World Family Medicine Journal

incorporating the Middle East Journal of Family Medicine

ISSN 1448-4196

September 2010 - Volume 8, Issue 8

From the Editor

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This is the eighth issue this year which has various topics from the UK , Saudi Arabia, Libya and Jordan. A paper from the UK looked at back pain. The author stressed that patient-doctor agreement is believed to promote the quality of interaction and satisfaction; yet, to date, no study has attempted to investigate the matching of back pain patients' and doctors' expectations, nor is there a valid measurement tool. The study aims to explore the feasibility of using a newly designed questionnaire for investigating the congruence of patients' and doctors' expectations in relation to back pain consultation. At the end of the study the authors concluded that there are some areas of mismatch that might adversely affect the consultation. Further research is needed to consolidate these results and to establish the significance of matched expectations.

A prospective study involving 2000 infants from Saudi Arabia looked at the increasing concern about the decline in breastfeeding in Saudi Arabia. The objective was to describe the pattern and predictors of infant feeding in Al-Hassa, Saudi Arabia. The findings revealed a significant downward trend in breastfeeding and upward trends in both bottle and mixed feeding rates with increasing infant's age. The authors concluded that breastfeeding, whether alone or mixed with bottle feeding, dropped significantly at the age of 6 months with further decrease at 12 months of infant's age. Mother's residence, education and work status had significant effects on feeding patterns at 4, 6, and 12 months of age. On the other hand gestational, birth weight and mode of delivery are significant predictors of feeding pattern throughout infancy. These predictors can be used to detect mothers, who are more likely to stop breastfeeding early, to be targeted in breastfeeding promotion and support.

A review paper from Saudi Arabia looked at an overview of child and adolescent mental health in the Middle East. Available studies revealed that prevalence of mental disorders in the Middle East is similarly high as in other parts of the world. Many risk factors and constraints are prevalent in the region. However, there are supporting factors that need to be promoted. Situation of child and adolescent mental health in the region as well as challenges facing any future program are discussed. The authors are hopeful that this viewpoint will stimulate debate on child and adolescent mental health among professionals and policy makers of the region.

A paper from Jordan looked at evaluation of conservative management of ingrowing toe nail. Of those who were treated conservatively stage I patients had a response rate of 26 (96.2%) of the patients. The authors concluded that conservative treatment is a worthy trial for patients with ingrowing toe nail especially in early stages of the disease and should be offered to the patient; although it needs a highly cooperative patient. A paper from Libya looked at the relationship between empowering women and domestic violence. This paper critically re-examines the literature to identify and apply relevant scientific principles and evidence to inform regarding effective intervention. It includes background on demographic data of ever married Egyptian women between 19-49 years old, and with an aim to developing an indicator to assess the probability of empowerment women, in order to combat domestic violence in the hope of ending violence against women. Domestic violence was experienced by 40 per cent of ever married women in the sample. This paper explored the relationship between women's empowerment, and domestic violence, and it found that Women's empowerment variables were significantly associated with the degree of domestic violence prevalence. This would mean promoting gender equality, empowering women, and ending violence against women.

A second paper from Saudi Arabia looks at Stroke secondary to an unusual cause, dense right sided hemiplegia aphasia, following blunt trauma to his neck from repeated non-fatal manual neck strangulation.

Are they thinking alike? Back pain patients and doctors expectations: A feasibility study

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ABSTRACT

Background and Objectives
Patient-doctor agreement is believed to promote the quality of interaction and satisfaction; yet, up to date, no study has attempted to investigate the matching of back pain patients' and doctors' expectations, nor is there a valid measurement tool. This study aims to explore the feasibility of using a newly designed questionnaire for investigating the congruence of patients' and doctors' expectations in relation to back pain consultation.

Methods: A 26-item questionnaire was developed and was given to 20 patients and 11 doctors to rank their objective of the encounter and report their agreement with the expectation statements. Responses were compared to investigate the matching of patients' and doctors' expectations.

Findings: Diagnosis, explanation of the problem, and referrals were the most important aspects for patients; explanation, effective pain relief, and information were common expectations for doctors. Patients agreed with doctors about most aspects of the consultation except for referrals, ability of doctor to help without referrals, as well as items related to sharing the reason for the encounter.

Conclusion: The study reveals some areas of mismatch that might adversely affect the consultation. Further research is needed to consolidate these results and to establish the significance of matched expectations.

Keywords: back pain, expectations, matching, congruence, primary care

Introduction

Affecting up to 2 in 3 of the adult population during the course of a year, back pain (BP) is a very common disorder, with an estimated fifth of the patients consulting their doctor about their condition (1, 2). Back pain is cited as one of the most common reasons for consulting a doctor (3). Biopsychosocial management of BP in primary care has been problematical (4), with many doctors seeing it as one of the difficult and unrewarding conditions to deal with in primary care (5). Over the last few decades, research in primary care has focused on understanding factors influencing the quality of healthcare, as well as ways to optimize expectations and enhance satisfaction with BP consultations. Although it may seem that patients' met expectations and satisfaction may be the key ingredients for a successful consultation,, and in addition to other clinical measures, might be important measures of the quality of the healthcare services; however, doctors' expectations may also be a strong contributing factor to a more successful consultation, as the clinicians' practice style and views are thought to affect outcome in BP care (6). Patient-doctor agreement is thought to promote higher satisfaction (7, 8), better general health outcomes (9, 10), as well as greater adherence to treatment (11). Most previous research suggested a negative impact of patient-doctor disagreement on the consultation outcome; yet, only few studies have addressed this issue (12). Moreover, literature pertaining to patient-doctor agreement is particularly scarce in the area of BP (12, 13). Previous studies focused on patients' general expectations rather than condition-specific ones and, to

date, none was done to explore the congruency of BP patients' and doctors' expectations, nor is there a valid measurement tool (13-15). The aim of the paper is to present the results of a pilot study exploring the feasibility of using a newly designed questionnaire for measuring the congruence of BP patients' and doctors' expectations as well as to investigate the range and matching of patients' and doctors' expectations related to BP consultations in primary care.

Methods

Questionnaire development

A literature review was carried out to produce a preliminary list of patients' and doctors' expectations related to aspects of the clinical encounter, doctors' characteristics, management strategies, attitudes and beliefs. Both qualitative and quantitative studies that investigated patients' and doctors' expectations related to BP management in primary care settings were reviewed; detailed characteristics and results of the literature review can be reviewed elsewhere (13). Collected data from the literature was used to produce a draft 36-item questionnaire consisting of two matched parts: one for patients' expectations and another, similar, but adapted for doctors' expectations. For the purpose of the questionnaire, expectations were defined as anticipations formulated by patients and doctors about specific actions, attitudes, or interventions that are likely to happen during the consultation. Subsequently, the questionnaire went through several revisions for clarity and wording as well as relevance of questions through a series of discussions with patients, doctors, and researchers during a series of eight collaborative learning workshops within the LIMBIC project (Learning to Improve Management of Back Pain in Community; A 3-year quality improvement project). Several versions of the revised questionnaire were produced until version IV (26 items) was ready for the pilot study. The questionnaire was designed to be self-administered, brief, understandable, and easy to complete for adults aged over 18 years. The questionnaire consisted of four different sections: the first asked about age, gender, occupation and duration of BP; the second required the subjects to rank different purposes of the encounter according to its importance as well the doctors' consultation objectives; the third section included the 26 expectation items derived from the literature, with a five-point Likert type scale asking for agreement or disagreement with the statement; and the last section was an open question asking the subject about any other expectations not reported in the questionnaire.

Patients' and doctors' expectations

The newly designed questionnaire was used to investigate the range and matching of BP patients' and doctors' expectations related to primary care consultation. Thirty-one subjects (20 BP patients and 11 doctors) participated in the study, recruited from The LIMBIC project and drawn from nine primary care practices in the South of England. Each subject completed the expectations questionnaire and sent it back in the provided pre-paid envelope. All participating doctors were involved in direct patient care for at least 20 hours per week in general practice. All recruited patients have had a recent consultation for

		Patients	Doctors
N		20	11
Age (mean + SD)		40 (±12)	51 (±6)
Gender	M	11	9
	F	9	2
Years with BP		8 (±7)	--
Years in General Practice		--	19 (±9)
Hours/week patient care		--	>20= 9

Table 1: Demographic data of the subject

their BP with their doctor. The study was granted ethical approval from the local research ethics committee.

Data Collection and statistical analysis

The study outcome measures were the ranking of the reasons for the encounter as well as the agreement scores for each expectations statement. Descriptive statistics were used to present the distribution and ranking of the reasons for encounter and doctors' objectives; each stated reason or objective was given a number from one to 10, equivalent to its ranking by the subject, and the total ranks were summed to calculate the overall ranking of each stated purpose. Patients' and doctors' responses to the questionnaire statements were reduced to disagree (1/2), unsure (3), and agree (4/5). Descriptive statistics were used to present the range of patients' and doctors' expectations. The data from the full 5-point scale were then analysed to examine differences between doctors and patients using Mann Whitney's U test. Statistical Package for Social Science (SPSS) version 13 was used to carry out the statistical analysis.

Results

Subjects' characteristics: Table 1 shows the demographic data of the participants. Thirty patients and 16 doctors were invited to participate in the pilot study; 20 patients and 11 doctors agreed to participate and completed the expectations questionnaire with response rates of 67% and 69% respectively.

Reason for the encounter:

The ranking of the consultation objectives or reasons according to its importance as perceived by patients and doctors' is shown in Table 2 (next page). Diagnosis, explanation of the problem, and referrals had the highest ranks respectively for the patients group, while explanation of the problem, effective pain relief, and information provision were more prevalent according to doctors. Effective pain relief, sick certificate, education and medication were the least reported by patients; while, on the other hand, X-rays, referrals, reassurance and prescriptions were less common reasons stated by doctors. About two thirds of the patients did not report education, reassurance, information, pain relief, medication, or X-rays as a possible reason for the encounter at all. Likewise, more than three quarters of the doctors reported that X-rays and referrals are not among the common objectives of the consultation for BP.

Comparison of patients' and doctors' expectations: In general, patients seemed to agree with doctors in most aspects of the expectations questionnaire (Table 3 and Figure 1) except for the items related to sharing the reason for the encounter (Q1; $U=60$, $P<0.05$), patients' expression of their expectations (Q3; $U=58.5$, $P<0.05$), doctors' enquiry about the impact of BP on social life (Q9; $U=63$, $P<0.05$), referrals (Q12; $U=40$, $P<0.05$), beliefs about the ability of doctors to help patients with their pain (Q24; $U=52$, $P<0.05$), and the ability to manage the problem without need for referral (Q25; $U=28$, $P<0.05$). Descriptive analysis of the responses reveals that the majority of patients and doctors agree that doctors showing interest and listening (Q7), as well as being warm and friendly (Q5) are common expectations for patients (90% and 90%) and doctors (100% and 82%) respectively. About three quarters of patients (75% and 85%) and doctors (82% and 73%) agreed that history taking (Q10) and physical examination (Q11) should be expected during the consultation. Patients and doctors shared their concerns about the ability of the doctor to identify the cause of the problem (Q15); yet, more than three quarters of the patients and doctors (80% and 82% respectively) expected an adequate explanation of the problem to be given during the consultation (Q16). All doctors (100%) and the majority of patients (80-85%) expected information (Q17) and education (Q18) to be essential components of the consultation and they both agreed (90%) that patients should be involved in decision-making (Q22). About half of the patients and doctors (45% and 55% respectively) revealed their perception of the time constraints during BP consultations (Q23), with more patients and doctors (65% and 55% respectively) acknowledging the privilege other healthcare professionals might have over doctors in managing BP in primary care settings (Q26).

Discussion

The patient-doctor relationship is of paramount importance to a successful consultation. Very few studies have investigated BP patients' and doctors' expectations regarding the consultation and the matching of such expectations (13); however, the general literature on patient-doctor relationships and meeting patients' expectations reveals that a higher patient-doctor agreement regarding diagnosis, nature of the problem, diagnostic and treatment plans are associated with higher satisfaction, better outcome, and greater adherence to treatment (7-11). Patients have a wide variety of specific expectations for care that extend to both technical and interpersonal management (16). Such expectations are measurable, and can have potentially important clinical consequences (17). On the other hand, despite the suggested importance of a state of matched (and not just fulfilled) patients' and doctors' expectations for better BP management in primary care (13), little is known about doctors' expectations related to the consultation. The current pilot study aimed at exploring the feasibility of using the newly designed patients' and doctors' expectations questionnaire for capturing the range of expectations related to BP consultations in an attempt to explore the matching of patients' and doctors' expectations. Within the limitations of this pilot study, and in terms of non-random, purposive recruitment and small sample size, the results of the pilot study showed that diagnosis and explanation of the problem are the most valued expectations by all patients; this finding was also the same for doctors as to explanation of the problem, but not the diagnosis (rated fifth), which might constitute a major area of mismatch that can adversely affect the patient-doctor

Reason for encounter	Patients					Doctors	
	Ranking	First (%)	Second (%)	Third (%)	Unstated (%)	Ranking	First (%)
Diagnosis	1	65	10	10	15	5	37
Explanation	2	15	45	10	15	1	55
Referral	3	15	-	10	35	8	-
X-ray	4	5	15	10	55	9	-
Information	5	-	5	20	65	3	-
Reassurance	6	-	5	10	65	7	9
Prescription	7	-	-	5	65	6	-
Education	8	-	10	-	70	4	-
Sick Certificate	9	-	-	5	75	-	-
Pain relief	10	-	-	5	80	2	-

Table 2: The ranking of the reason for encounter according to patients and doctor

relationship. This is in line with previous research suggesting the importance of diagnosis as the most valued expectation by patients (18, 19). Interestingly, and in accordance with previous studies (20, 21), both patients and doctors agreed that knowing the cause of the problem (Q15) is not a high priority compared to provision of adequate explanation of the problem. This contradicts a previous study (22), which stated 'knowing the cause of the pain' as a principal expectation for BP patients; however, reviewing the study showed that diagnosis and cause of the problem were overlapping and were used interchangeably, therefore, the results of the study actually suggest both diagnosis and cause as principal expectations for BP patients. Another area of mismatch would be inferred by combining the results of the ranking and questions sections of the questionnaire; effective pain relief was ranked as third important for doctors, while referrals was ranked as third for patients. Comparing patients' and doctors' expectations reveals that patients were less likely to expect their doctors to help with their pain (Q24), expected the need for referral to address the problem (Q25), and indeed expected more referrals during the consultation than doctors did (Q12). This emphasizes the fact that despite the doctors' attempts to challenge their clinical frustration with BP management by trying to provide effective pain management without the need to refer patients, still, patients do not think doctors would be capable of helping without referrals (23), and about half of them would expect to be referred to a specialist (18). Nevertheless, expectations for medications and tests are met more frequently than expectations for referrals (24), and some doctors do not consider referring to physical therapy to be beneficial at all for BP management (25), which affected their referral behaviour, and caused unmatched expectation with their prospective patients, who expected to be referred. The mismatch in the ranking of the reasons and objectives of the consultation, is consistent with previous research suggesting a mismatch between patients' and doctors' beliefs about the role of

Second (%)	Third (%)	Unstated (%)
-	-	37
18	-	9
-	-	82
-	-	82
46	9	27
9	-	46
-	27	27
9	46	27
-	-	-
18	18	9

doctors in general practice as well as patients' reasons for visiting the doctor (26), and can be explained in light of the significant differences found between patients and doctors in regards to expectations of sharing the reason for the encounter (Q1; U=60, P<0.05), and patients' expression of their expectations (Q3; U=58.5, P<0.05). As suggested in the literature, exploring and understanding patients' expectations and encouraging patients to voice them during the consultation might improve the clinical process of care, in terms of satisfaction (22), as well as patient-doctor interaction and concordance (14, 27). It is alleged that doctor's recognition of patients' expectations would improve doctor's satisfaction with the consultation (28).

Patients and doctors agreed about different aspects of the bio- and psycho- but not the social aspect of the doctors' management, where patients were less likely to expect the doctor to explore the impact of BP on their social life (Q9). In regards to the expectations questionnaire, preliminary use of the tool suggests it to be simple, appropriate and acceptable by users as reflected by the good response rate. Some potential problems for the use of the tool might be the overlapping of some expectations items, which prompts the need for a study to investigate the content and construct validity of the questionnaire to address any clarity and repetitiveness issues. While no generalization can be made from the study results; however, the results of the study underpin important issues that need to be addressed in order to achieve better patient-doctor relationship and consultation outcome. This study would form a good foundation for future research investigating the matching of patients' and doctors' expectations and the significance of such congruence, using proper sample size and more rigour sampling techniques.

Conclusion

Within the limitations of the study, the findings showed that diagnosis, explanation of the problem, and referrals are the most valued expectations by patients; while explanation of the problem, effective pain relief, and information provision were the most common expectations reported by doctors. Patients' and doctors' expectations were in agreement for most aspects of the consultation except in relation to referrals, ability of doctor to help without the need for referrals, as well as items related to sharing the reason for the encounter and expression of expectations. Patients and doctors agreed that doctors' interpersonal and communication skills are very important and that explanation of the problem is more important than identifying the cause. The study reveals some areas of mismatch that might adversely affect the outcome of the consultation.

Further research is needed to explore the matching of patients' and doctors' expectations using bigger sample size as well as to investigate the significance of matched expectations for more successful BP consultations. The expectations questionnaire seemed to be an appropriate and acceptable tool; further research is needed to test its validity and reliability for measuring BP patients' and doctors' expectations in primary care settings.

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Table 3: The results of the patients' and doctors' expectations questionnaire

Expectations Questionnaire	Patients (n= 20)			
	% of agreement			□
	Agree	Unsure	Disagree	
Q1. Reason for encounter explored	95	5	0	4.80
Q2. GP to ask about expectations	65	25	10	3.90
Q3. Pt to express expectations	60	25	15	3.65
Q4. Unmet expectations recognised	60	30	10	3.80
Q5. GP warm and friendly	90	10	0	4.25
Q6. Pt genuine & symptoms real	80	20	0	4.55
Q7. GP listening	90	10	0	4.65
Q8. Doubts and fears discussed	75	20	5	4.00
Q9. Impact on social life explored	50	40	10	3.70
Q10. Full history taken	75	15	10	3.95
Q11. Physical examination done	85	10	5	4.20
Q12. Referral	60	30	10	3.80
Q13. Tests/investigations	55	25	20	3.55
Q14. Prescription	25	55	20	3.10
Q15. GP to know cause of problem	50	35	15	3.55
Q16. Adequate explanation given	80	15	5	4.15
Q17. Information	85	10	5	4.05
Q18. Education	80	10	10	4.00
Q19. Information about prognosis	85	10	5	4.05
Q20. Pt beliefs discussed	60	35	5	3.70
Q21. Pt management ideas discussed	50	40	10	3.55
Q22. Pt is part of decision making	90	10	0	4.15
Q23. Adequate consultation time	40	15	45	3.25
Q24. GP can help with the pain	40	40	20	3.15
Q25. GP can manage BP without referral	10	40	50	2.40
Q26. Other HCP privilege	65	35	0	4.15

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	range	Doctors (n= 11)					Mann Whitney's U test
		% of agreement			□	range	
		Agree	Unsure	Disagree			
	3-5	100	0	0	4.36	4-5	P< 0.05
	2-5	91	0	9	4.09	2-5	NS
	1-5	36	9	64	2.64	1-5	P< 0.05
	2-5	73	9	18	3.73	2-5	NS
	3-5	82	18	0	4.45	3-5	NS
	3-5	73	18	9	4.00	2-5	NS
	3-5	100	0	0	4.64	4-5	NS
	2-5	91	9	0	4.55	3-5	NS
	2-5	100	0	0	4.45	4-5	P< 0.05
	2-5	82	9	9	4.18	2-5	NS
	2-5	73	27	0	3.82	3-5	NS
	2-5	18	9	73	2.45	1-5	P< 0.05
	2-5	36	27	36	3.00	1-5	NS
	1-5	46	36	18	3.36	2-5	NS
	1-5	27	36	36	2.91	2-4	NS
	1-5	82	18	0	4.00	3-5	NS
	1-5	100	0	0	4.18	4-5	NS
	1-5	100	0	0	4.27	4-5	NS
	1-5	73	27	0	3.91	3-5	NS
	2-5	100	0	0	4.09	4-5	NS
	2-5	82	18	0	4.00	3-5	NS
	3-5	91	9	0	4.18	3-5	NS
	1-5	18	27	55	3.27	2-5	NS
	1-5	73	27	0	4.18	3-5	P< 0.05
	1-5	73	27	0	3.91	3-5	P< 0.05
	3-5	55	45	0	3.55	3-4	NS

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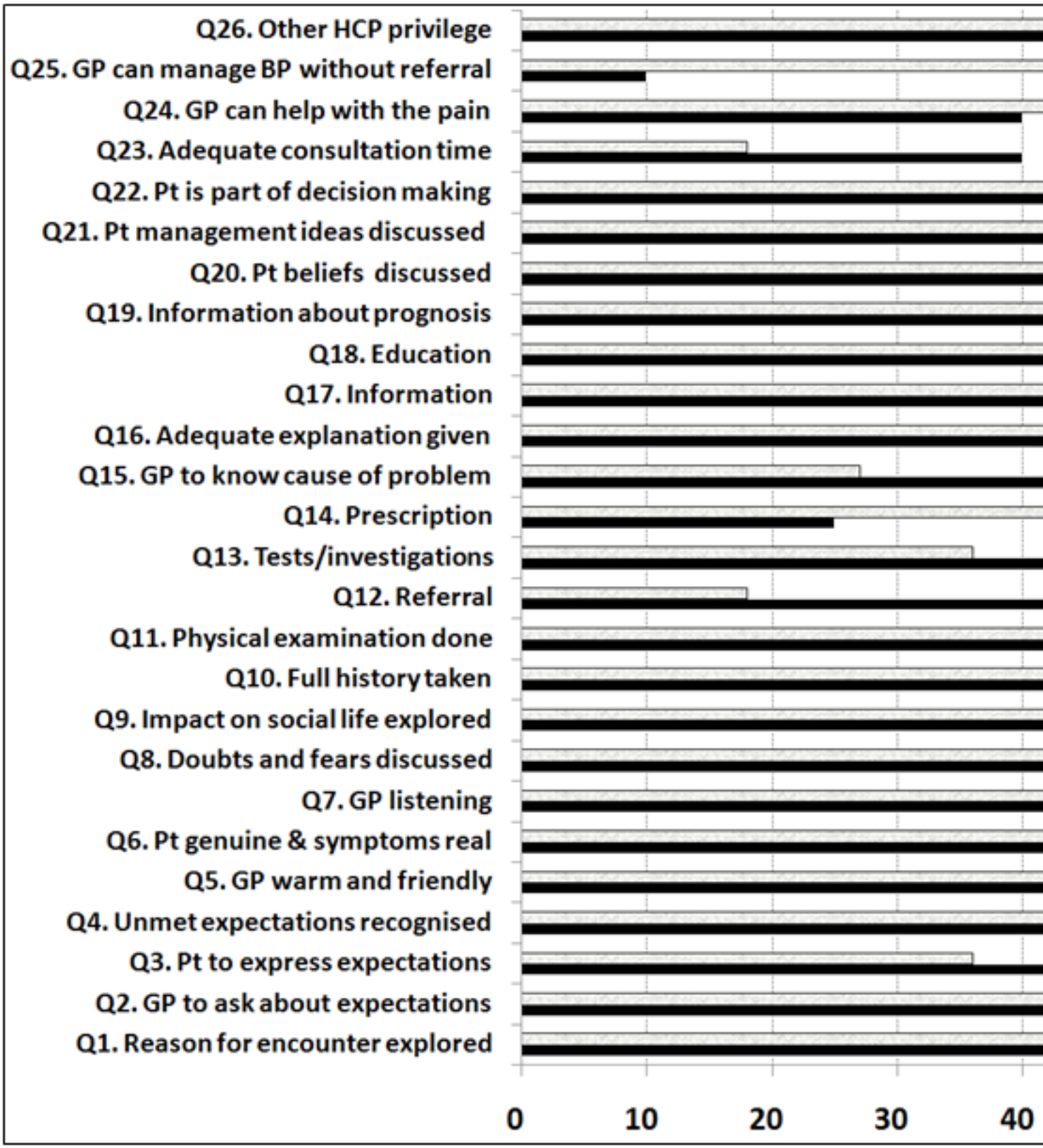

Figure1: The results of the patients' and doctors' expectations questionnaire

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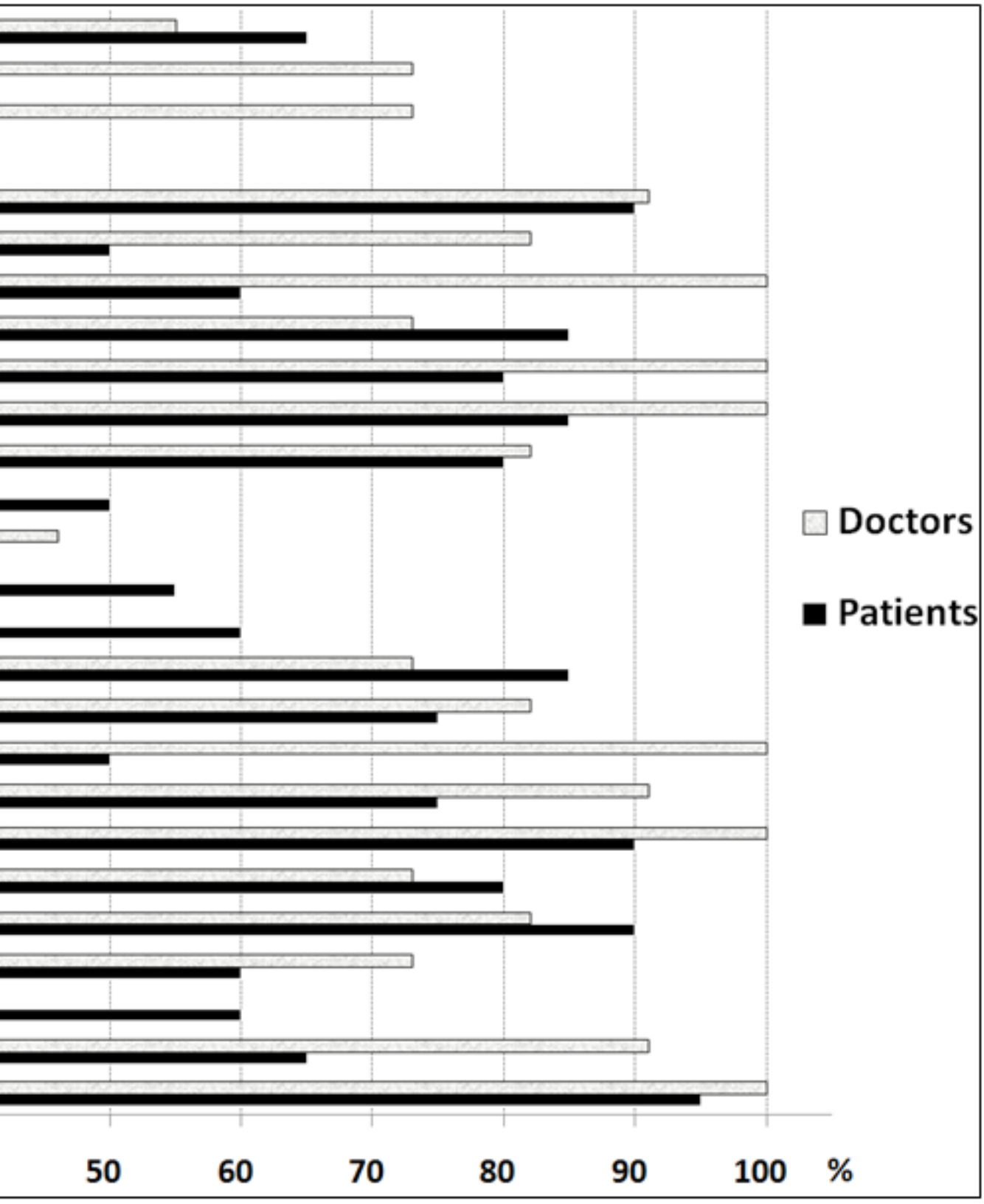

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Child and adolescent mental health in the Middle East: an overview

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ABSTRACT

The last few decades have witnessed significant achievement in child physical health with control of infectious diseases and improvement of nutritional status. It is a paradox that physical health among children has improved while mental health has been deteriorating. Recently, therefore, attention has been turning to child mental health promotion. Available studies revealed that prevalence of mental disorders in Middle East is similarly high as in other parts of the world. Many risk factors and constraints are prevalent in the region. However, there are supporting factors that need to be promoted. Situation of child and adolescent mental health in the region as well as challenges facing any future program are discussed. We are hopeful that this viewpoint will stimulate debate on child and adolescent mental health among professionals and policy makers of the region.

Key Words: Child mental health, Adolescent mental health, Mental health promotion, Middle East

Introduction

World Health Organization embraces a definition of health as physical, mental and social well-being. Of these elements, mental well-being historically has been misunderstood and often forgotten(1). Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. The World Health Organization definition of health implies that mental health cannot be achieved merely by preventing and treating disorders. It must address the broader issues affecting the mental well-being of all sectors of the society(2,3). Mental health is a basic human right. The historic Human Right Conventions, passed by the United Nations in 1989, is the first universal and binding international policy statement on the rights of the child. However, many children continue to experience overt or covert denial of access to essential needs such as food, shelter, health care, education, recreation and social support(4). Mental, physical and social functioning are closely associated and interdependent(5).

Current events have highlighted an interest in child and adolescent mental health. Unfortunately, too often this is due to concerns about the mental health consequences of war, prolonged conflict, natural disaster, AIDS, and substance abuse. Special populations of repatriated child solders and street children are a vivid reminder of the many children who have been deprived of an environment that could support healthy development. Further, there is an increased understanding that children who are not mentally healthy can have an adverse impact on the stability and economic viability of nations. Of particular importance is the fact that positive mental health plays a role in supporting compliance and adherence to a broad spectrum of health regimens(6).

Mounting evidence suggests that antecedents of adult mental disorders can be detected in children and adolescents(3). However, for long, the attention dedicated to children and adolescents' mental health has not been commensurate with that dedicated to adults and elderly(7).

In many Middle East countries, like other developing countries, childhood disorders that have priority in health

planning are life threatening conditions, such as diarrheal diseases, acute respiratory infections and other childhood infectious diseases. The region has made substantial progress in improving infant and child physical health; however, the mental problems are neglected despite their increase. Child mental health is a relatively new discipline in the Middle East region. With high prevalence rate of trauma and violence in the region's countries, child and adolescent mental health remains a major concern. Children and adolescent mental health in some countries, such as Palestine, Iraq, Somalia and Sudan (Darfur) are a matter of grave concern(7).

The under five population of the Arab world represents about 19.7% of the total population while children and adolescents constitute about 45% of the Middle East population(8,9). Adolescence is a period of change when intellectual abilities are stimulated while cognitive and affective faculties are nurtured. Children and adolescents are influenced by parents, teachers, peer groups, health care providers, the media and the religious and cultural norms in their communities. The health behaviors of adolescents, such as eating habits, use of tobacco and other substances, are crucial to the health and disease patterns that will be observed when this population reaches adulthood(9).

Magnitude of the problem

Worldwide the bulk of evidence suggests that one child or adolescent out of eight suffers from mental health problems at any given point in time. The prevalence of mental problems in children and adolescents in the general community is approximately 20% in the United States, of which at least half suffer from impairment in functioning. The few studies that examined prevalence in the developing world found similar rates(10-13). Only 4 to 6% of these children and adolescents are in need of a clinical intervention for observed significant mental disorders(7,13,14). Major studies regarding psychiatric morbidity in the Arab countries of the Middle East region are scant and no systematic region-wide study has been done. Judging from recent work in Bahrain, Egypt, Morocco, Saudi Arabia and Tunisia, the prevalence of major psychiatric disorders among children and adolescents of this region is similar to other parts of the world(9).

Although children may suffer from a wide range of mental problems there is a poor awareness amongst health care providers about the occurrence of these conditions. The magnitude of mental health problems in children has not yet been recognized sufficiently by many governments and decision makers. They include not only well defined mental disorders, but also the mental health problems of children exploited for labor and sex, and children orphaned, or forced to migrate for economic and political reasons(15).

Early childhood psychiatric problems are child abuse, behavioral problems, in addition to lack of awareness of parents of psychological development of children. The major problems for middle childhood and adolescent period is the greater concern of parents and teachers to focus on academic competition in schools with lack of awareness on individual variation of children and to push them to get the highest score in their academic education without consideration to individual differences. The common mental health problems faced at this age group are anxiety, dissociative disorders, depression, school drop out and acute psychosis(16). Children may suffer from a wide range of other psychiatric illness such as conduct disorders, eating disorders, attention deficit hyperactivity disorders, adjustment disorders, substance abuse and dependence. Suicide rates rise rapidly in adolescence(17).

Findings from Middle East studies

Emotional disorders

Anxiety symptom was reported by 59% of a national survey of Egyptian children and adolescents through a specialized questionnaire(18). More than 35% of school children showed moderate anxiety scores(19). Using a clinical interview, anxiety was diagnosed in 7.9% of school children aged 6-12 years in Egypt(20). More than 10% of primary and preparatory school students in Alexandria, Egypt demonstrated depressive scores(21). A much higher prevalence of psychiatric disorders was reported among children and early adolescence in Iraq (37.4%)(22) and the Gaza strip up to 72.8%(23-25). In Taif, Saudi Arabia 8.4%, 13.5% and 11.6% of male school children and adolescents suffer from depression, anxiety and schizophrenia, respectively(26).

Behavioural disorders

Behavioural disorders present 8.2% of diagnoses in all children attending the outpatient psychiatric facilities in an Egyptian University Hospital(27). Up to 23.5% of preschool children have behavioral problems(28,29). More than 13% of primary school children in the United Arab Emirates have some form of behavioral disorders(30). Behavioural problems in childhood are frequently interpreted as misbehavior that can be managed by punishment or reward within the family. Within the overcrowded schools, teachers are less likely to differentiate between children with developmental disorders, adjustment disorders or mild learning disability(31).

Learning difficulties

Since education is increasing in both urban and rural areas, there is a tendency to see more cases of educational problems. Scholastic underachievement was found among 42.8% in pupils of elementary Egyptian schools(32). The awareness of parents and school staff of children's needs at different phases of development is often inadequate. A child who is an underachiever at school is usually labeled as mentally retarded by the teacher(19). Parents are often over-demanding in relation to the academic achievement of their children, even in the earliest years and this leads to an increase in the school drop-out rate(31).

Child abuse and neglect

There is a dearth of knowledge about the problem of child maltreatment in Arab societies(33). Egyptian studies revealed that violent behavior was

higher among children and adolescents subjected to corporal punishment. Hyperactivity and attention-deficit symptoms are encountered more often among students who are underachievers and most often are exposed to corporal punishment(32). Also, female genital mutilation has been studied and found to be prevalent in Egypt, Sudan, Somalia and Yemen. A higher percentage of Arab adolescents in Israel are psychologically and physically maltreated annually. This is associated with feelings of helplessness; psychological adjustment problems and low self-esteem(34). Children who experience maltreatment are three to four times as likely to become depressed or suicidal in adolescence or adulthood. A Moroccan study found that 9.2% of women reported sexual abuse during their childhood which is associated with depressive symptoms(35).

Eating disorders

Eating disorders (e.g. anorexia nervosa and bulimia nervosa) are psychological disorders characterized by severe disturbance in eating behavior. The available literature indicates that anorexia nervosa is rare in Arab countries. Thinness has been regarded as socially undesirable, whereas plumpness is regarded as a symbol of fertility and womanhood(36). However, an Omani study revealed that 33% and 9% of Omani and non-Omani teenagers showed a propensity for anorexic-like behavior, respectively and 12.3% and 18.4% showed propensity for binge eating or bulimia, respectively(37). In Qatar 10.1% of adolescent boys were extreme eaters(38). In the United Arab Emirates (UAE), 23.4% of adolescent girls showed abnormal eating attitudes(39). In Saudi Arabia, the figure is 24.6% among secondary school girls(40).

Handicapped children

A dark and neglected area is the mental health needs and services provided to children and adolescents with special needs. They face three major obstacles. Firstly, some families are ashamed to acknowledge that their child is impaired or delayed. Many children with autism or retardation are kept at home without receiving specialized services. Secondly, when families decide to seek placement for their children in either day centers or residential facilities, they may be faced with fees that they cannot afford given their poor financial conditions. Lastly, even after placing a child in a center, integrating the child later into society can be problematic. Not many schools accept children with a physical or mental handicap. Similarly, (and except for governmental agencies), few business allow those groups of youth to train for jobs when such jobs are well within their capacity. Disabled children frequently end up being kept at the fringe of society, where they continue to be non-productive and develop additional behavioural problems because of the lack of structure in their life(41). Bakr et al(42) and Amr et al(43,44) studied psychiatric disorders in children with chronic renal failure on dialysis and found a prevalence of 52.6% with adjustment disorders the most common. These children have low verbal, performance and full scale intelligent quotient, more depression and internalizing scores as well as more anxiety, somatic complaints, family problems and attention deficit. In UAE, psychiatric disorders were more frequent among children with bronchial asthma (16%)(45) and mental retardation(46).

Nocturnal enuresis was present in 1.9% of school children in Egypt(47) and a higher rate of 8.8% was reported among Jordanian children(48).

Determinants of child and adolescent mental health

The specific etiologies of behavioural and psychological disorders are unknown and probably multiply determined. It is not known exactly how and when the currently healthy children eventually develop specific mental problems making it difficult to plan interventions to prevent future specific dysfunction(49). Mental disorders have many determinants. Biological, psychological, social and societal risk and protective factors and their interactions have been identified across the lifespan from as early as fetal life. Many of these factors are malleable and therefore potential targets for prevention and promotion measures(5).

Risk factors

Risk factors are associated with increased probability of onset, greater severity and longer duration of major health problems(5).

- There are apparent universal risk factors including parental separation and divorce, psychological deprivation, and culture-specific factors, such as polygamy which correlated with manifest psychopathology(6). Poverty, in absence of community safety nets, can make the psychosocial distress worse(9). This is usually accompanied by lack of adequate food, shelter, education or health care.

- In some agricultural communities there is an ambivalent view of children as family property to be used for work, a lack of comprehension that children have a mental life and a failure to understand developmental psychology. Children have to obey the order of parents as a discipline system. This system raised lack of communication between children and their parents, particularly among adolescents.

- Lack of awareness about child mental health. Most children with mental problems or learning difficulties are simply ignored or labeled as slow, disobedient or problem children(50).

- Widespread civil strife and violence: wars and internecine strife disrupt social and community life. Mental morbidities usually accompany or outlast the physical morbidity of wars.

- With wide urbanization, work becomes mechanized, and both parents work away from home. They pass on to their children little knowledge and fewer skills which could earn them the children's respect. It is difficult for parents to train their children in social responsibilities, hence, delinquency

and behaviour disorders tend to develop(31). Breakdown of extended families deprives mental patients from the traditional source of support.

- Poor quality school, with less qualified, low paid and poorly committed teachers, have taken a great toil on mental health of children.

- Many perinatal factors are associated with mental disorders e.g. congenital anomalies, inborn error of metabolism, preterm, low birth weight, birth asphyxia, etc. Low birth weight and preterm were associated with cognitive and behavioural deficits, failure to thrive, cognitive problems later in life, academic impairment and school problems and increases the risk of behavioural and psychiatric disorders(51-53).

- In Gulf countries children are left to the care of expatriate non-Arabic home servants. The mental health impact of this type of child rearing practice was not studied.

Protective factors

Protective factors refer to conditions that improve people's resistance to risk factors and disorders.

- Individual protective factors include self-esteem, emotional resilience, positive thinking, problem-solving and social skill, stress management skills and feelings of mastery(5).

- Contrary to Western cultures, Arab culture is based on shame rather than guilt. In spite of rapid social change in the region, the majority of people especially in rural areas belong to an extended family hierarchy. It is considered shameful to care for a psychiatric child away from the family surroundings. Parents of children with learning disabilities or hyperkinetic disorders accept primary responsibility for them, rather than having them looked after in an institution(54).

- Arab society is characterized by strong family ties and close extended family relationships and is strongly influenced by Islamic principles. Social relationships have worked as factors of protection and as support networks. Extended family develops a better bond and support to the family members. Grandparents can ensure continuity of cultural and family traditions by passing on these values to children, thus helping them build a better foundation for their moral and social development with lower rates of delinquency(50).

- Psychotherapy is an important element of psychiatric management in the region, with a strong religious (Islamic and Christian) emphasis. Deeply religious faith and belief in destiny can protect people from feelings of hopelessness and the intention to kill oneself.

- In rural conservative societies, conditions are conducive to the development of happy and socially secure children. Such children learn crafts and appropriate conduct smoothly from their everyday coexistence with parents and elders and are gradually initiated into the fuller social responsibilities of the extended family community. Those living in the countryside have a special tolerance of children with mental disorders and learning disabilities and the ability to assimilate them into their community.

Those people are rehabilitated daily by cultivating the countryside and learning simple crafts under the supervision of family members(31).

- The practice of prolonged and exclusive breastfeeding in traditional communities improves the cognitive development as measured by intelligent quotient and teacher's academic ratings in children at age of 6.5 years(55).

Situation of child and adolescent mental health in the Middle East

Traditional religious healers (sheikhs) have a major role in primary mental care in the region. They deal with minor neurotic, psychosomatic and transitory psychotic states using religious and group psychotherapies, suggestions and devices such as amulets and incantations(54,56). Until recently, child mental health and psychiatry were not offered high priority in Middle East countries. They are recently addressed in the official health plans of some Middle East countries e.g. Egypt and Tunisia. Large-scale community surveys are scarce in the Arab world. There is a scarcity of valid and culture relevant Arabic psychiatric research instruments(8).

In the Middle East needs in child psychiatry are increasing because the region is very young and because of decreased pressure of traditional health problems especially infectious diseases. Primary health care workers, because of their commitments to physical health needs, are not able to deliver mental health care. They are not confident in managing mental disorders.

In the past 20 years, the countries of the Eastern Mediterranean region have adopted national programs of mental health as a method of meeting the needs of their peoples. This has brought in a new era in the provision of mental health care using the primary health care approach. The ultimate goal is to decrease both the stigma of mental illness and the reliance on large institutions for their treatment through community based care programs. Although the majority of the countries have agreed in principle to integrate mental health into primary health care delivery system, implementation so far has been limited for a variety of reasons(56).

Middle East countries have few psychiatrists specialized in childhood problems. Universities do not offer a degree in child psychiatry in spite of the magnitude and severity of mental health problems in childhood. The problem is not only the lack of resources for providing mental health care to children, but also the attitude of the community to child mental health problems.

Misconceptions about mental disorders are widespread, not only just among the lay public, but also among health professionals. It is commonly believed that mental disorders are not real disorders. They are considered to be rare in developing countries, or are

considered to be largely untreatable(57). In fact, most parents and teachers are not sensitive enough to pick up subtle forms of behavioural indications and often ignore or neglect them. It is only when the problem becomes severe and disabling that some attention is paid to the child. In early stages it is much easier and simpler to intervene and push the developmental trajectories into healthier and adaptive courses(17).

Special education schooling for children with learning disabilities and mental retardation is present in Egypt, Jordan, Lebanon, Saudi Arabia, Tunisia and the United Arab Emirates(8).

Future challenges

Child mental health problems are expected to increase in future due to rapidly changing social and cultural values, fragmentation of the family system, and loss of religious values(50). The vast majority of children and adolescents do not receive any mental health services at all. Mental health needs of children and adolescents are complex and huge. The high prevalence of child mental health problems and the fact that a sizeable segment of the population in the Middle East are children, it is pressing to develop systems to identify mental health needs in children and the necessary means to provide preventive and therapeutic services to them.

Most of the existing laws dealing with mental health are now old; having been written prior to the new concept of community psychiatry and the integration of mental health into other health services(58). An attempt to update them is now in progress(31). The main challenge remains to convince the states to allocate funds for more widespread and well organized mental health services, necessary for the prevention and intervention of the ever increasing demands in the child and adolescent population.

The challenges are to include child mental health in primary health care and school health services, train family doctors and pediatricians to deal with the main bulk of mental disorders, and raise public awareness regarding recognition of mental disorders and referral routes. School mental health assessment and screening of school children by qualified psychologists or social workers with referral to psychiatrists is mandatory if we want to provide our children with healthy mental development. What we need is a public awareness that mental disorder can start in childhood and that its early detection and management can spare the community a high percentage of adulthood disorders. Most parents of emotionally disturbed children prefer to take them to a general practitioner or pediatricians rather than a psychiatric clinic.

Special attention should be paid to children with special needs, delinquent juvenile, adolescent with substance abuse, abused and neglected children, children with separated parents, civil wars and political unrest. Feasible and cost-effective service delivery has to be developed to meet the mental health needs of children and adolescents.

Assessing impairment in children and adolescents is a complex task involving the need for cultural specific tools, agreement on criteria for impairments, and the implication of disorders for a reduction in the ability to be productive(3). There is a need for simple culturally sensitive screening tools in local language for different psychiatric illnesses. These tools need to be validated and be appropriate for application in primary health care.

Another challenge in the Middle East countries is the role played by traditional healers. Many of them are strongly against any medication intake and therefore constitute an obstacle rather than an asset to mental health care provision. A policy of integration, to have among its goals an examination of the nature of the traditional practices, and a process of improving the more efficacious and safe components of this form of care. A training package is needed to be prepared for these healers. Any future program should articulate collaborative linkages between traditional and modern medicine systems.

Novel approaches are essential to satisfy needs of rural, remote dispersed populations, refugees, displaced indigenous and disaster stricken populations.

Research in child mental health is not highly developed. Research might seem like a luxury in poor countries, but is essential to work towards the development of a local research capacity. Research should not represent a simple replication of Western studies(6). There is a need to initiate research that will answer questions about the specificity of diagnosis in the Middle East region, the ways in which services can be developed, how treatments are best utilized, role of traditional healer and how the burden of diseases can be measured at the community level.

What can we do?

Continued neglect of the mental health needs of children and adolescents is unacceptable and must stop(3). The problems of mental illness are complex, with implication for health care, economy, and social and cultural practices. The prevention of mental disorders has been neglected, despite the fact that nearly half of these disorders are amenable to primary prevention(59). Mental health needs are often present in systems other than the health or mental health arena. Children with mental health problems are often first seen and first treated in the education, social services, justice or juvenile systems(3).

Ample evidence exists that early intervention programs are a powerful prevention strategy. The most successful programs addressing risk and protective factors early in life are targeted at child populations at risk(60). There is a wide range of preventive measures that have been found to reduce the risk factors, strengthen protective factors, and decrease the onset of some mental disorders and improve positive mental health(5). There is no simple solution. A combination of approaches may be more successful

than a single strategy. Empowerment of primary health care staff to tackle mental health problems is mandatory for the success of any intervention program.

Promotion of mental health and prevention of mental disorders needs to be a multipronged effort(5). There is a need for greater integration of the health, education and welfare sectors to provide a more comprehensive policy for prevention of child mental health problems.

Preventive interventions may seek to enhance protective factors, which are positive behaviours or features of environment that lessen the likelihood of negative outcomes or increase the possibility of positive outcomes. In their meta-analysis of 177 primary prevention programs designed to prevent behaviour and social problems in children and adolescents, Durlak and Wells(49) found that most of these programs yield significant effects.

Promotion of maternal and child health programs will contribute significantly to improvement of child mental health.

Changing school ecology will improve emotional and behavioural functioning of students. Teachers are in a very powerful position. Their behaviour as a model and their opinions as to what constitutes good mental health, impact very directly on the concepts of mental health adopted by their pupils. They are concerned in promoting some aspects of mental health, such as improving the self-esteem of their learners, teaching acceptable ways of relating to others and managing stress and adversity(1). For children, school is the second home and no child mental health can be conceived without proper attention to school mental health.

In view of the lack of human resources, mental health policies and legislation should develop partnerships with other sectors e.g. non-governmental organizations, and international organizations to provide mental patients with the best care possible. Training in child mental health care should include all health care personnel including doctors, nurses, social workers and psychologists. The involvement of teachers in this program is vital.

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Relationship between empowering women and domestic violence, EDHS 2005

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ABSTRACT

Introduction: The literature reveals that there has been limited critical discussion of the inter-relationship between domestic violence and women's empowerment. Also there is scarce research on domestic violence against women in some Arab countries.

Objectives: This paper critically re-examines the literature to identify and apply relevant scientific principles and evidence to inform effective intervention. It includes background on demographic data of ever married Egyptian women between 19-49 years old, and developing an indicator to assess the probability of empowerment among women in order to combat domestic violence in the hope of ending violence against women.

Methods: The current state of knowledge is analyzed using the secondary data of the EDHS, 2005 by applying both; (1) simple descriptive measures such as frequency to specifying the types of evidence available and its weaknesses, attitudes to hitting, with highlighting possible implications for a research agenda, and by (2) logistic regression and Domestic violence was experienced by 40 per cent of ever married women in the sample.

Results: The study showed that about 36 % of Egyptian women experiences domestic violence in her lifetime by her spouse, and about 49.7 % of them felt it was justified for them to be beaten. Furthermore there is no difference between those women who live in rural or urban areas or to exposure to domestic violence. Then again, those women who are recently married and in extreme age groups were less exposed. Additionally, it is found that those women who are empowered are less exposed as well.

Conclusions and recommendations: This paper explored the relationship between women's empowerment, and domestic violence, and it found that Women's empowerment variables were significantly associated with the degree of domestic violence prevalence. This shows the need to promote gender equality, empower women, and end violence against women.

Keywords: domestic violence, violent behaviour, wife abuse, wife-beating, violence against women, male assaults on females violence, empowerment, Egypt.

Introduction

In the whole world, to a greater or lesser degree, women and girls are exposed to physical, sexual and psychological abuse that cuts across lines of income, class and traditions, and which hinders their right to get involved entirely in society (el-Bayoumi G, Borum ML, Haywood Y., 1998, UNCEF, 2000, 2005, The World's Women 2005, Diop-Sidibé N, Campbell JC, Becker S., 2006).

Recent surveys have found that the prevalence of domestic violence (defined as physical beating or battering of a woman by a male intimate partner) ranges from 22 per cent to 60 per cent in developing countries (Kavita Sethuraman, 2008).
Violence against women is one of the critical social means by which women are imposed into inferior positions compared with men (The World's Women 2005). In Arab and Islamic countries, the scope of domestic violence is not yet considered a major concern despite its increasing frequency and serious consequences (S. Douki, F. Nacef, A. Belhadj, A. Bouasker, and R. Ghachem, 2003). The precursors of domestic violence are found to be mostly marital conflict, cultural heritage, male control over household wealth and decision-making, poverty, and unemployment (Bent-Goodley TB., 2005, Oths K. S., Robertson T., 2007, Kavita Sethuraman, 2008).

It is not only that, but some selective quotes from the Koran are misused, and misinterpreted to prove that men who beat their wives are following God's orders. However, a fair reading of the Koran shows that wife abuse is a result of culture rather than religion (S. Douki, F. Nacef, A. Belhadj, A. Bouasker, and R. Ghachem, 2003, Katerndahl. D. A., Obregon. M.).

A review of nearly 50 population-based surveys from around the world found that between 10% and 50% of women reported being hit or physically abused by an intimate male partner at some point in their lives (Gracia E, Herrero J, 2006), and another study conducted by the WHO in 10-countries on women's health and domestic violence, had found that between 15% and 71% of women reported physical or sexual violence by a husband or partner (Al-Habshi S. , 2006)
In Egypt, the Egyptian Demographic and Health Survey of 2005 (2005 EDHS), conducted among a national random sample of women (El-Zanaty & Associates, 2005), indicated that almost half of the Egyptian women ever married had experienced some sort of physical abuse by their spouses, which impacted her physically, and psychologically. This is all attributed to the concept of male supremacy which is accepted to be the norm (Ibrahim A., 2004).

Although a lot of research studied prevalence of domestic violence against women, little related it to women's empowerment and women's attitude towards violence. The millennium development goals have pointed to the importance of women's empowerment in goal number three (MDG 3), (Beijing Platform for Action, 2005, Afifi M., 2007).

This research will study the relation between empowering women and domestic violence, to build up a new strategy to tackle this problem in the Egyptian society.

Our hypothesis is that if women can be empowered, then the violence agains tthem would lessen.

The aim of this research is to determine the main determinants of domestic violence occurrence against women in order to make recommendations to reduce its incidence by empowering women.

The objectives of the research are to measure of prevalence of domestic violence (according to the type of domestic violence), measure women's attitude towards violence, and to determine the main factors behind domestic violence among women.

Subjects and methods

Study population, data and variable definitions

Secondary analysis of DHS 2005 data (El-Zanaty & Associates, 2005). The DHS is quantitative and cross sectional research, targeting ever married women between 15-49 years old. The inclusion criteria were ever married women between 15-49 years old.

There are many variables; however some were selected for the statistical analysis in order to fulfill the aim and objective of the study, and those variables which considered for analysis in this paper were; socio-demographic characteristics such as; different age groups, duration of marriage, residence location (urban and rural), and attitudes toward hitting (tolerance and perceived exposure to hitting). The indicators which were used for measuring violence from the DHS 2005 were as followings: physical, emotional and sexual violence. All data were computed through the SPSS to create one variable namely domestic violence as a whole with the three types of it, as above, and was assigned zero if not exposed or experienced domestic violence, and assigned one if the woman had been exposed at any time of her life, to violence while married to her husband.

The United Nations General Assembly in 1993 defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life". Accordingly, violence against women encompasses the following: violence occurring in the family, including battering, sexual abuse of female children in the household, dowry-related violence, marital rape, female genital mutilation and other traditional practices harmful to women, non-spousal violence and violence related to exploitation and violence occurring within the general community, including rape, sexual abuse, sexual harassment and intimidation at work, in educational institutions and elsewhere, trafficking in women and forced prostitution and violence perpetrated or condoned by the State, wherever it occurs.
Moreover an indicator for women's empowerment has been built up by taking into consideration the final say in health care, and buying goods, daily requirements, and family visits, as well as taking into consideration education, employment, and decisions in budgets.

The women's empowerment variables and indicator was formed by considering any women who completed secondary degree and more to be counted as empowered and take the score one, if not take the zero score. In addition, if the is working for cash to be considered as empowered, and scored one, and if not zero. Additionally, if women take decisions alone, or with their husband to be considered as empowered, and to be scored one, and if not zero. Those decisions measures include; health care, buying goods, daily requirements, and family visits.

If the woman was empowered in the sex dimension, she will take the value six (maximum), if not empowered in any of them, she will take the value of zero. And on that concept and calculation, we assume any women with a value more than three would be considered empowered.

The United Nations population information network (popin) defines women's empowerment as containing the following components: women's sense of self-worth, their right to have and to determine choices, have access to opportunities and resources, have the power to control their own lives, both within and outside the home, and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally.

Statistical methods

Statistical package of social science SPSS version 12 was used, and the dependent variable used was domestic violence and the independent variables used were rural / urban areas, agree to be hit, duration of marriage, and empowerment indicators.

Basic descriptive analysis (frequency distribution table) and logistic regression analyses were performed on the data set.

The purpose of these two sets of analyses was to determine the association between the women's empowerment and domestic violence variables, and the simple logistic regression was applied to investigate the relationship between two variables (dichotomous) to predicate how empowering women could be achieved and measured.

The frequency was applied to estimate the percentage of domestic violence occurrences among women, and those who agree to be hit, and

	Frequency	Percent	Cumulative Percent
.00	3595745591	64.1	64.1
1.00	2017254530	35.9	100.0
Total	5613000121	100.0	

Violence types

Table 1 presents the simple descriptive analysis for domestic violence different types.

	Frequency	Percent	Cumulative Percent
.00	796514378	14.2	22.2
1.00	2788608498	49.7	100.0
Total	3585122876	63.9	
Missing System	2027877245	36.1	
Total	5613000121	100.0	

Justify beating

Table 2 presents the simple descriptive analysis for agreeing to be hit.

	Frequency	Percent	Cumulative Percent
.00	260309330	4.6	5.0
1.00	407414152	7.3	12.8
2.00	640087156	11.4	25.0
3.00	1021054370	18.2	44.6
4.00	1435152484	25.6	72.1
5.00	1052476740	18.8	92.2
6.00	405137404	7.2	100.0
Total	5221631636	93.0	
Missing System	391368485	7.0	
Total	5613000121	100.0	

Empowerment

Table 3 presents the simple descriptive analysis for empowerment.

percentage of empowerment against domestic violence, and the estimated findings were as following;

About thirty-six percent of women in the sample were ever exposed to different sorts of domestic violence by their current husband whereas 64.1% are not. And about 49.7 % felt it was justified and agreed to be hit; while 14.2 % would not agree (missing data were 36.1%). 55.5 % were empowered according to our indicators (Figure 1 opposite).

(See Tables 1, 2, and 3 previous page)

The main analysis tool used was simple logistic regression, because the (outcome) dependent variable is binary (categorical). The logistic regression was significant (P< 00.5), and it was applied to the following variables; namely, different age groups with reference to (15-19), residency with reference to rural, attitudes toward hitting with reference to disagree about it, duration of marriage with reference to (0-4) years of marriage duration, and lastly the built up empowerment index as indicated and explained earlier. This model showed that there is minimal difference between rural and urban areas in relation to domestic violence. On the other hand, the empowered women and those who disagree to be hit are less exposed (OR = 1.774 and 1.633 respectively, $p < 0.05$). In addition, women in the extreme age groups (15-19, and >40) and recently married are less exposed to domestic violence as well. This can be illustrated by the following Table 4:

So our regression analyses found that extreme age groups, and a recent marriage, and less tolerance to domestic violence (disagreeing to be hit) were important factors in predicting violence against women.

Indicators	Odds ratio (OR)	p-value
Age		**0.000**
15-19 (REFERENCE)		
20-24	1.576	0.000
25-29	1.537	0.000
30-34	1.322	0.000
35-39	1.170	0.000
40-44	1.083	0.000
45-49	0.979	0.000
Residence		
RURAL (REFERENCE)		
Urban	1.034	0.000
Attitude to being hit		
Disagree (REFERENCE)		
Agree	1.774	0.000
Duration of marriage		**0.000**
0-4 (REFERENCE)		
5-9	1.734	0.000
10-14	2.587	0.000
15-19	2.602	0.000
20-24	2.711	0.000
25-29	2.235	0.000
30+	2.658	0.000
Empowerment index	**1.633**	**0.000**

Table 4 presents the logistic regression analysis.

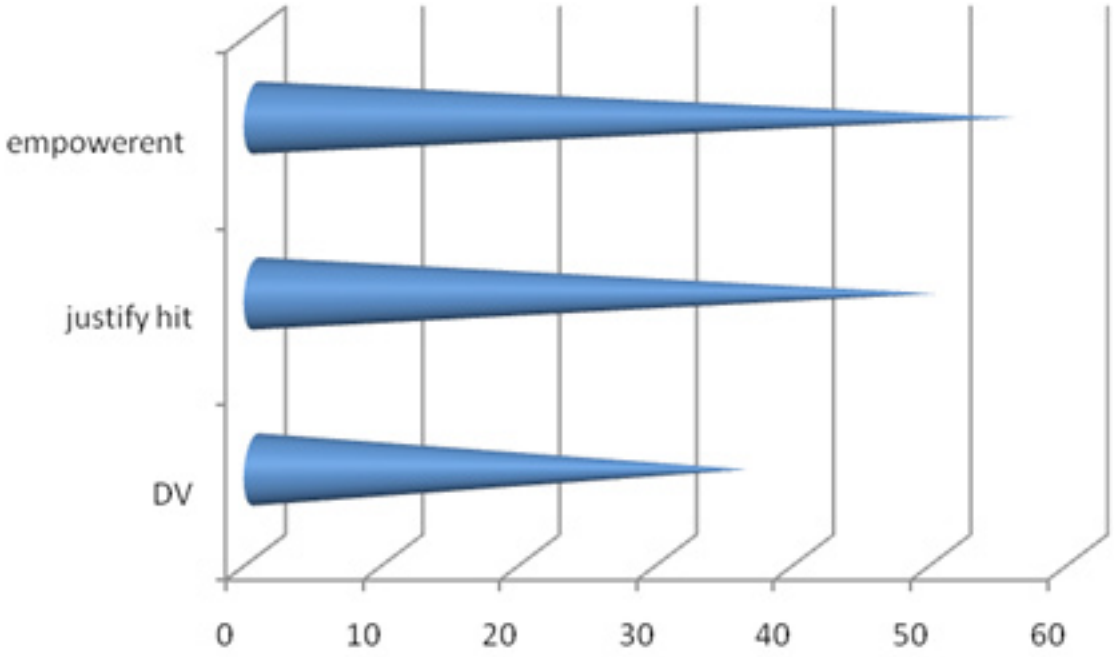

Figure 1-% of DV, agree to hit and EW

Discussion

The aim of this study was to determine the main factors of domestic violence, and its prevalence, also measure women's attitude to domestic violence, and build up indicators for women's empowerment, and as the results showed about 36 % of women were exposed to different sorts of domestic violence, and 49.7 % agreed to be hit, and 55.5% were empowered according to our indicators findings.

Taken together, these study findings show that women's empowerment and experience of domestic violence are closely associated. As this study was carried out to see if we can tackle domestic violence in the short and long run vision, by empowering women we have decided to work on raising simple measures such as increasing education of women, working opportunities, and who should have the (decision-making capabilities and control over their lives) right for final say, and the woman's attitude toward domestic violence.

Those measures and indicators were found to be closely related and associated to reduce domestic violence prevalence, and therefore this would support our proposed hypothesis. The literature reveals there has been limited critical discussion of the inter-relationship between domestic violence and women's empowerment. Also there is scarce research on domestic violence against women in some Arab countries. This study has found that empowering women would tackle this issue (Kavita Sethuraman, 2008).

As our analysis showed that the empowered women and those who disagree with being hit are less exposed. In addition, women in the youngest age group (15-19) and recently married are less exposed to domestic violence as well. Also those women become more empowered as they get older (40+).

After all, women's lack of empowerment is believed to be an important factor in the persistence of her abuse. On the other hand, measuring women's empowerment is challenging, because the term itself is often poorly defined (Kavita Sethuraman, 2008). In this study, we created indicators for empowerment of women and then analysed them to see the association.

The generally expected key factor for a clear concept that defines women's empowerment relates to choices, control, and power. After all, women's empowerment is conceptualized as a utility of women's access to and control over resources, which extends to their decision-making capabilities regarding household decisions, employment opportunities and having their own income, household assets and expenditure, fertility, sexuality, and freedom of movement (physical mobility) and their control over material and intangible resources such as property, information and time; their position within the household, their experience of domestic violence; and their education (Kavita Sethuraman, 2008).

Another argument as to what would make women experience Domestic violence is gender inequality and women's lack of empowerment (Kavita Sethuraman, 2008).

This study has looked for associations between indicators of women's empowerment and domestic violence, and it has showed that if women's empowerment is raised, then the prevalence of domestic violence would decrease. So a strong association would be there. As for example the increase in women's education, and maternal employment significantly decreased the domestic violence prevalence. Also if women contribute more to total household income they are less likely to be exposed to domestic violence.

Conclusions and Recommendations

Ending violence against women

Domestic violence against women is a significant social problem as it is a human right violation. Wife-beating is common. Furthermore many nations consider it as a normal routine and an acceptable feature of any relationship between men and women especially in Egypt. Additionally it it's a relatively invisible issue as it occurs within the households walls, whereas in many western countries, such an act is condemned, and considered to be a crime where the perpetrator should be persecuted (Millennium project, 2005).

Domestic violence is a misapplication of power against women by men, and its acceptance cannot be accepted nor justified, and surely it cannot be attributed solely to religion. It is rather a deep seated cultural and traditional issue that is injected into societies towards the traditional feministic idea by the male paternalistic component in the broader context of a dynamic relationship between spouses (Bent-Goodley TB, 2005). The results of this study refer only to the Egyptian population and thus more research is needed to ascertain if the relationships found here would be duplicated in other cultural contexts. Importantly, all these cultural and traditional features can be changed by proper information, and education.

However, this study's results strongly support the idea that, empowering women would lessen the violence against them, but this is not sufficient on its own. Because this study might have potential limitations, as most of our variables were combined together on the assumption of making indicators of empowerment, so reliability of our empowerment indicator could be questionable.
A further research on the nexus between women's empowerment and domestic violence is clearly needed, in particular in developing countries, and its far consequences. There is a need to understand the extent to which women experience violence and women's ability to become empowered. It is vital to set up strategies and get them implemented to end violence against women.
Also we need to promote gender equality, delay marriage, and empower women and girls.
Lastly to conclude with, a call to men, both men and boys should be urged to stop violence inflicted by males on females, and to transform their belief that the definition of masculinity does not involve aggression and domination.

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Infant feeding in Al-Hassa, Saudi Arabia

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ABSTRACT

Background: Recently there has been an increasing concern about the decline in breastfeeding in Saudi Arabia. The objective of this paper is to describe the pattern and predictors of infant feeding in Al-Hassa, Saudi Arabia.

Methods: This is a prospective study involving 2000 infants. Data was collected from mothers at 2, 4, 6, and 12 months of infant's age during the vaccination sessions. All infants attending for vaccination at primary health care centers during a two months period were included. Pattern of feeding was expressed as either breast, bottle, or mixed (both) feeding.

Results: There is a significant downward trend in breastfeeding and upward trends in both bottle and mixed feeding rates with increasing infant's age. At age of two months, gestational age, birth weight and mode of delivery all have a significant effect on feeding pattern. Breastfeeding is significantly higher among full term infants, normal weight infants and infants of spontaneous vaginal delivery. At four, six and twelve months of age, breast feeding was significantly higher among mothers' of rural residence, housewives and those of low educational levels. Also full term infants, average weight infants and those of spontaneous vaginal delivery are more likely to be breastfed.

About 14% of infants are still exclusively breastfed without supplementation at the age of 12 months.

Conclusion: Breastfeeding, whether alone or mixed with bottle feeding, dropped significantly at the age of 6 months with further decrease at 12 months of infant's age. Mother's residence, education and work status had significant effects on feeding patterns at 4, 6, and 12 months of age. On the other hand gestational birth weight and mode of delivery are significant predictors of feeding pattern throughout infancy. These predictors can be used to detect mothers who are more likely to stop breastfeeding early, to be targeted in breastfeeding promotion and support.

Key words: Infant feeding, Breastfeeding, Bottle feeding, Mixed feeding

Introduction

Breastfeeding is the ideal and most natural way of nurturing infants. The importance of breastfeeding has been proved unequivocally(1). The practice of breastfeeding has declined considerably over the past decades and early introduction of bottle milk and solid food has increased in many parts of the world(2-7). Saudi Arabia is a country where the legislation is derived from Quran and Hadiths. Breastfeeding is considered to be the ideal and the most natural way of nursing infants due to religious and cultural beliefs. However, recently major developments have taken place in Saudi Arabia. This development has had different influences on lifestyles of Saudi families. More mothers leave their homes either to achieve high education or for work. The majority of mothers start breastfeeding their infants but soon introduce a bottle(1). Recent studies showed a decline in breastfeeding between the ages of 6 and 12 months and the introduction of bottle formula has been become more frequent at earlier infant ages(8-13). The objective of this study is to describe the pattern and the influencing factors of infant feeding practices of mothers in Al-Hassa, Saudi Arabia.

Population and Methods

This prospective study was carried out in Al-Hassa, Saudi Arabia. The target population was all infants attending for first vaccination session during a two months period, in June and July of 2008 AD. These infants were followed-up to the end of their first year of life.

Al-Hassa is the largest province in Saudi Arabia's Eastern region (population of 908,366) covering an area of 534,000 km(²). Maternity care in Al-Hassa is provided through a network of 47 primary health care centers (PHCCs) covering urban, rural and Hegar (Bedouin desert collection) areas. Eligible candidates

were all infants attending for vaccination in primary health care centers (PHCCs) at the age of two months and their mothers are willing to keep a vaccination schedule throughout infancy at the same PHCC. Mothers were counseled and assured that data collected would be dealt with confidentially. They were requested to give verbal informed consent before interview. The study was approved by Al-Hassa Directorate of Health.

Sample size was calculated using EPI Info statistical program. During 2007 a total of 15,032 live births were registered in Al-Hassa. A pilot study on 100 infants not included in the study revealed that about 14% of infants are still breastfed without any supplementations at the age of 12 months. The sample size was calculated to be about 1808 infants with worst acceptable level of 12.5% and 95% confidence level. The target was increased to 2000 infants at the age of 2 months to compensate for loss during follow-up. The actual number of infants participated in the study was 2000 at the age of two months. This number dropped to 1947, 1904 and 1863 at the ages of 4, 6 and 12 months, respectively.

The infant-mother dyads were followed up during the routine vaccination sessions. Mothers were interviewed at the PHCCs by Arabic speaking female nurse interviewers who were oriented about the study and trained in data collection. Data were completed from the family file, and maternity cards kept at PHCCs and also from the hospital discharge form.

At the first vaccination session the following data were collected; family residence and income, mother's education and work, parity, infant sex, gestational age, birth weight, and mode of delivery. Gestational age at birth was defined as the number of completed weeks of gestation based on the estimated delivery date in the clinical record. Pre-term delivery was defined as live infant delivered at <37 weeks' gestation, and low birth weight was defined as live infant weighing <2500 g at birth(14,15).

The outcome variable (pattern of feeding) is expressed as either breast only, bottle only or mixed (both breast and bottle). Mothers were asked about infant feeding patterns at subsequent vaccination sessions.

The Chi-squared (2) was used as a test of significance for comparison of categorical variables. P <0.05 was chosen as the level of statistical significance using the SPSS (Statistical Package for Social Sciences) version 17 (Chicago, USA).

Results

Out of 2000 infants studied, only 5.2% were never breastfed. Table 1 reveals that there is a significant downward trend in breastfeeding and an upward trend in both bottle and mixed feeding rates with increasing infant age. Breastfeeding decreased with increasing age from 64.0% at two months down to 44.4%, 24.4% and 14.1% at the ages of 4, 6 and 12 months, respectively.

All studied maternal characteristics as well as infant sex have no effect on the pattern of infant feeding at the age of two months. On the contrary, gestational age, birth weight and mode of delivery all have a significant effect on feeding patterns. Breastfeeding is significantly higher among full term infants, normal weight infants and infants of spontaneous vaginal delivery (Table 2).

At four, six and twelve months of age breast feeding was significantly higher among mothers of rural residence, housewives and those of low educational levels. Also, full term infants, average weight infants and those of spontaneous vaginal delivery are more likely to be breastfed throughout the first year of life (see Tables 3, 4 and 5 - pages 28, 29, 30).

Discussion

The incidence and duration of breastfeeding in Saudi Arabia has been declining in the past decades(4). In the present study 5.2% of mothers never breastfed. This is intermediate to the previously reported never breastfed rates in Saudi Arabia from both local and national studies that ranged from 1.4% up to 13.1%(13,16-21). This high prevalence of breastfeeding initiation at birth indicates the willingness of Saudi mothers to breastfeed(13).

There is a significant downward trend in breastfeeding and upward trends in both bottle and mixed feeding rates, with increasing infant's age.

		Feeding pattern		
Age (months)	Total N	Breast N (%)	Bottle N (%)	Mixed N (%)
2	2000	1279(64.0)	108(5.4)	613(30.7)
4	1947	864(44.4)	173(8.9)	910(46.7)
6	1904	465(24.4)	336(17.6)	1103(57.9)
12	1863	263(14.1)	516(27.7)	1084(58.2)

X2=1354.9, P<0.001

Table 1: Overall pattern of infant feeding

	Feeding pattern			Significance test
	Breast N(%)	Bottle N(%)	Mixed N(%)	
Residence: Urban	906(63.6)	81(5.7)	437(30.7)	χ^2=0.8,
Rural/Hegar	373(64.8)	27(4.7)	176(30.6)	P=0.7
Mother's work: Housewives	1153(64.6)	92(5.2)	539(30.2)	χ^2=4.0,
Working@	126(58.3)	16(7.4)	74(34.3)	P=0.1
Mother's education: Less than secondary	679(65.2)	50(4.8)	312(30.0)	χ^2=5.2,
Secondary	420(64.3)	39(6.0)	194(29.7)	P=0.3
Above secondary	180(58.8)	19(6.2)	107(35.0)	
Family income: Satisfactory	1012(63.8)	83(5.2)	490(30.9)	χ^2=0.6,
Unsatisfactory	267(64.3)	25(6.0)	123(29.6)	P=0.8
Mother's age (years): Less than 20	65(67.7)	5(5.2)	26(27.1)	
20-35	1008(63.4)	92(5.8)	489(30.8)	χ^2=3.4,
More than 35	206(65.4)	11(3.5)	98(31.1)	P=0.5
Parity: Primipara	259(60.2)	27(6.3)	144(33.5)	
2 and 3	438(65.1)	36(5.3)	199(29.6)	χ^2=3.5,
4 and more	582(64.9)	45(5.0)	270(30.1)	P=0.5
Infant's sex: Male	621(61.9)	59(5.9)	324(32.3)	χ^2=3.96.,
Female	659(66.1)	49(4.9)	289(29.0)	P=0.14
Gestational age: Preterm	44(30.1)	12(8.2)	90(61.6)	χ^2=79.8,
Full term	1235(66.6)	96(5.2)	523(28.2)	P≤0.001
Birth weight: Average weight	1208(66.5)	102(5.6)	506(27.9)	χ^2=72.1,
Low birth weight	71(38.6)	6(3.3)	107(58.2)	P≤0.001
Delivery: Spontaneous vaginal delivery	1149(67.3)	79(4.6)	479(28.1)	χ^2=58.9,
Operative delivery#	130(44.4)	29(9.9)	134(45.7)	P≤0.001

Table 2: Factors affecting feeding patterns at the age of two months

	Feeding pattern			Significance test
	Breast N(%)	Bottle N(%)	Mixed N(%)	
Residence: Urban	581(42.2)	159(11.5)	638(46.3)	χ^2=42.8,
Rural/Hegar	283(49.7)	14(2.5)	272(47.8)	P≤0.001
Mother's work: Housewives	831(47.2)	154(8.8)	774(44.0)	χ^2=63.3,
Working	33(17.6)	19(10.1)	138(72.3)	P≤0.001
Mother's education: Less than secondary	493(47.9)	79(7.7)	457(44.4)	
Secondary	298(46.8)	69(10.8)	270(42.4)	χ^2=53.7.,
Above secondary	73(26.0)	25(8.9)	183(65.0)	P≤0.001
Family income: Satisfactory	676(43.8)	133(8.6)	734(47.6)	χ^2=2.2,
Unsatisfactory	188(46.5)	40(9.9)	176(43.6)	P=0.3
Mother's age (years): Less than 20	44(45.8)	8(8.3)	44(45.8)	
20-35	684(44.2)	143(9.2)	719(46.5)	χ^2=1.5,
More than 35	136(44.6)	22(7.2)	147(48.2)	P=0.8
Parity: Primipara	182(44.0)	38(9.2)	197(46.9)	
2 and 3	296(44.8)	64(9.7)	301(45.5)	χ^2=1.4,
4 and more	386(44.3)	71(8.1)	415(47.6)	P=0.8
Infant's sex: Male	415(42.4)	97(9.9)	467(47.7)	χ^2=4.5,
Female	449(46.4)	76(7.9)	443(45.8)	P=0.11
Gestational age: Preterm	30(24.8)	22(18.2)	69(57.0)	χ^2=26.6.,
Full term	834(45.7)	151(8.3)	841(46.1)	P≤0.001
Birth weight: Average weight	820(46.1)	152(8.5)	807(45.4)	χ^2=24.8,
Low birth weight	44(26.2)	21(12.5)	103(61.3)	P≤0.001
Delivery: Spontaneous vaginal delivery	772(46.5)	133(8.0)	757(45.5)	χ^2=24.4.,
Operative delivery	92(32.3)	40(14.0)	153(53.7)	P≤0.001

Table 3: Factors affecting feeding patterns at the age of four months

	Feeding pattern			Significance test
	Breast N(%)	Bottle N(%)	Mixed N(%)	
Residence: Urban	283(21.0)	233(17.3)	829(61.6)	χ^2=32.6,
Rural/Hegar	182(32.6)	103(18.4)	274(49.0)	P≤0.001
Mother's work: Housewives	458(26.4)	302(17.5)	967(56.1)	χ^2=41.7,
Working	9(5.0)	34(19.0)	136(76.0)	P≤0.001
Mother's education: Less than secondary	253(25.0)	177(17.5)	580(57.4)	
Secondary	171(27.4)	115(18.5)	337(54.1)	χ^2=19.6,
Above secondary	41(15.1)	44(16.2)	186(68.6)	P≤0.001
Family income: Satisfactory	364(24.1)	268(17.7)	881(58.2)	χ^2=0.5,
Unsatisfactory	101(25.8)	68(17.4)	222(56.8)	P=0.8
Mother's age (years): Less than 20	24(25.0)	15(15.6)	57(59.4)	
20-35	372(24.6)	267(17.7)	871(57.7)	χ^2=0.6,
More than 35	69(23.2)	54(18.1)	175(58.7)	P=0.97
Parity: Primipara	101(25.1)	81(20.1)	220(54.7)	
2 and 3	162(24.8)	117(17.9)	373(57.2)	χ^2=4.1,
4 and more	202(23.8)	138(16.2)	510(60.0)	P=0.4
Infant's sex: Male	236(24.7)	167(17.5)	552(27.8)	χ^2=0.1,
Female	229(24.1)	169(17.8)	551(58.1)	P=0.95
Gestational age: Preterm	13(14.9)	28(32.2)	46(52.9)	χ^2=14.7,
Full term	452(24.9)	308(17.0)	1057(58.2)	P≤0.001
Birth weight: Average weight	443(25.2)	302(17.2)	1014(57.6)	χ^2=8.8,
Low birth weight	22(15.2)	34(23.4)	89(61.4)	P=0.012
Delivery: Spontaneous vaginal delivery	418(25.7)	266(16.7)	943(58.0)	χ^2=18.1,
Operative delivery	47(17.0)	70(25.3)	160(57.8)	P≤0.001

Table 4: Factors affecting feeding patterns at the age of six months

	Feeding pattern			Significance test
	Breast N(%)	Bottle N(%)	Mixed N(%)	
Residence: Urban	149(11.3)	359(27.3)	806(61.3)	χ^2=32.2,
Rural/Hegar	114(20.8)	157(28.6)	278(50.6)	P≤0.001
Mother's work: Housewives	261(15.4)	457(27.0)	97(57.6)	χ^2=26.6,
Working	2(1.2)	59(34.9)	108(63.9)	P≤0.001
Mother's education: Less than secondary	145(14.6)	261(26.3)	587(59.1)	
Secondary	101(16.6)	177(29.0)	332(54.4)	χ^2=17.8,
Above secondary	17(6.5)	78(30.0)	165(63.5)	P=0.001
Family income: Satisfactory	207(13.9)	414(27.9)	863(58.2)	χ^2=0.3,
Unsatisfactory	56(14.8)	102(26.9)	221(58.3)	P=0.9
Mother's age (years): Less than 20	16(16.7)	23(24.0)	57(59.4)	
20-35	206(14.0)	410(27.8)	860(58.3)	χ^2=1.1,
More than 35	41(14.1)	83(28.5)	167(57.4)	P=0.9
Parity: Primipara	56(14.4)	122(31.4)	211(54.2)	
2 and 3	93(14.4)	178(27.6)	373(57.9)	χ^2=4.5,
4 and more	114(13.7)	216(26.0)	500(60.2)	P=0.4
Infant's sex: Male	138(14.8)	255(27.3)	541(57.9)	χ^2=0.7,
Female	125(13.5)	261(28.1)	543(58.4)	P=0.7
Gestational age: Preterm	2(3.6)	26(46.4)	28(50.0)	χ^2=12.5,
Full term	261(14.4)	490(27.1)	1056(58.4)	P=0.002
Birth weight: Average weight	255(14.7)	474(27.3)	1010(58.1)	χ^2=7.4,
Low birth weight	8(6.5)	42(33.9)	74(59.4)	P=0.03
Delivery: Spontaneous vaginal delivery	244(15.3)	415(26.0)	935(58.7)	χ^2=22.5,
Operative delivery	19(7.1)	101(37.5)	149(55.4)	P≤0.001

Table 5: Factors affecting feeding patterns at the age of twelve months

Breastfeeding decreased with increasing age from 64.0% at two months down to 44.4%, 24.4% and 14.1% at the ages of 4, 6 and 12 months, respectively. This result supports the decline of breastfeeding practices by Saudi mothers reported in previous studies. These studies reported popularity of bottle and mixed feeding with early introduction of solid food and weaning(4,11,12,16,17,22-25). A recent study reported that bottle feeding was introduced by one month of age to 51.4% and to 90% by the age of six months. Furthermore, 80.8% of infants were introduced to solid foods between 4 to 6 months of age and whole milk feedings were given to 40% of children younger than 12 months of age(13).

This study revealed that all studied maternal characteristics as well as infant sex have no effect on the pattern of infant feeding at the age of two months. However at four, six and twelve months of age breastfeeding was significantly higher among mothers of rural residence, housewives and those of low educational levels.

Mothers of rural/Hegar residences are more likely to breastfeed than those of urban residence at the ages of four months (49.7% vs. 42.25), six months (32.6% vs. 21.0%) and 12 months (20.8% vs. 11.3%). Rural and Hegar areas are more conservative and mothers are more likely to be housewives and less educated than urban mothers.

Working mothers are less likely to breastfeed than housewives at the ages of four months (17.6% vs. 47.2%), six months (5.0% vs. 26.4%) and 12 months (1.2% vs. 15.4%). A previous study in the same locality demonstrated that compared to non-working mothers, working mothers were more likely to bottle feed their infants and start weaning early and were less likely to continue breastfeeding for 12 months(26). Another study reported the same finding(12), however Madani et al, reported no significant relationship between duration of breastfeeding and working status(19).

The higher the maternal education, the lower is the breastfeeding rate and the higher the mixed feeding rate throughout the first year of life. This is in agreement with previous studies in Saudi Arabia that reported an inverse association between the level of maternal education and breastfeeding as well as its duration(12,20,22-25). Highly educated mothers are more likely to be employed which adversely affects breastfeeding.

Mothers' age is not found to be associated with infant feeding patterns. This is in agreement with previous studies(12,19,25). However other previous studies in Saudi Arabia reported that younger women had a shorter duration of breastfeeding then their older counterparts(16,22-24).

We found that gestational age and birth weight have a significant effect on feeding pattern. Breastfeeding is significantly higher among full term infants and normal weight infants throughout the first year of life. Forman et al.,(27) reported the same finding. This can be attributed to the high likelihood of admission to neonatal care units with poor suckling of the neonates. In their review of literature, Nascimento and Issler(28) concluded that despite being highly desirable, little success in breastfeeding preterm infants is generally observed, particularly in special care neonatal units.

Breastfeeding is significantly lower among infants delivered by caesarean section, throughout the first year of life. The evidence available from previous studies on the relationship between caesarean section and breastfeeding is inconclusive. Many studies from around the world have suggested that caesarean delivered women are less likely to breastfeed than those who delivered vaginally(28-30). This appears to be the case for women who have operations under general anesthesia, as they feel tired, depressed and less mobile thereby unable to begin breastfeeding early. The difficulties appear to persist so that even when breastfeeding is successfully established, less caesarean delivered women continue to breastfeed compared to those who delivered spontaneously(31). In contrast, an earlier study found that although mothers giving birth by caesarean had a later first breastfeeding than those who delivered vaginally, there is no relation between delivery type and duration of breastfeeding(32).

In conclusion maternal socio-demographics are not predictors of feeding pattern at the age of two months and their significant impact becomes evident after that, while infant factors and mode of delivery exerted their significant effect on feeding patterns throughout the whole of infancy.

Al-Jassir et al,(20) concluded that the practice of breast feeding is increasing, but at the same time the fraction of mothers that breastfeed exclusively is declining. There is a need for strengthening the breastfeeding drive, while stressing that breast milk alone is sufficient for the first six months of life with appropriate supplementation after this age. Sustaining breastfeeding once it has been initiated and established is theoretically considered an easy task to accomplish, especially with the findings indicating that the most significant factors affecting the outcome of breast feeding are modifiable by health education. Mothers of preterm or low birth weight infants and those delivered by caesarian section need information and support to make informed decisions about their infants' feeding. Vaccination sessions are an opportunity for breastfeeding education with special emphasis to mothers at risk of stopping breastfeeding. Legislation is needed to permit working lactating women to breastfeed their infants in the workplace, or enjoy a longer paid maternal leave or at least part time work.

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Ingrowing toe nail : conservative treatment

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ABSTRACT

Objective: Ingrowing toe nail is a common problem that the surgeon faces in their practice, especially the surgical doctors in the army. The objective of our study is to evaluate conservative treatment in dealing with ingrowing toenails.

Methods: Data were collected prospectively from patients who presented to our surgical clinic in Prince Hashim hospital in Zarqa between January 2007 and September 2007. 152 patients presented with ingrowing toe nail. They were classified according to the Hriftiz classification into three stages. 90 patients were diagnosed to have stage III disease. Surgery was offered to them immediately and they were excluded from our study. 27 patients had stage I disease and 35 patients had stage II diseas e, so both groups were initially offered conservative treatment, by elevating the corner of the nail by a small piece of cotton wool and were followed up over a mean period of 10 weeks.

Results: Of those who were treated conservatively, stage I patients had a response rate of 96.2% (26 of the patients) , and stage II had a response rate of 94.2% (33 of the patients), with a mean recovery period of 5.5 weeks.

Conclusion: Conservative treatment is a worthy trial for patients with ingrowing toe nail especially in the early stages of the disease and should be offered to the patient, although it needs a highly cooperative patient.

Introduction

Unguis incarnates, onychocryptosis or ingrowing toenail is a common disease and causes considerable pain and discomfort with functional consequences(1). It has different causes with the most common cause poor cutting of the nail. Other causes include abnormal curved nail, tight shoe wearing and previous trauma to the nail that has changed its shape. Pain is the main symptom of ingrowing toenail. If it becomes infected it may drain pus(2). It is divided into three stages, according to the Heifitz classification(3) (Table 1). Many invasive approaches have evolved for ingrowing toenail such as classical wedge excision and lateral matricectomy, either by debridement, phenol or electrocautery ablation, but these surgical therapeutic modalities have had many disadvantages such as prolonged wound healing period, scarred and deformed nail production or restriction of normal activities. In recent years, non-invasive techniques have evolved as feasible treatments, challenging the more traditional surgical treatments. Elevation of the nail fold by a small piece of cotton wool packed under the free edge of the nail is a simple non-invasive therapeutic method that is easy to perform and dose not require any special equipment(4) . In this study, effectiveness of nail elevation is evaluated and re-assessed as a classical therapy for patients with onychocryptosis.

Heifitz Classification
I Pain with mild erythema and swelling of the nail fold.
II Increased swelling, seropurulent discharge and laceration of the fold.
III Chronic inflammation with granulation and marked fold hypertrophy.

Table 1

Stage I Ingrowing toe nail

Materials and Methods

A prospective study on the nail elevation technique was conducted on the patients who presented to the outpatient clinic in Prince Hasham Hospital in Zarqa between January 2007 and September 2007. 152 patients who presented with an ingrowing toenail, were classified into 3 stages. 90 were diagnosed to have stage III. Of these 7 had a previous surgery and 3 were diabetics so surgery was offered to them immediately and they were excluded from our study. 62 patients (55 male and 7 female) with a mean age of 29, who had stage I or stage II disease and approved of our technique, were studied with regular follow up. All patients were examined and followed by the authors. All patients were instructed to wear loose-fitting shoes or sandals whenever possible. The nail was cut straight leaving the corners untrimmed. The tingrowimg toe nail was then elevated with a small piece of cotton wool packed under the free corner of the nail, applied with a pair of sharp forceps in the out patient clinic. Patients were instructed to repeat the cotton wool insertion when necessary. Patients were seen once weekly for two weeks then once every two weeks. Patienta were instructed to keep the cotton wool piece in place until there were no symptoms in the area including pain, swelling, erythema and exudation (a mean of 70 days in this study). None of the patients received oral antibiotics throughout that period(5).

Stage II Ingrowing toe nail

Stage III Ingrowing toe nail

Demographic data	
Number of patients	62
Mean age	36 years
Males	55 patients
Mean follow up time	70 days

Table 2

Results

152 patients presented to our outpatient clinic. 27 presented with stage I and 35 with stage II, and 90 patients presented with stage III, who were offered surgery immediately and excluded from the study. 62 ingrowing toenails were offered conservative treatment. The mean duration of symptoms were 2 weeks in stage I and 3 weeks in stage II. The mean age of the subjects was 36, (55 males and 7 females). The site of the ingrowing toe nail was the first tarsal for all the cases. Patients were followed for a mean of 10 weeks. Of the cases who presented with stage I, all were cured within 4 weeks, and only one case had recurrence, and was treated successfully by wedge resection of the nail. The cases with stage II were cured within 6 weeks. Only 3 had recurrence. One of them was treated by the same method and the other two insisted on surgery and were treated and cured by a wedge resection of the nail.

	Results
No. of patients with stage 1	27 (43.5%)
No. of patients with stage 2	35 (56.5%)
Recurrence in stage 1 patients	1 (3.7%)
Recurrence in stage 2 patients	3 (8.6%)
Cure of stage 1	4 weeks
Cure of stage 2	6 weeks

Table 3

Discussion

In the past, nail avulsion, wedge resection, total matrix ablation, and other surgical treatments of ingrowing toenails have been associated with high recurrence rates, considerable postoperative pain and poor cosmetic result. More recent studies have shown that with segmental matrix excision, segmental phenolization and wedge resection in combination with segmental phenolization, far more acceptable results can be achieved. These simple methods were first described by Heister in 1763. For the result of conservative treatment, most authors have referred to the article by LIoyd-Davies and Brill published in 1963. These authors treated 100 conservative patients in their toe clinic by warm soaking, cotton wool packing beneath the nail and in the nail grooves, removing the granulations by silver nitrate applications and extensive hygiene instruction. According to this article, 33% of the patients were discharged as cured after 2 years, and 27% were still under treatment. 40% had defaulted(6). However, a success rate of 74% for conservative management has been reported even in advanced cases, although follow up has only amounted to 6 months. Another study using the same method was published in 1986 with a success rate of 79%.

Before treatment

After treatment

Conclusion

Our study shows that conservative treatment of ingrowing toenail is simple but time consuming. It requires a degree of co-operation from the patient and perseverance on the part of the doctor, and the cosmetic result, post treatment pain, and the time to return to normal activities are acceptable.

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Case Report - Stroke secondary to an unusual cause

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ABSTRACT

A 34 year old man sustained blunt trauma to his neck following repeated non-fatal manual neck strangulation. After a few hours he developed altered sensorium and dysphasia and 6 hours later he deteriorated further and was brought to the emergency department. On examination he had a dense right sided hemiplegia aphasia. Plain CT scan of the head should a large hypodense area in the vascular territory of the left middle cerebral artery suggestive of infarction. CT angiogram of the neck and head showed thrombosis of the right common carotid and internal carotid artery with total occlusion of the left middle cerebral artery stem. He was treated conservatively and improved partially. Problems associated with carotid artery thrombosis in the setting of blunt head and neck trauma are discussed.

Key Words: Bilateral Carotid Thrombosis, Manual strangulation.

Introduction

Thrombosis of the carotid tree is caused by various diseases, resulting in fatal and non-fatal outcomes. Bifurcation of the common carotids in the neck leads to the formation of internal and external carotids. During their short course in the neck, the internal carotid artery is vulnerable to both penetrating and blunt trauma. The majority of extra-cranial traumatic injuries to internal carotid artery (ICA) are caused by direct trauma from penetrating injuries, especially from gunshot wounds. There is a small subset of injuries of extra-cranial ICA injuries caused by blunt trauma and some of these occur in the setting of head trauma. The incidence of carotid injury in association with blunt head and neck trauma is reported to be less than 1%. We report a case of manual strangulation leading to stroke after 6 hours associated with bilateral carotid arterial tree affection.

Case Report

This 34 year old male was brought by his brothers to the emergency department with complaints of altered sensorium and inability to speak for the past 6 hours. A day prior to his presentation, the patient while eating food felt that there was some abnormal sensation in his throat. He went to one of the traditional healers for indigenous treatment who started manually pressing his neck repetitively and vigorously. Six hours later, his relatives noticed that he was drowsy and had difficulty in speaking, and it took another 6 hours to bring him to hospital, until he developed right sided hemiplegia. His past history was notable of ill-defined psychiatric illness for which he was indigenously treated by religious healers and which used to improve without visiting any psychiatrist. There is no associated history of recurrent oral ulcers, hair loss, fever, headache, rash, or any symptoms suggesting connective tissue disorders. He is single and works as a teacher. Examination revealed that he was conscious but drowsy, arousable to sounds, looked to direction of sound, with gaze preference to the left side. He was globally aphasic with few incomphrensible sounds, and dense right sided hemiplegia. His pupils were normal in size and reaction to light; his fundi were also normal. There was neck swelling on the right lateral aspect of the neck with bruising on the right side of neck below the angle of mandible. There was bruising also on the anterior chest wall below the supra-sternal notch and there was minimal swelling on the left lateral aspect of the neck. The carotid pulsations on the right side were feeble whereas on the left side they were of good volume. His vitals including his blood pressure (120/75 mmHg) and other systemic examination were unremarkable.

Figure 1. Initial non contrast-CT scan of the head shows ill-defined hypodense lesion involving the cortical and subcortical of the vascular territory of the left MCA. The arrow points to the hyperdense MCA as a sign of recent thrombosis.

Figure 2. Initial non-contrast CT scan of the head shows the large left cerebral infarction in the vascular territory of MCA with shift of midline structures

Immediately a non contrast CT scan of his head was done on an emergency basis which showed a large recent infarction in the vascular territory of left middle cerebral artery (MCA) with significant mass effect (Figures 1 and 2). CT angiogram of his neck and head showed thrombosis of the right common carotid and internal carotid artery with total occlusion of the left middle cerebral artery(MCA) stem (Figures 3 and 4, next page). There was no facility of an interventional thrombolysis available, so the patient was started on anticoagulation to inhibit the extension of right carotid thrombus, along with other anti edema measures and anti platelet therapy. His work up for the other secondary causes of young stroke was done including echocardiography, antinuclear and anticardiolipin antibodies, and lupus anticoagulant, all of which were negative. His work up for inherited thrombophilia including proteins C and S, anti thrombin III and factor V Leiden mutation were done and were also negative.

The patient started improving after 3 days, became more alert, and started babbling a few words and was started on physiotherapy and speech therapy. He was initiated on antiplatelet therapy with low dose aspirin (81 mg) and therapeutic anticoagulation, initially, with unfractionated heparin (target aPTT between 1.5 to 2.5) and warfarin overlap and later on continued on warfarin alone with his international normalized ratio (INR) maintained between (2.5 to 3). He was discharged in a relatively good condition with residual right sided weakness and motor aphasia. For follow-up he was advised to come to the neurology clinic after one month from the time of discharge .A month later his CT Angiogram was repeated which showed that the thrombus had resolved in the right internal carotid artery, and his middle cerebral artery was also patent with a good flow. (Figure 5, page 41).

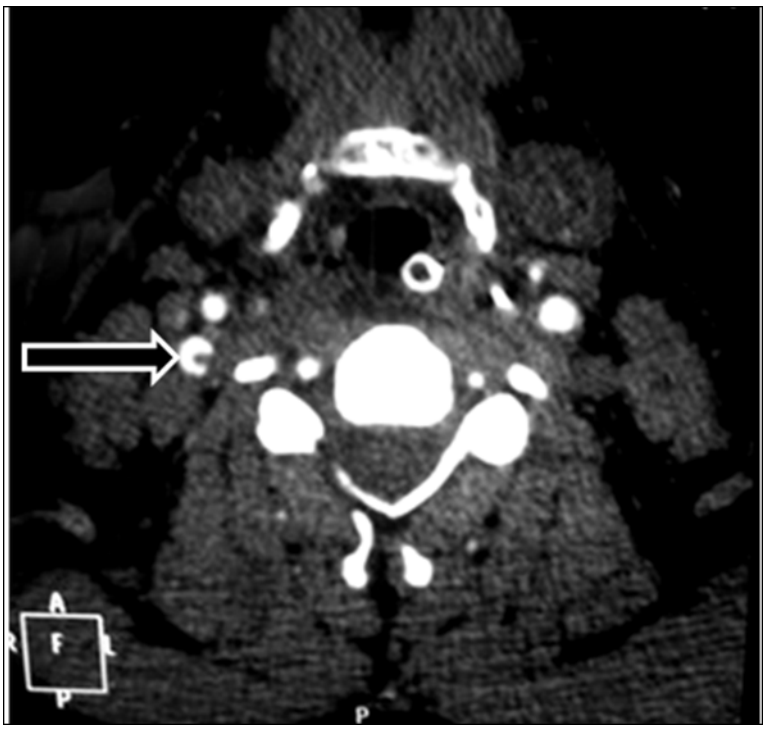

Figure 3. Initial CT angiography (MIP in axial plane) of the neck arteries shows partial thrombosis of right ICA (arrow)

Figure 4: Initial CT angiography (MIP in axial plane) of the intracranial arteries shows total thrombosis of left MCA (arrow)

Discussion

Traumatic thrombosis of internal carotid artery is caused by four mechanisms; injury to the intra-petrous part or cavernous part of internal carotid artery during basal skull fracture; injury to the point of emergence of internal carotid artery from cavernous sinus as a result of shearing strain; a direct blow to the neck or trauma to the peri-tonsillar area by a foreign object carried in the mouth; and stretching of carotid artery by hyperextension and lateral flexion of the neck. Secondary symptoms resulting from thrombosis of the carotid artery develop most commonly between 12 and 24 hours after injury [1]. Blunt and penetrating trauma to the neck and pharynx can both cause thrombosis of the internal carotid artery [2, 3]. Manual strangulation is also reported as a rare cause of carotid thrombosis and it is possible that excessive pressure to the neck may contribute to thrombus formation and then traumatic occlusion of middle cerebral artery [3] resulting in infarction.

Incidence of carotid artery injury in the setting of head injury is very low and can be missed in the setting of cranio-cerebral trauma. Yamada et al could collect only 52 cases in a review of literature [4]. Because of this low incidence there is lack of awareness that results in delay in the diagnosis. High index of suspicion (hyperextension-hyperflexion mechanism of injury, basilar skull fracture, and cervical spine injury, mid-face fracture, mandibular fracture, diffuse axonal injury and neck seat belt sign) clinches early diagnosis or directs efforts for early diagnosis and treatment [5]. The suggested mechanism of injury is hyper-extension and rotation of the neck which results in stretching and compression of ICA against lateral mass of C1 or C2 vertebra that causes either tear in intima or hematoma in the media of arterial wall and subsequent thrombosis and occlusion [6, 7, 8]. Conventional angiography was the gold standard for diagnosis and CT scan and MRI will show the extent of infarct. MR angiography and CT angiography

Figure 5: Follow up CT angiography (MIP in axial plane) shows complete resolution of the right ICA thrombosis

are useful non-invasive tests in showing the stenosis, occlusion, tear of vascular intima or hematoma in the wall of the carotid arteries and their branches [9]. Positron Emission Tomography scan of the brain will show the area of hypo-perfusion which can be more than the area of infarct. Anticoagulation is mandatory for blunt carotid injuries to reduce the chances of stroke, provided there is no contraindication and patients are promptly diagnosed before occlusion [10]. Once occlusion has occurred, surgical intervention becomes imperative. This report also highlights rare occurrence of blunt carotid injury in the setting of closed neck injury, which is usually missed due to lack of awareness for early diagnosis and treatment or arrives too late for any worthwhile therapeutic intervention and results in avoidable morbidity and mortality.

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CME Quiz - on Low Back Pain

Case presentation

Morrie Jacobs, aged 62, mechanic.
Problem: Low back pain for 6 months.

History of injury:	Not specific but Motor Vehicle Accident aged 21 and 43. Heavy manual work.
Site and Radiation:	Low central back pain. Occasionally radiates to buttocks.
Type of Pain:	Dull, nagging deep ache.
Onset:	Sitting long periods.
Aggravation:	Heavy activity e.g. gardening, work, bending.
Relief:	Gentle exercise, swimming.
Associations:	Stiffness, especially on arising, stiffness with immobility.
Physical examination	
Inspection:	Moves stiffly.
Palpation:	Mild tenderness over L3, L4, L5,

Which of the following is the most likely diagnosis?

A. Lumbar spinal pain in association with spondylosis
B. Spinal metastases from carcinoma of the prostate
C. Seronegative spondylarthropathy such as ankylosing spondylitis, (AS) or Reiters disease
D. Spondylolisthesis
E. Neurogenic claudication

Send your answers to:
admin@mediworld.com.au

Correct answers will appear in next MEJFM.
All entries will go into an annual prize drawer.

References

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http://www.mediworld.com.au/CD-ROM_Titles.htm

Pakistan Flood Appeal

he Pakistan Floods 2010 - Pakistan Flood Relief Appeal - URGENT HELP IS NEEDED

Dr Manzoor Butt

Maqbool Clinic
Rawalpindi
Email: drmanzoor@ymail.com

The 2010 Pakistan floods began in July 2010 after record heavy monsoon rains. The Khyber Pakhtunkhwa province of Pakistan was affected first. Thereafter, the floods entered in Punjab and now it is causing extreme devastation in Sind. The floods are described as the worst in the country in the last 80 years.

Estimates from rescue-service-officials suggest the death-toll has reached 3,000 victims. According to a recent estimate of the United Nations, the number of people suffering from these massive floods in Pakistan exceeds 20 million, which is more than the combined total of the 2004 Indian Ocean tsunami, the 2005 Kashmir earthquake and the 2010 Haiti earthquake. The disaster has done harm to struggling Pakistani economy due to extensive damage to infrastructure, crops and loss of livestock. Power lines are down and damage has been done to hospitals, schools and sanitation systems. Many families are camping out in schools and other building located on higher ground.

About 46 of Pakistan's 135 districts have been affected by the flooding. Many health facilities have been destroyed, resulting in a loss of tons of medicines. There is a tremendous need for more medical and related materials to treat people affected by the humanitarian emergency, as well as to immunize children, particularly against polio, typhoid, cholera and measles.

Major health concerns are cleaning drinking water and treating the injured. Fever, diarrhea, respiratory infections and skin diseases are spreading among victims of the worst flooding. The United Nations has confirmed at least one case of cholera in flood-ravaged Swat valley of Pakistan. There is a vast majority of expecting mothers in these affected areas, so there is also a great concern for safe birthing.

UNICEF says that 6 million children have been affected by the floods in Pakistan with some 2.7 million children in need of urgent, life-saving assistance.

It is Ramadan in Pakistan. I and my family have decided not to spend on this coming Eid day and to use this money for arranging the needful for the affected people.

What help is urgently needed;

The scale of the emergency means more and more medical supplies will be needed. The first important thing is to provide shelter, food, clean drinking water, health supplies, high energy biscuits, and clothing for women and children. Psychosocial support is also important.

Medical supplies include Bandages, sterilized gauzes, anti-diarrheal, IV-canulas, IV- giving sets, Ringer Lactate infusions, Anti-malarial, anti-pyretics, analgesics, antibiotics, skin preparations, and eye preparations. Vaccines are needed urgently

Sterilized gloves, sterilized cord clamps, sterilized naval cord cutters, anti-septic, soaps, plastic sheets are also needed for safe birthing.

Donations can be sent directly to Dr Butt

Emails for contact details: drmanzoor@ymail.com ,

or to MEJFM at admin@mediworld.com.au .