	120	32	11	.003
Cardiologist	10	21	37	79	47	13	12	.001
Rheumatologist	2	8.7	21	91	23	6.1	1.1	.000
Chest medicine	7	43	9	56	16	4.2	1.7	1.06
Orthopedic	5	42	7	58	12	3.2		1.77
Number of managing physicians in last year								
0	45	27	1	.5	46	12	174	.000
1	93	56	37	18	130	35		
≥2	27	16	174	82	201	53		
Doctors								
Mean	.909		2.14					
Std. Deviation	.696		.743					

Table 3: Relation between type and number of managing physicians in the last year and polypharmacy

medications in different settings like outpatient clinics or long term care facilities reported lower percentages [40-42]

A high percentage of inappropriate medications, 41% in the current study, may be referred to a high prevalence of polypharmacy [26, 38-39], OTC medications and visiting general practitioners prescribing more frequently than other specialists.

In conclusion: polypharmacy is an important problem in the elderly population. The percentage of polypharmacy was 56%. There is a high significant association between the number of physicians and polypharmacy. There is a significant relation between polypharmacy and inappropriate medication use.

Disease state	Value	95% Confidence Interval	
		Lower	Upper
CLD	7.9	4.3	15
DM	1.1	.69	1.7
HTN	4.4	2.7	7.3
IHD	4.0	1.9	8.6
Parkinsonism	2.4	.64	8.9
Stroke	4.1	1.2	14
Depression	3.9	.46	34
Dementia	2.9	.81	11
CHF	2.5	1.0	5.9
Lung diseases	1.7	.88	3.1
Musculoskeletal disease	15	2.0	115
Gastritis	3.3	1.6	6.8
BPH	.89	.31	2.5

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Variable	A		B		C		D		Total		Significance test	
	NO	%	NO	%	NO	%	NO	%	NO	%	X ²	P
Absent	86	58	60	58	43	66	33	53	222	59		
Present	61	42	43	41	22	34	29	47	155	41		
Table1 high severity	50	34	31	30	18	28	21	34	120	32	9.9	.36
Table1 low severity	8	5.4	8	7.8	4	6.2	3	4.8	23	6.1	.a	
Table2 high severity	2	1.4	2	1.9	.00	0	5	8.1	9	2.1	.a	
Table2 low severity	1	0.7	2	1.9	.00	0	.00	0	3	0.8	.a	

Table 5: Inappropriate medication use among elderly age groups according to Beers

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Problems and Needs of Elderly People: A Study in Bangladesh

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ABSTRACT

Bangladesh is a South Asian country with a large, densely-settled population. In Bangladesh an estimated 7.3 million people are currently 60 years or older, and it is projected that this number will increase by 173 percent by 2025 (Help Age International 2000). Around 34 percent of the Bangladeshi population lives below the national poverty line (UNDP 2003), and 36 percent of the population earns less than \$1 a day. More than 85 percent of the poor live in rural areas (BBS 2002, World Bank 2002). It is one of the poorest countries in the world. Bangladesh has enjoyed an impressive rate of sustained economic growth of 6.7 percent. During the last decade real Gross Domestic Product (GDP) per capita increased by 52 percent. This study focuses on various problems and needs of elderly people in Bangladesh, like health problems, mental problems and problems of health care services, housing, security and so on. Finally it gives some recommendations to eradicate major problems and needs of the elderly people in Bangladesh.

Key Words: Problems, Needs, Elderly People, Bangladesh

Introduction

The aging of populations has become an emerging issue both in developed and in developing countries (Sen, 1993). Over the last decade or so in Bangladesh the proportion of the elderly population has been gradually increasing. Currently about 6 percent of the population is 60 years and above. By 2025 this proportion will increase to over 9 percent. The population aging seems to be poised to replace the population growth as the major demographic issue of public, political and scientific concern in the twenty first century (Knodel and Debavalya, 1997).

Traditional support system for the older person in Bangladesh based on joint family structure and kinship to ensure older people's care security and respect, has been declining. With the rapid decline of the joint and extended family system, the community no longer protects older people's rights as in the past. As a result, older people have largely been displaced in the community and are exposed to vulnerability. The present study would help to assess the elderly population's basic needs in terms of food, shelter, health care, income security,

socialization and community support. It would also help to draw feasible policy oriented strategy given the resource constraints (Kabir, 1999; Hasina, 2002).

The human life cycle is composed of five main stages from birth to death. These are infancy, childhood, adolescence, adulthood and elderly. In each of these stages an individual finds himself in different situations and faces different problems. Among these the most vulnerable and problematic stage is old age (Rao, 2006: 345), because in old age, physical strength deteriorates, mental stability diminishes, money power becomes bleak and eyesight suffers a setback. In our traditional society, families performed various roles to meet all the problems of elderly people. They were not neglected and they were considered as respectable by their family members. In present times, due to industrialization and urbanization the modern nuclear families are increasing and the care of elderly is becoming questionable. So the elderly people need support from others. In our country, the welfare services are provided to the elderly people through family and on an institution basis.

Who are the Elderly?

Being elderly is an obvious reality and the last stage of the human life cycle. The term elderly is applied to those aged 60 and over in conformity with the International Plan of Action in Ageing adopted by the World Assembly of Ageing, held in Vienna in 1982 (Kabir, 2003: 64). There are many words such as 'old' or 'old age' or 'pensioners' used to denote the later life of all people. In a globalizing world, the meaning of old age is changing across cultures and within countries and families (Hardy, 1997; Riley and Riley, 1994:263). For example, 'old' is not a polite word for people in western societies. In the English language there is a move from 'the old' to the hopefully more polite 'the elderly' (Wilson, 2000:4). In America, Senior Citizens is thought to be more polite. In Europe they like to be called 'senior citizen' (Walker, 1993: 73). In Bangladesh, there is no universally accepted specification of the span of years embraced by old age. Though there is a lower limit of age for those who have a formal job in our country. In fact in our society, people work as long their health permits them to continue. However, in the formal sector there is a specific age. For example, the retirement age from government service is 57 in accordance with the Retirement Act-1974 (Feroj, 2005: 173). We generally use the term of 'elderly' from the age of sixty years.

Aims and Objectives of this study

This study report can be used-

- i. To know what are the problems and needs of elderly people in Bangladesh;
- ii. By Government and civil society organizations to support advocacy for elderly people in Bangladesh;
- iii. As an information source for future development of Bangladesh's plan of action on ageing.

Methodology

This study is descriptive and analytical in nature. It is based on the review of primary and secondary literature including books, journals, national and international research articles, and government documents. Relevant literature was also collected through internet browsing. Finally personal ideals and critical views were added as well.

Problems of the Elderly

The elderly people are confronted with various problems like physical, mental, economic and cultural problems (Butler and Lewis, 1977: 34) stated concerning problems. The elderly are confronted by multiple losses, which many occur simultaneously: death of a partner, older friends, colleagues, relative; decline of physical health and coming to personal terms with death; loss of status, prestige and participation in society and for large numbers of the older population, additionally of their physical power, they don't move easily and work properly. Of the major health problems afflicting the elderly, heart disease leads all other conditions in both cause of death and utilization of health care services. The most common ailment is stomachache and diarrhoea followed by asthma, peptic ulcer, blood pressure, diabetes, cardiac problems, dental and eye problems and so on (Kabir, 2003:71). The main leading cause of elderly death is heart disease, cancer and stroke. Psychological problems are growing more in the older people. They cannot adjust to the changing situation of the society. In addition, old age may be a time of loneliness and bereavement as brothers, sisters, wives and husbands are lost. Another problem of elderly is the housing problem. Most of the elderly people have no special arrangement of living. They sleep at night with their grandson or granddaughter. They live in a specially arranged room in a separate part of homes or on a veranda. In a word, they have some unmet needs in the family. As a result the elderly consider themselves as a burden on their family members.

Ailment	% of sufferers among sex		% of sufferers in total sample
	Male	Female	
Eye problem	143 (31.77)	271 (56.69)	414 (44.66)
Weakness	158 (35.11)	225 (47.07)	383 (41.31)
Arthritis	186 (41.33)	179 (37.44)	365 (39.37)
Waist/back pain	55 (12.22)	236 (49.37)	291 (31.39)
Pain in joint	34 (7.55)	220 (46.02)	254 (27.40)
High blood pressure	76 (16.88)	118 (24.68)	194 (20.92)
Sleeping problem	25 (5.55)	144 (30.12)	169 (18.23)
Problem in heart	53 (11.77)	90 (18.82)	143 (15.42)
Asthma	69 (15.33)	44 (9.2)	113 (12.18)
Denture problem	42 (9.33)	54 (11.29)	96 (10.35)
Diabetes	31 (6.88)	19 (3.97)	50 (5.39)

* Only those diseases were shown in the table prevalence which exceeded 5 percent in the total sample.

Source: Kalam and Khan, BRAC University Journal, vol. III, no-2, 2006, pp. 78.

Table 1: Percentage distribution of usual health hazards* of the elderly citizen

What are Needs?

Need is the state of lacking basic necessities such as food or of requiring help (Concise English Dictionary, 11th Edition, 2004). Needs are such a type of phenomenon which we think necessary to fulfill and meet our daily or normal lifestyle. To run or lead a balanced life, we are to face or meet some practical problems that must be solved by us. As a human being, we are social in nature. To live in a society, we have to go a long way in our present so called modern social system. Needs are nothing but our extreme felt things. Needs vary from person to person, place to place, society to society, culture to culture and country to country. They fully depend on geographical location and that very place. So, it can be said in short that needs are really an abstract concept.

Classification of Needs of Elderly People:

Maslow believed that each of us has five basic needs, which follow a development sequence; human needs are arranged in ascending order from physiological to self-actualizing needs. Maslow thought that the lowest level of unsatisfied need is always dominant. Only when it is fulfilled do we turn our attention to the next higher one (Maslow, 1954: 12).

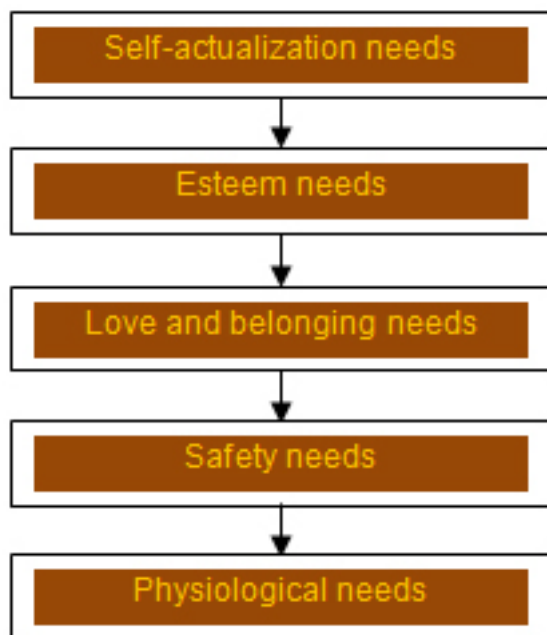


Figure 1: Maslow's hierarchy of human needs

Needs of the Elderly People in Bangladesh:

The elderly people in Bangladesh have strongly filled (realized) that their main needs are those-

1. Food
2. Shelter
3. Healthcare

The other important needs of the elderly people in Bangladesh are as follows-

Needs of Physical Care of Elderly People:

Physical care is very much essential in the case of the aged. The typical image of care giving and the elderly is one of an older person who is ill or infirm receiving care from a younger person. In many instances this image is correct. However, in

Bangladesh older women and men are not only the recipients of care; in many cases they caregivers themselves. Historically, when an older person was in need of care, most often the family provided it. Therefore, the gender differences in care giving with the elderly as recipients were examined.

Mental Security Needs of Elderly People:

The elderly people of our country feel different kinds of mental insecurity. Included in this are inferiority complex, insecurity, loneliness, insomnia etc. They think that their mental insecurity should be removed by eliminating these types of problems which they think are as follows:

1. To arrange entertainment;
2. To set up a library;
3. To arrange play things;
4. To arrange their income and savings;
5. To arrange the treatment of the mentally disordered elderly persons on an individual and group level with a Psychiatrist;
6. To arrange for voluntary work for the elderly people;
7. To evaluate their achievement and labor;
8. To arrange the training system to serve the elderly people of a family so that they can give proper service;
9. To create awareness among them of various kinds of social and personal consciousness and
10. To appoint the efficient elderly people;
11. Their respective work (jobs).

Nutritional Needs of the Elderly People:

As people become old, parts of their body become inactive gradually. Probably, for people between 50 to 70 years old, according to their activities, their daily needs are 1600 to 2400 kilo calories. But in some special situations, their food taking needs vary. As usual, for people of 51 to 70, their normal needs are 10% less than the youth and if the age is over 70, their needs may decrease 20%.

The elderly people should be involved in income generating activities:

The majority of elderly people live their lives in absolute poverty. Elderly people suffer from the cumulative effects of a life lived of deprivation, entering old age in a poor state of health and without savings of material assets. Because of prevailing systems elderly population are left out from the micro-credit system due to the age barrier. Currently NGOs who provide micro-credit do not include the elderly population. The elderly population who have ability to participate in the system consistently lack means to fulfill their most basic needs such as food, clothes, housing and health care (Hasina and Kabir, 2002).

Needs of Living Arrangement and Support of Elderly People:

Support in old age is important for the elderly population. In this paper support of the elderly population is investigated and information from the person who provide such support is also obtained. Generally the elderly person is dependent on their children or other close relatives. In Bangladesh the family has traditionally been the main source of support and provider of care for the old; changes in the structures of the family may

Care providers	Male		Female	
	Married	Widower	Married	Widower
Spouse	88.6	N.A	9.8	N.A
Son	2.3	24.4	4.4	11.0
Daughter	2.1	14.1	16.0	15.9
Daughter-in-law	3.2	53.8	48.0	58.2
Self	3.8	7.7	21.8	14.9
All	100.0	100.0	100.0	100.0

Source: Mostafa and Streatfield, 2003: 49

Table 2: Percentage of major providers of physical care by sex and marital status

Food Ingredient	General Measurement Amount	Weight (grams)	Carbohydrates (grams)	Proteins (grams)	Fat (grams)	Energy (grams)
Butter	1 cup	240	12	-	8	80
Milk	1 cup	240	12	10	-	10
Vegetable	½ cup	100	05	-	2	26
Fruit	any	-	10	-	-	40
Bread/Rice	any	-	15	2	-	68
Meat low fat	1 ounce	30	-	7	3	55
Meat Medium Fat	1 ounce	30	-	7	5	75
Meat High Fat	1 ounce	30	-	7	8	100
Fat	1 tea spoon	05	-	-	5	55

Source: Probinder Sashta Poricharza (training manual), 1998: 87

Table 3: Food Ingredient Table of Elderly People

Needs of the elderly population	Number			Percentage
	First need	Second need	Number	
Government aid	98	68	166	23.4
Need money	24	48	72	10.2
Wants working facility	72	126	198	28.0
Wants to do business	68	44	112	15.8
Wants good health	6	14	20	2.8
Others	86	54	140	19.8

Source: Hasina and Kabir, 2003: 147

Table 4: Distribution of Elderly People by Type of Needs to Improve their Condition

Extent	Number	Percentage
Severe	84	26.2
Medium	107	33.3
Little	21	06.5
No report	109	34.0
Total	321	100.0

Source: Sattar, Milton, Al-Mamoon and Shahina, 2003: 23

Table 5: Distribution of the Elderly to the Severity of Health Care Needs

Basic needs	Urban elderly males	Urban elderly females
Treatment	96.0	100.0
Food	62.0	49.0
Cloth	64.0	50.0
Shelter	56.0	8.0
Social security	53.0	30.0

Source: Hasina, Haque and Kabir, 2003: 6

Table 6: Distribution of Elderly People by Sex and Basic Needs

Extent of the housing needs	Number	Percentage
Severe	87	42.9
Medium	31	15.3
Little	35	17.2
No report	50	24.6
Total	203	100.0

Source: Sattar, Milton, Al-Mamoon and Shahina, 2003: 26

Table 7: Distribution of Elderly People According to the Severity of Housing Needs

not automatically provide such old age support. Traditionally the elderly live in extended households and rely on their adult children, their spouse and other family members for material needs and personal care. Today, the traditional family support system is under pressure from demographic, social and economic change (Cai, 1991, Chang, 1992, Kabir and Zarin Nahar, 1999).

The needs for the elderly population are also very much essential. The following table suggests more than a quarter of the elderly persons need the opportunity to work to improve their present condition, which is followed by government support, business and they need financial support etc.

Health Care Needs of the Elderly People:

Disease burden is an important issue and needs consideration in the context of welfare of the elderly population in Bangladesh. The elderly people of our country suffer from more than one health problems at old age. Sound health status of the elderly is an important issue for their well being. The following table shows how much health care is needed for the elderly people in Bangladesh.

Basic Needs of the Elderly People:

Poor elderly people, particularly in urban areas, live in even poorer conditions than in the rural areas. Information on basic needs reported by the urban males and females are shown below. The information from the table show that the important basic needs of urban elderly people included treatment, food, clothing and social security. Since more elderly women are widows they are considered to be a marginalized group in Bangladesh, because they occupy a very low social class. Consequently they have to face severe social, economic and cultural deprivation.

Needs of Housing of Elderly People:

House is a place where elderly people live. Housing is one of the important basic needs of the elderly people in Bangladesh.

They expect that to have a sound housing area. But unfortunately we can say the housing condition of elderly people in Bangladesh is a measurable concern. The following table shows how much need their is of the elderly people in Bangladesh.

Care and Services Needs for the about to Die Elderly People

In our country every elderly person expects to die in peace. They think that their care and services of the last time of their age should be as follows:

- i. To arrange a peaceful environment for the elderly person. They should not be aggregated without any reason so that they can pass their days with peace, tolerably and pleasantly;
- ii. To arrange such a kind of environment where peace, silence and problem-free situations are available;
- iii. In this connection, primarily the numbers of the family should be initiated. (Probinder Sastha Paricharza, Training Manual, 1998: 29)

Some Recommendations regarding the Welfare of the Elderly People in Bangladesh

1. Increasing access to the old age allowance from age 60 by a minimum of 18 percent by 2012, from 1.7 million 2 million people;
2. Increasing the old Age Allowance from 220 to 500 taka by 2012;
3. Improving the allowance distribution systems to reduce issuing problems and delays;
4. Increasing access to interest-free micro-credit for older people;
5. Providing free healthcare and medicine to older people on presentation of ID card;
6. Increasing the number of doctors with expertise in geriatric issues;
7. Actively promoting the inclusion of ageing and Geriatrics

- issues in school, college and university text books;
8. Introducing a national tax with the revenue dedicated to the needs of older people;
 9. Giving local government the responsibility to register older people;
 10. Collecting of disaggregated data on people 60 and over;
 11. Cultural traditions of older persons can be portrayed positively in the mass media in the context of educational and recreational activities for the elderly people;
 12. We have to create free distribution of food, clothes, shelter and treatment for the betterment of the elderly people;
 13. Government and NGOs should focus on involving elderly people in creating employment for those who wish to work, and improving their livelihood in rural areas.

Conclusion

being elderly is a serious reality and it is the last step of the life cycle. None can avoid this stage. At present the global population situation in respect of age structure has been changing and showing the elderly 60+ as a growing segment. This is because of a declining trend in fertility and mortality and also increasing trend of life expectancy exceeding lower age limit of 60 years of the old due to increasing awareness of health as well as improving healthcare services. According to the ESCAP more than 80 percent of the elderly population in the developing world will be in Asia by the beginning of the twenty first century. The growing population of old age will have more serious social and economic implications. It is a time to emphasize the need for policies and programs to create awareness of ageing populations both from national and individual family's concern. With the prevalence of morbidity and disability the elderly should be provided with both financial and social securities inside and outside homes with health care services, medical facilities for better treatment, housing, food and clothing and with extended facilities of health care center. There should be voluntary organizations to support the elderly. Special health care centers for the old, hospitals for the aged attached to the running public and private hospitals should be established. In order to create a positive attitude towards the elderly and promote awareness and understanding of the younger to the old, Bangladesh should observe "National Old Day". Although 1st October in every year "International Old Day" has been observed since 1991. Finally we can say government should have to take some positive initiatives for the betterment of elderly people in Bangladesh.

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The effect of Transversus abdominis block on decreasing pain following laparoscopic cholecystectomy in elderly patients

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ABSTRACT

Objective: The aim of this study is to describe the novel transversus abdominis block and to evaluate the effect of transversus abdominis block versus morphine on pain after laparoscopic cholecystectomy in elderly patients.

Methods: In this randomized double blinded study, 50 patients were randomly allocated into two groups: Group t (Transversus abdominal block)(n=25), patients received transversus abdominis block with bupivacaine 0.25% in addition to an intravenous single-injection of morphine 5 mg/kg. Group M, the control group, (n=25), patients received morphine 5mg intravenous injection. Pain scores were measured postoperatively using visual analogue scale.

Results: This study included 50 patients; 25 in the transversus abdominis group (t) and 25 in the control group (m). Pain scores postoperatively were significantly less in group t than group m. The amount of morphine consumption postoperatively was significantly less in transversus abdominis block.

Conclusion: Preoperative transversus abdominis block combined improves postoperative pain outcome after laparoscopic surgeries .

Keywords: Anesthesia, Postoperative pain, transversus abdominis block, laparoscopic surgery

Introduction

Many methods have been used for postoperative pain management, with several advantages and disadvantages for each. Opioids have been used extensively for postoperative pain management, however they are associated with potentially serious respiratory depression, which should be considered when anesthetizing elderly patients(1). Non steroidal anti-inflammatory drugs have an opioid sparing effect but are associated with potentially serious side effects such as gastrointestinal bleeding and renal impairment, especially in the elderly (2). Regional or local anesthesia can avoid such side effects in elderly patients, and laparoscopic cholecystectomy surgeries are amenable to several forms of regional anesthesia by which, these techniques include intercostal, intraperitoneal, epidural and transverses abdominis plane blocks. (3)

Although laparoscopic surgery is a less invasive procedure than laparotomy it is still associated with significant postoperative pain (4) . Single-shot preoperative transverses abdominis plane block improves postoperative pain treatment after abdominal surgery in a clinically significant fashion. (5)

The aim of this study is to evaluate the effect of preoperative transverses abdominis plane block in decreasing pain after laparoscopic cholecystectomy in elderly patients.

Methods

Fifty patients of ASA I-III, undergoing laparoscopic cholecystectomy were included in the study.

The exclusion criteria were:

Patient refusal or hypersensitivity to bupivacaine or morphine.

20G cannula was placed in the dorsal vein of each hand, and suitable monitoring was applied. Anesthesia was conducted using Fentanyl 1-2 micg/kg, Propofol 1-2mg/kg and atracurium 0,5mg/kg. Endotracheal intubation was performed. After induction of general anesthesia patients were randomized to receive either TAP block with morphine (group t n=25) or only morphine (group m n=25).

The TAP block was performed bilaterally before the start of surgery by the following technique:

The Land mark for this technique is the triangle of Petit,; for this block it was identified by palpating the iliac crest inferiorly, latissimus dorsi posteriorly and the external oblique anteriorly. 22 G 50 mm blunt end block needle was used to enter this triangle in a right angle until the first resistance was encountered which indicated that the needle was entering the fascia of the external oblique muscle. The needle then advanced further in the same direction to encounter the second resistance which indicates the entrance into the transverses abdominis facial plane.

Then 0.5 ml/kg bupivacaine 0.25% was injected after aspiration to ensure no blood. All patients in both groups were given 0.1 mg/kg IV morphine after induction of anesthesia.

After finishing the procedure, all patients left the operating room and remained in the recovery room as long as indicated with usual postoperative care.

Using the visual analogue pain scale (VAS; 0 mm=no pain, 100 mm=worst pain imaginable), patients were asked to rate their pain every hour after arrival in the recovery room. VAS was recorded for both groups every hour for the first 4 hours. Additional Nurse-administered i.v. boluses of morphine 2 mg were given and recorded if the patient have more than 30 mm pain score. Total amount of morphine given was recorded for both groups. All data were analyzed using student's t-test.

Results

Fifty patients were included in this study, 25 in the TAP group(t) and 25 in the control group(m). Patient data, was similar for the 2 groups as shown in Table 1 (next page). Pain scores during the first 4 hours postoperatively are shown in Table 2 (next page); they are significantly less in group p than group m over the 4 hours $p < 0.05$. The average quantity of morphine administered per patient in 4hours was 10 mg (range 0-18 mg) in group m and 6 mg (range 0-12 mg) in group p ($P < 0.05$).

Discussion

There are many benefits of good postoperative analgesia, such as decreased stress response(6), decreased postoperative morbidity especially in elderly patients in which there is increased incidence of cardiopulmonary co- morbidity (7). Other known advantages of effective regional analgesic techniques include reduced pain intensity, decreased incidence of side effects from analgesics, and improved patient comfort (8).

The innervations of the skin, muscles, and parietal peritoneum of the anterior abdominal is by the lower six thoracic nerves and the first lumbar nerve (9,10).

The anterior primary rami of these nerves leave their respective intervertebral foramina and course over the vertebral transverse process. The anterior primary rami of these nerves pierce the abdominal wall musculature course through a neuro-fascial plane between the internal oblique and transversus abdominis muscle (9,10). So the local anaesthetic given is deposited by this block in the transversus abdominis plane and provides sensory and muscle blockade. The lumbar triangle of Petit can be identified easily in all patients by palpating the iliac crest as principal land mark (10).

The results of this study indicate that TAP block decreased the pain after laparoscopic cholecystectomy during the first 24 hours.

Other studies have proved the beneficial effect of TAP block in decreasing the pain following laparoscopic cholecystectomy or other procedures like caesarian section , hysterectomy, and appendectomy (11,12). We found the effect of this block on pain extended to 24 hours postoperatively. The pharmacological effect of bupivacaine cannot be expected to cover this time and findings may be explained by a pre-emptive effect of the block (reducing the nociceptive input to the central nervous system in the first hour after surgery may have attenuated central sensitization, thereby leading to less postoperative pain), but we think that this is very debatable issue.

A variety of local and regional anesthetic procedures for pain control after surgery have been described after laparoscopic cholecystectomy with the goals of providing optimal pain control and avoiding complications. In our study we have not reported any clinically significant complications. Many of the recent studies included the use of ultrasound-guided sensory block of the anterior abdominal wall with local anesthesia for postoperative pain relief. Ultrasound guided techniques are usually associated with better identification of the anatomical planes so they are associated with better safety and accuracy. We hope to use these facilities as soon as the equipment and experience is available in the future.(13)

Conclusion

We conclude that TAP block given with morphine is an effective way to decrease pain after laparoscopic cholecystectomy procedures in comparison to morphine alone.

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Report: Middle East Medical Journals and Middle East Academic Survey 2011

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Firstly we thank all regional academics and readers who took part in this survey and who contributed survey questions.

The reply/return rate from academics was 73% and participating academics came from a range of universities and medical schools representing Iraq, Egypt, Lebanon, Saudi Arabia, Libya, Iran, Turkey, Pakistan, UAE and Jordan.

Your needs and wishes

Data from the survey returns, and comments, were remarkably consistent and showed clear needs and preferences of readers, practitioners and academics.

On the academic side, the free to air archives of previous issues were used 'often' by all but one respondent, (the highest response of the survey) making this a clear need as a research tool. While these archives can be accessed free on our own websites many respondents (also) wanted them on various databases that were either used or preferred by their national academic bodies.

Database presence

We are currently listed on Ebsco databases (including Ebsco-Host, DynaMed and Cinahl), and Al Manhal database and we have applied for listings on ISI. We will advise further once we hear.

While most of these databases are closed commercial entities we are seeking access to all databases requested by our readers.

All articles are being given a DOI (Digital Object Identifier) as they go on to the Al Manhal database.

In one Middle East country we have submitted the journals to the national academic bodies and have had them meet the national academic criteria, and become accepted, making this another route of journal acceptance for academics publishing their research.

Most readers wanted 'an email reminder of new issues out' and more CME. Both of these will be implemented as from next issue (February 2012) and you can click the following email

address to be put onto the email distribution list for the Journal Alerts emails. Contact: admin@mediworld.com.au.

These Alerts will carry journal titles and their authors, for the current issue, with the ability to click directly to the online article.

Readers almost unanimously liked the variety of topics, the relevance of topics and the fact that regional issues were covered. They were also appreciative of the journals as a free resource and most have requested no advertising on the journals. A full report of both surveys can be found further below.

Impact factor / Health Index

These tend to be produced on a publishers' own database (and therefore reflect that company's or databases journals only) or can be worked out via formulae/statistics or via Google search engine.

The accepted formula is:

The impact factor for a journal is calculated based on a three-year period, and can be considered to be the average number of times published papers are cited up to two years after publication. For example, the impact factor 2011 for a journal would be calculated as follows:

A = the number of times articles published in 2009-2010 were cited in indexed journals during 2011

B = the number of articles, reviews, proceedings or notes published in 2009-2010

Impact factor 2011 = A/B

You can also use the following formula to find out the number of citations on an (your) individual author's /academic's own articles:

<http://code.google.com/p/citations-gadget/>

Take a sample 3 year old issue and apply these formulae to it.

Webstats

The other report we will make available to you on a quarterly basis will be sourced from our 'webstats' software which has been running behind the journals since their launch and where we've seen our combined journal readership grow until its current level of circa 1,000,000 readers / month.

The top (8) MESA/MENA countries reading the journal are: India, Egypt, Pakistan, Jordan, Saudi Arabia, Yemen, Turkey, United Arab Emirates, and Bangladesh.

The top international reader countries are: USA, Australia, United Kingdom, Russian Federation, Indonesia, Malaysia, Canada and South Africa.

Most used search engines are: b3090789.crawl.yahoo.net; crawl-66-249-67-18.googlebot.com; 213.186.122.2.utel.net.ua; imparser12.yandex.ru; msnbot-207-46-199-37.search.msn.com

Most common access points (after a direct request for the website) are for articles on surgical management, antibiotic sensitivity, and CME.

Academic Survey

The reply/return rate from academics was 73% and contributing academics came from a range of universities and medical schools from Iraq, Egypt, Lebanon, Saudi Arabia, Libya, Iran, Turkey, Pakistan and Jordan.

Top three most read journals were: (1) Middle East Journal of Family Medicine/ World Family Medicine (MEJFM/WFM), (2) Middle East Journal of Nursing (ME-JN) and (3) the Middle East Journal of Psychiatry and Alzheimers (ME-JPA). The latter was only launched in 2011 but its early high readership shows a regional need for information on this topic.

Most academic readers (75%) read 'articles of interest' mainly, but 10% read every article. All but one respondent accesses the archives 'often'.

In regard to 'new titles' there was most interest in, in order, a Journal of Public Health, a Journal of Epidemiology and a Journal of Paediatrics. Other journal topics of interest to the region are: Medical Education and Accreditation; Women's health and other issues related to women, Emergency Medicine; Social medicine.

Most academics did not want to see advertising in the journal.

Preferred article types were consistently:

- * Original contribution/Clinical investigation
- * Review articles
- * Education and training
- * CME

New topics academic readers would like to see covered include: Medical education research and operational research; Special Education and Evaluation

Consistently readers like the diversity of the topics, the relevance of the topics and the coverage of regional research.

Negative comments were: many wanted 'theme issues' and some wanted a colour cover/image. While the possibility of 'theme issues' will depend on the quality, number and type of articles submitted - we will in future provide a colour cover, but are conscious that this may add a cost to those organisations who print them out for their members so we would like to hear any negative feedback on this point.

Comments ticked in agreement (top 6 in order):

- * I would like an email reminder that there is a new issue out.
- * I appreciate that it is a free resource for doctors of the region.
- * I would like to see more research
- * The MEJFM deals in real medicine relevant to the Middle East region
- * I am happy with the publication in its current form
- * I would like to see theme issues

Most readers or authors would also like a pdf copy of the individual articles, in addition to the full pdf. This will be instituted from February 2012.

Academic Competencies

As some respondents answered nationally and others for their particular medical school we could not make national assumptions from the data collected. The following is a link to a recent article and survey done on this topic which probably provides a more complex overview. See: www.mejfm.com/July2010/globalcompetencies.htm

Research in the Region

Data showed:

- Allocation of research budget to academic institutions has been graded as average to poor
- Allocation of qualified personnel was graded as average to good
- Most students have free access to online medical databases and a variety of databases are used, and there are no limits on which can be used free in most institutions
- Most existing research facilities (computer and other) were graded average.
- Most have compulsory research activities for students and most have established guidelines.

Most countries have: Subsidised medicine, Spreading/diffusion of medical insurance and Universal access to medical facilities and most found the focus of their medical school as socially accountable.

National situation

There were widespread shortages of both nurses and GPs/family physicians reported across the region and primary care was undertaken in either hospital outpatients (mostly) or a variety of other locations such as government provided health centres, schools, health houses, industry, armed forces and other.

The percentage of health and medical care provided through primary care was reportedly between 39% (Egypt) and 80% (Iraq).

