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Unmet Health Care Needs Among Clients from Outpatient Clinic of Ain Shams University Hospitals , Cairo, Egypt

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Abstract
Background: The concept of unmet needs refers to the difference between health services necessary to treat a particular health problem and services actually received. **Aim**: This study examined the prevalence of self-reported unmet needs for health care and the extent to which they were attributable to perceived problems with service availability or accessibility or acceptability. Study design: descriptive analytical study. **Sample**: 1316 individuals Clients from some out patients, clinic of Ain Shams University hospitals. Setting: out patients, Clinic of Ain Shams University Hospitals, Cairo, Egypt. **Subjects**: patients randomly chosen from out patients, clinic of Ain Shams University hospitals. **Tools of the study**: A questionnaire tool developed to collect data about the prevalence of unmet needs for health care in the previous 6 months. **Results:** This study conducted on 1316 individuals where 580 (44.8%) reported unmet health care needs. As regard causes of unmet needs, 33.6% of unmet needs attributed to accessibility problems, while service availability problems accounted for 57.4% of the unmet needs. The largest group, accounting for 92.4% of unmet needs was acceptability problems. **Conclusions**: The causes of unmet needs attributed to accessibility and availability problems. The most common reported reason for an unmet health care need was that the too long waiting time, and the high cost of examination. **Recommendations:** Re-plan health care service to treat causes of unmet needs, which attributed to accessibility and availability problem.

Key words :*Prevalence - Unmet health care needs- availability, accessibility, acceptability reasons*

Introduction:

The concept of unmet needs refers to the difference between health services thought necessary to treat a particular health problem and services actually received **(1).** A person who perceived the need to receive medical services but who has not obtained these services has unmet health care needs. Unmet health care may result from limited availability or unavailability of health care services, when or where they were required. Also it can be caused from individual accessibility problem, such as cost or transportation, or from acceptability problem, such as attitude toward and knowledge about health care. **(2)**

While a country's health policy aims to provide health services to all who need them, an appreciable proportion of sick people do not get the health services at the time of illness they need in their viewpoints to restore health, particularly in developing countries. Delayed or non-receipt of medical care may result in more serious illness for the patient, increased complications, a worse prognosis, and longer hospital stays. **(3, 4)**

The number of people reporting unmet needs has increased over the last few years. According to **Statistics Canada, reports** of unmet needs have risen across the country from 4% in 1994-1995 to 6% in 1998-1999 and to 13% in 2000-2001 to 18% in 2004. **(1)**

In United States, the prevalence of unmet varied from 25% in 1999 to 7% among insured population and 18 % among uninsured population in 2001. **(5)** Therefore, to assess unmet health care needs, it is important to understand the barriers associated with them based on existing literature. **(3,4)** These factors examined in relation to the three types of unmet needs are: age, sex, marital status, household income, education, employment, urban/rural residence, health status, chronic conditions, chronic pain, distress, physician consultations, and attitudes towards physicians, authority and self-care. Previous studies have found that the main cause

of unmet health care needs were attributable to acceptability problems, such as being too busy followed by service availability problem , such as long waiting time .The minority were related to accessibility problems (cost or transportation). [(2)] The study examine the prevalence of unmet need for health care among **Clients from out patients' Clinic of** Ain Shams University **hospitals**, we can have an idea about the problem in our community.

Aim of the study:

1. To estimate the prevalence of unmet need for health care among Clients from out patients' clinic of Ain Shams University hospitals.
2. To determine the factors affecting unmet need in terms of availability or accessibility or acceptability to health care service.

Research questions:

- What is the prevalence of unmet need for health care among clients from out patients, Clinic of Ain Shams University hospitals ?What are factors affecting unmet need in terms of availability, accessibility or acceptability to health care services?

Significance of study:

The number of people reporting unmet needs has increased over the last few years. According to Statistics Canada, reports of unmet needs have risen across the country from 4% in 1994-1995 to 6% in 1998-1999 and to 13% in 2000-2001 to 18% in 2004. [(1)] In United States, the prevalence of unmet varied from 25% in 1999 (5) to 7% among insured population and 18 % among uninsured population in 2001. [(5)]

Subjects and Methods:

Research design: descriptive analytical study was carried out in Ain Shams University hospital during the period from March to August 2011.

Setting: Ain Shams University hospital, Cairo, Egypt**.**

Samples: A sample of (1316) of patients or clients attending: out patients clinic at Ain Shams University hospital who attend for receiving different needed health care , they are aged (18-60 years) were chosen by systematic random sampling procedure from attendants of these clinic on successively days in a rotatory way of every working week in proportion to size. All sampled clients were invited to participate in the study.

Tools of data collection:

Questionnaire Tool: Data was collected by interview with the sample, according to ***Chen and Hou*, (2002)** [(6)] the questionnaire was developed, modified and translated into Arabic.

It includes the following items:

1- **Socio- demographic characteristic of studied sample as :***age ,residence ,education status ,occupation ,……e tc*

2- **Unmet health care need in the past 6 months** : The reasons classified as follows: (1) not available in the area; (2) at time required; (3) waiting time too long; (4) cost; (5) transportation problems; (6) felt it would be inadequate; (7) too busy; (8) didn't get around to it/didn't bother; (9) didn't know where to go; (10) language problems; (11) personal or family responsibilities; (12) dislike doctors/afraid; (13) decided not to seek care; and (14) others. These reasons classified into three groups, depending on reasons due to: service availability (service not available when required or waiting time is too long); accessibility (cost or transportation), or acceptability (the remaining reasons, which concern attitudes and competing responsibilities).

a- **Factors that could affect the unmet health care needs**, **which include** :(Perception of self- reported health, presence of a chronic condition and presence of a chronic pain).

3- **Presence of distress**: It based on responses to six questions: .During the past month, how often did you feel? So sad that nothing could cheer you up. Nervous? Restless or fidgety? Hopeless? Worthless? What is the effort? The response options all of the time, most of the time, some of the time, a little of the time, and none of the time were given weights of 4, 3, 2, 1 and 0, respectively. The score could range from 0 to 24, with higher scores indicating more distress. Respondents scoring 7 or more were classified as having distress. Respondents scoring less than 7 or with missing information were considered as not having distress.

4- **General practitioner consultations** and specialist consultations in the past year
5- **Attitude towards doctor authority**: was based on three statements: "I prefer doctors who give me choices or options and let me decide for myself what to do", "Patients should never challenge the authority of the doctor" and" I prefer that the doctor assume all of the responsibility for my medical care.". Attitude toward *self-care* based on responses to two statements: "Except for serious illness, it is generally better to take care of your own health than to go to a doctor" and "It is better to go to a doctor than to try to treat yourself". For each statement, respondents asked if they strongly agreed, agreed, neither agreed nor disagreed, disagreed, or strongly disagreed. The respective scores were 4, 3, 2, 1, and 0. The values for the first doctor authority statement and the second self-care statement reversed. The two variables constructed by taking the mean score of the answers to the questions. Missing values imputed with a value equivalent to neither agree nor disagree. The scores for attitude toward doctors authority could range from 0 to 4, with higher scores representing a greater tendency to trust doctors; The scores for attitude toward self-care could range from 0 to 4, with a higher score representing a greater tendency to rely on self-care; The scores were classified into three levels: high for a score one standard deviation above the mean, low for a score one standard deviation below the mean, and middle for a score in between**.**

Validity: The questionnaire developed, modified and translated into Arabic reviewed by expertise to test validity and reliability, before starting data collection, to select the most efficient methods to obtain the required data and to test the applicability and practicability of the tools.

Fieldwork:

The research team invited all the clients to the study during the attendance to out- patient's clinic to explain the purpose and the importance of the study. The questionnaire sheet takes about 15 minutes to be completed and data collection take about six months.

Pilot study:

A pilot study using 40 questionnaires done to ensure clarity and consistency of the questions and any modification could be done.

Administrative and ethical considerations:

The selected clients received an information letter, which explained the purpose of the study and requested that he /she should complete the self-administered anonymous questionnaire to insure the confidentiality. The response to questionnaire constituted the participants' informed consent. The Institutional Ethics Review Board approved the study. Eighty- four study subjects gave incomplete answers and excluded from the study.

Statistical design:

Collected data was revised, checked for completeness and consistency followed by double data entry on a personal computer. Statistical analysis using SPSS program version 11 used.

Both: chi-square test was used as a test of significance, difference was considered significance at $P< 0.05$ and multivariate logistic regression was done.

Results:

The studied sample was 1316 individuals, most of the unmet health care needs group was in the age category 18-34 years, from urban place of birth (77.4%), of high education (72.8%) and 60.2% of them are currently working. About half of them (54.7%) were single and of female gender (50.7%). 64.8% of the study group are of low middle economic class, earning from 500-<2000 Egyptian L.E. / month. (**Table 1)**

However, nearly half of the studied sample were 580 (44.8%) reported unmet health care needs when they were sick, 25.8% were not sick and 2.9% had met health care needs during the last 6 months of the start of the study, but 41.9% of the unmet health care need group didn't have any health arrangement **(Table 2)** . Regarding regular source of healthcare only 22.4% of the unmet group had a regular source of healthcare mostly to the private health care sector (57.9%).Also, 33.8%and 58% of the unmet group had a general practitioner and

specialized doctor consultation respectively, during the last six months of the study. (Results have not shown in tables)

However, acute diseases (46.1%) showed the highest prevalence followed by the dental problems (35.7%), while unmet needs to chronic disease were only 17.5% among the unmet group. **(Figure 2)**

Regarding causes of unmet needs, the majority group, accounting for (92.4%, 57.4%, 33.6%) of unmet needs was acceptability, availability, and accessibility problems respectively.

However, more than one reason for unmet health care needs was 37.4% of responses. Also long waiting time was the most common reported reason for an unmet health care need, cited by 45.5% .and high cost of examination was (25%). **(Table3)**.

Only variables showing significant associations with the status of having unmet health care need and unmet needs related to availability, accessibility and acceptability were analyzed in the logistic regression model **(Table 4).**

The logistic model shows that the females odd's **ratios** (1.41) and those in the age group 35-<45 years (O.R. = 12) showed a higher risk of having unmet health care needs than males and other older age groups. Also people with chronic condition and distress odd's **ratios** (1.74, 1.61) were significantly having unmet health care needs than those not afflicted. Those in the middle self-care score showed significantly higher risk of having unmet health care needs (2.9).

(**Table 4**)

The **odd's ratios** of people in low income households would report unmet health needs related to accessibility were about 14.4 times those for residents of upper- middle/ high income households. Also having a poor perceived health status increased the odds of reporting unmet needs related to accessibility. (**Table 5**)

Younger age groups (18-34 years) had significantly higher odd's **ratios** (12.4) of reporting acceptability, than did people aged 65 and older.

However, physician authority lowered the odds of having acceptability- related to unmet health care needs. Conversely, a tendency to rely on self- care raised the odds of reporting unmet needs growing out of these reasons. Individuals suffering from a chronic condition or distress had higher odd's **ratios** (1.7 and 1.6 respectively) of reporting unmet needs due to acceptability problems compared with those who did not. In addition, females had higher odds (1.4) then men of reporting this unmet health need (**table 5**).

As regard the low-income it was the most common consequence of having unmet health care need, followed by being dependent on family members and suffering deterioration of health (**figure 1)**

Discussion:

Health services in Egypt are currently managed, financed, and provided by agencies in all three sectors of the economy—government, parastatal, and private. [7]

The prevalence of unmet health care needs among our sample (18 years and over) was 44.8%. of unmet health care need in the last 6 months which is considered a short period to be less subjected to memory bias. Similar findings were reported in a study of unintended pregnancies in Beheira governorate of Egypt [20]. Also the study agree with **Kotib *et al.* 2010)** [21]revealed that level of unmet contraceptive need found in its study was 7.4%, which is close to the national level for Egypt (9.2%) in 2008.([22] .

Regarding the socio-demographic characteristics of the studied group, most of the unmet group was young adults 18-34 years old, with high education and from urban place of birth and about half of them were single and of female gender. This is agree with the literature which reported that women, younger people and individuals with higher levels of education reported more unmet health care needs. [3, 8] However, Ross *et al*. **2006** [9] was found that women had higher rates of unmet need for health care. Other studies found that taking care of others had caused them to delay seeking health care for themselves. [10]

Forty percentage of those who had unmet health care, are currently working, this might explain their inability to take time off work. [9, 11]

Studying the relationship of socio-demographic factors and unmet health care need indicated that more than half 57% of those who had unmet health care are of middle economic class, this because the impact of finances on delayed and unmet needs for medical care in the general population has been well-documented. [12] Others believe that financial problems are only one of the barriers that people face in obtaining the health care they need, and other factors enable or impede an individual's ability to obtain medical care. [13]

In Egypt, any patient can have access to the primary health care centers and general hospitals in free or minimal fees. However, less than fourth of subjects with unmet health care needs reported that they are suffering from chronic diseases diagnosed by physician. This agrees with Ayanian *et al*, (2000) [14] who had stated that chronically ill persons are less likely to have visited a physician.

On the other hand, the highest self-reported chronic disease among the unmet and the total study group was hypertension, and this agrees with the population-based study conducted in USA, although different survey methodologies were used. [15]

Regarding the reasons of the unmet need for health care, the highest reasons have related to the acceptability of health services, followed by availability and then the accessibility of health services. The majority of the study sample 92% reported unmet health care due to problems of acceptability, being too busy, did not bother to seek medical help or felt it would be inadequate.

In relation to women and young age groups (18-<35 years), had higher odds for unmet health care needs related to service acceptability, this may reflect their busier schedules, and their attitudes toward health care. Those who had low trust in doctors and having a high tendency to rely on self- care showed higher odds of reporting unmet health care needs related to service acceptability. Moreover, this reflects personal circumstances and attitudes that mostly affect the patient's decision to accept health service or not.

Although most of the western studies reported that the acceptability reasons are the most common cause of unmet health care either on the primary health care, or the other health care sectors .[16] More analytic psychosocial and community based studies were needed to identify specific reasons related to our community.

However, more than half 57% reported unmet health care due to problems of availability as waiting too long to have the service.

In Cairo, there is a well- distributed network of health care service, as only 1% of the study subjects with unmet needs mentioned the unavailability of the service in the area. The health authorities must put more efforts increase the patients' satisfaction with services offered. Some studies stated that those who reported availability reason for unmet health care needs mostly if their health problem is temporal or not serious by individual perception. [2, 8]

However, thirty 33% of the study sample reported accessibility problems , where one quarter of them revered too costly of the medical examination and its correlates with the economic status of the study group where 46.5% of them lies in the lower medium class. Loss of income was one of the most commonly reported consequences of having unmet health care needs. Further studies needed to measure the cost of having unmet health care needs to detect its burden on the economy of the individuals and the community.

These results are consistent with a Canadian study where the main reason that low-income people, especially the poor people, were not obtaining physician services and they would be unable to afford prescribed medication. [17]

People who trusted doctors had relatively low odds of reporting unmet needs due to service availability and acceptability problems. This may be due to people were less skeptical about health care services or because of positive experiences receiving health care in the past. [6]

As regard people with chronic condition and distress and having a poor perceived health status were more likely than those who were not afflicted to report unmet needs related to service availability, acceptability and accessibility. It is quite likely that people with medical problems are those most in need of health care services.

They are therefore also more likely than people are in better health to recognize deficiencies in the delivery of those services, particularly if their medical problems remained unsolved. **(18)**

In agreement to the present work, a Canadian study found that after controlling for other factors, higher rates of unmet need have reported among people who resided in urban communities, had poorer health status, had physician-diagnosed chronic conditions, were female, were of younger age, had more education, had lower income, did not have a regular medical doctor and did not have pharmaceutical insurance. **(19)**

Finally, our results revealed that still there is a substantially high proportions of unmet health care needs in our sample that was supposed to have better attitudes towards health services **(Figure 1).**

Conclusion: The majority of the study sample reported unmet health care due to problems of acceptability, also, the highest reason have related to availability and then the accessibility of health services. The other causes were being too busy, did not bother to seek medical help or felt it would be inadequate. The highest rates of unmet need had reported among people who resided in urban communities, had poorer health status, had physician-diagnosed chronic conditions, were female, were of younger age, had more education, had lower income, and did not have a regular medical doctor. Younger age groups of reporting acceptability- related unmet health care needs than older people. However, physician authority lowered the acceptability related to unmet health care needs.

Recommendations:

- Put plan in health care service to treat causes of unmet needs that attributed to accessibility and availability problems.
- Control policies and guidelines will give to most common reported reason for an unmet health care need, such as was the long waiting time and high cost of examination.
- Plan afternoon time for working women's or men to use these services to be in available time.
- Improve quality and quantity of primary medical care services to reach lowest level of an unmet health care need of the low-income population.

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Table 1: Characteristics of the studied group

Category	No (%)	Category	No (%)
1- Sex (1316)		5- **Working status(1316)**	
Male	646 (49.1)	Working	805 (61.2)
Female	670 (50.9)	Not working	511 (39.8)
2- Age group (1316)		6-**Income (1316)**	
18-	861 (65.4)	<500	222 (16.9)
35-	150 (11.4)	500-	667(50.7)
45-	281 (21.4)	2000-	225 (17.1)
>60	24 (1.8)	>4000	202 (15.3)
3-Marital status (1316)		**7- Birth place (1316):**	
Single	710 (54.0)	Rural	291 (22.1)
Married	535 (40.7)	Urban	1025 (77.9)
widow/divorced	71 (5.3)		
4-**Education (1316)**		**8-Health arrangement**(1316)	
< university	351 (26.7)	Yes	765 (58.1)
University	955 (73.3)	No	551 (41.9)

Table 2: Health status of the total studied group:

	Health status	Total (1316)(N%)
1	**Perceived health status :**	
	Poor	46 (3.5)
	Fair	305 (23.2)
	Good	610 (46.4)
	very good	250 (19)
	Excellent	105 (8)
2	**Complaint from any disease**	442 (33.6)
3	**Doctor –diagnosed chronic disease**	432 (32.8)
4	**Type of chronic disease**	
	Hypertension	168 (12.8)
	heart disease	53 (4)
	Diabetes	103 (7.8)
	bronchial asthma	25 (1.9)
	blood disease	64 (4.9)
	Depression	39 (3)
	kidney disease	31 (2.4)
	liver disease	38 (2.9)
	rheumatic disease	76 (5.8)
5	**Suffer from chronic pain**	426 (32.4)
6	**Suffer from distress**	867 (65.9)

** *Distress score = >7*

Table 3: Frequency of reasons of unmet health care needs

Category	N (%)
1- Availability	**333 (57.4)**
- Waiting time too long	264 (45.5)
- Not available when required	63 (10.9)
- Not available in area	6 (1)
2- Accessibility	**195 (33.6)**
- high cost of examination	145 (25)
- transportation problem	38 (6.6)
- transportation was costly	12 (2.1)
3- Acceptability	**536 (92.4)**
- too busy	133 (22.9)
- didn't bother	120 (20.7)
- felt it would be inadequate	118 (20.3)
- decided not to seek care	98 (16.9)
- didn't know where to go	45 (7.8)
- dislike doctor /afraid	17 (2.9)
-personal /family responsibilities	3 (0.5)
- others	2 (0.3)
4- Availability and accessibility	78 (13.4)
5- Availability and acceptability	67 (11.6)
6- Accessibility and acceptability	42 (7.2)
7- Availability & accessibility & acceptability	30 (5.2)
Total	**580**

Table 4: Adjusted odds ratios for unmet health care needs:

	Met versus unmet Adjusted OR	95% CI Lower	Upper
1-Sex:			
-male #	1.00	----------	
-female	1.41	1.08	1.84
2- Age:			
18-	12.36	3.25	
35-	47.05		
45-	11.30	2.88	
65+#	44.35		
	10.07	2.63	
	38.54		
	1.00	----------	
3- Income:			
>500	2.08	1.32	3.28
500-	1.54	1.07	2.21
2000-	1.43	0.93	2.20
4000+ #	1.00	----------	
4-Chronic condition			
- Yes	1.75	1.29	2.38
- No#	1.0	----------	
5- Distress			
-Yes	1.62	1.22	2.13
-No#	1.00	----------	
6- Doctor authority score:			
- High	0.57	0.38	0.83
- Middle	0.45	0.27	0.75
- Low #	1.0	---------	
7-Self -care score			
- High	1.27	0.89	
- Middle	1.81		
- Low #	2.95	1.87	4.64
	1.00	----------	

Table 5: Adjusted odds ratios for unmet health care needs related to availability, accessibility and acceptability of health care services.

	Availability			Accessibility			Acceptability		
	Adjusted OR	95% CI		Adjusted OR	95% CI		Adjusted OR	95% CI	
		Lower	Upper		Lower	Upper		Lower	Upper
1-Sex:									
-male #							1.00	----------	
-female							1.41	1.08- 1.83	
2- Age									
18-	6.76	1.70- 26.98					12.36	3.25- 47.05	
35-	6.29	1.59- 24.90					11.30	2.88- 44.35	
45-	5.02	1.30- 19.31					10.07	2.63- 38.54	
65+#	1.00	----------					1.00	----------	
3- Marital status									
-married #	1.0	----------		1.00	----------				
-never married	0.37	0.23- 0.59		0.37	0.26- 0.52				
-widow/ divorced/ separated	0.60	0.31- 1.14		0.78	0.40- 1.50				
	0.63	0.44- 0.90							
4- Occupation									
- working	1.0	----------					1.75	1.29- 2.48	
- not working #	1.69	1.25- 2.28					---------		
5-Chronic condition									
- Yes	1.00	----------							
- No#									
6- Distress									
-Yes	1.81	1.35- 2.44					1.62	1.22- 2.13	
-No#	1.00	----------					1.0	---------	
7- Doctor authority score							0.57	0.38- 0.83	
	0.59	0.41- 0.85					0.46	0.27- 0.76	
- High	0.71	0.44- 1.17					1.0	----------	
- Middle	1.00	----------							
- Low #									
8- Self-care score									
- High	1.04	0.72- 1.50		1.14	0.70- 1.87		1.27	0.90- 1.81	
- Middle	1.63	1.05- 2.54		2.06	1.18- 3.58		2.95	1.87- 4.64	
- Low #	1.0	---------		1.0	---------		1.0	---------	
9- Income:									
>500				14.43	6.57- 31.71		2.07	1.32- 3.29	
500-				4.69	2.21- 9.96		1.54	1.07- 2.21	
2000-				2.09	0.88- 4.95		1.43	0.93- 2.20	
4000+ #				1.00	----------		1.00	----------	
10- Perceived health									
Poor/fair				1.50	1.05- 2.13				
good/ v. good / excellent				1.0	---------				

Figure 1: Consequences of unmet health care needs:

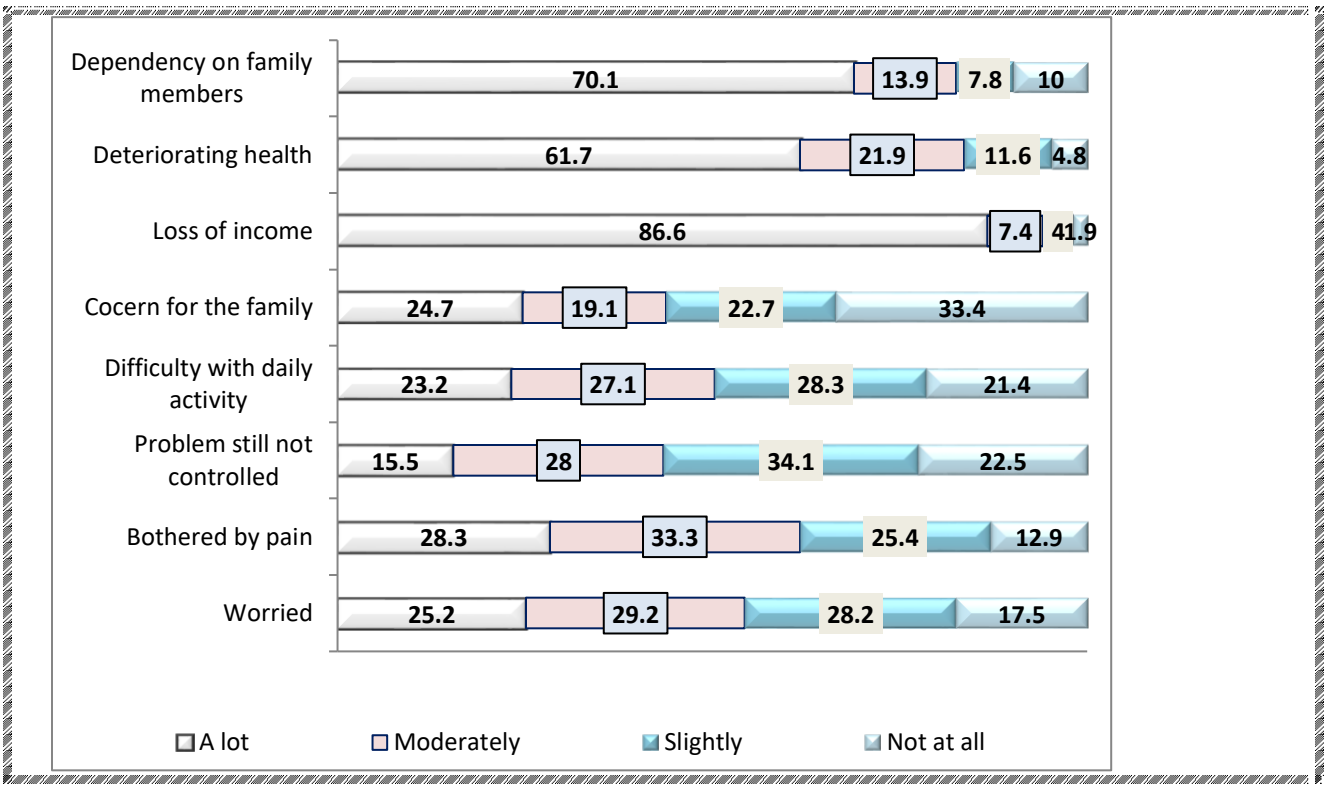

Figure 2: Percentages of unmet health care needs