

## Development and validation of a scale to measure the perceived access to medical care

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### Abstract

#### Introduction

Instruments measuring access to medical care are available. However, development of new instruments suitable to the specific population and validation of it to that population is essential. The objective of this study was to develop and validate an instrument measuring the access to medical care.

#### Methods

A Likert scale of 35 items was constructed and validated using 178 clients of four private pharmacies and six hospital out door pharmacies in an urban and rural district. Construct validity was assessed using exploratory factor analysis, item analysis and measuring internal consistency. To measure the tendency to agree with statements regardless of their content (Acquiescent Response Sets-ARS), matched pairs of items were included.

#### Results

Factor analysis extracted four main factors which accounted for 41% of variance. Items of "availability of services" formed the first scale. However, items related to regularity of service provision hypothesised in the "availability" dimension merged with hypothesised items of "acceptability of Services". This scale was named "Acceptability of Services and Regularity of Service provision (AC & RS)". Third scale which consisted of three items hypothesised to be in the dimension of "Acceptability of services" was logically named "Concern for Clients (CC)". Fourth scale comprised "Affordability" items. One hypothesised item of affordability loaded onto the factor of "Availability of Services".

All item-scale correlations were above 0.3. Higher correlation of the majority of items (33) with the tentative scale than with other scales confirmed the factor scales. Factor scales were internally consistent as Cronbach's alpha exceeded the accepted level of 0.5. None of the dimensions proved to be sub scales of higher order

scales as inter scale correlation did not meet Anastasi's criteria of 0.5-0.7. Reliability of the ARS scale was low (0.45).

#### Conclusions

Extracted factor structure was consistent with theoretically hypothesized dimensions with a small difference. Two small multi-item dimensions "Affordability" and "Concern for Clients" need further validation with more items. To increase the reliability of ARS scale, more matched pairs are necessary.

#### Key words

validation; Factor analysis; access measurement; item analysis; ARS

#### Introduction

The issues of medication use in developing countries revolve around two phenomena: restricted access and unsupervised access. Restricted access is a result of scarcity of essential medicine. Unsupervised access to medicine is related to factors such as access to medical services, pharmacy services and alternative sources of medical care (1). In community based drug utilization studies, many researchers have modeled medication use as a function of individual and community factors related to access to medical, pharmaceutical and other alternative medical services. Anderson and Newman's Health Services Utilization (HSU) model has been used for this purpose. In this model, factors related to access to care have been defined as enabling variables (2).

Access to care has been defined as the availability, affordability and acceptability of health care (3). Measures of perceived acceptability, affordability and availability of medical care have been incorporated as appropriate measures of access to care in many drug utilization studies. These major measures of access to care have been based on the concept of satisfaction suggested by Ware *et al* (1).

Many studies have addressed the development of instruments measuring access to care. While these instruments can be used in specific populations for which they have been developed, for other settings construction of appropriate new instruments based on the concept of "Access to Care" is essential as factors related to access to care vary from country to country. Since we needed to assess access to private and public medical care as an independent measure of medication use (enabling factors), development of an instrument for measuring access suited to the Sri Lankan situation was an essential step. In developing such an instrument, it is very important to pay due at-

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tention to measurement principles (4). The subsequent major challenge is to establish its validity and reliability so that it can be successfully applied (5). This paper describes the development and validation of a Likert-type scale measuring access to generally available medical care in Sri Lanka.

### **Methodology**

#### **Phase I – Development of a scale to determine the access to medical care**

An extensive literature review of the concept of patient satisfaction and reviews of similar scales were carried out. Based on these, an instrument measuring the access to medical care (Likert-scale) comprising three hypothesised constructs, namely, perceived availability of medical care (12 items), perceived acceptability (19 items) and perceived affordability of medical care (4 items) was developed. The instrument is given in Annex 1. In the developed Likert-type scale measuring the access to medical care, instead of the usual statement format, the question format requiring more concrete responses was used. The responses were formed as "Always", "Never" and "Sometimes". The questions focussed on the actual experience of a respondent (personal reference) than on the experience of people in general (general reference).

To control the phenomenon of "Acquiescent Response Set (ARS)", a tendency to agree with statements of opinions regardless of their content, two structural features were adopted. First, each scale contained a balance of favourably and unfavourably worded items. Secondly, approximately one fourth of the items consisted of matched pairs i.e., two items that measure the same feature of care but worded in opposite direction. Agreement with both items in the pair is paradoxical and is counted as a manifestation of ARS (5). Of the 35 items, 7 were matched pairs. Unfavourably and favourably worded items were 18 and 17 respectively. The matched pairs were I (9,12), I (7,10), II (4,8), II (9,17), II (16,19), II (15,18), III (2,4) (Annex- I)

#### **Phase II- Pre testing**

Pre-test was carried out on a convenience sample of 30 patients attending a general practice and a medical clinic at a government hospital. Clarity and relevance of items were assessed. On the basis of the findings of the pre-test, modifications such as inclusion of a response option "not relevant" which was previously not thought of and change of some words for better comprehension

were made before using the scale in the validation component. The instrument used for validation is given in the Annex-1.

### **Phase III –**

#### **Testing validity and reliability**

##### **Study population**

The scale was validated using a sample of consumers patronising private and outdoor pharmacies of government hospitals. Feasibility, convenience, and the need for simultaneously validating another scale measuring the access to pharmacy care were the reasons for choosing a sample of pharmacy users.

##### **Sample size**

The appropriate sample size for factor analysis is debatable. Some consider that the ratio of the study subject per variable is 1:10. Others consider that a ratio of 1: 5 is adequate (4). The general acceptance is that a sample of 100 subjects is acceptable but a sample size above 200 is preferable (6). Since there were 35 items in the scale belonging to the 3 constructs of perceived availability, affordability and accessibility, calculated sample size, on the basis of minimum of five subjects per variable was 175. However, for the ease of selection of study participants from hierarchical institutions and pharmacies, we studied 178 subjects.

##### **Identification of study units**

The required number of study participants was selected from an urban and a rural area. Eighty nine clients patronising private pharmacies and outdoor pharmacies of government hospitals from each sector participated in the study. In both settings, 44 clients were selected from two private pharmacies and 45 were from an outdoor pharmacy of a base hospital, peripheral unit and a rural hospital. Every fourth client patronising these pharmacies filled the scale in the presence of the principal investigator (PRW).

#### **1. Methods used for validation**

##### **a) Judgemental validity**

Face, content and consensual validity, which are based on judgement were assessed in order to decide whether the conceptual definition has been appropriately translated into operational terms (7).

##### **Face validity**

The scale was tested among 30 users of a private medical facility to assess whether the intended variables yield information of real relevance to what the investigator wishes to measure.

##### **Content validity**

Content validity was built into the questionnaire

through careful review and selection of items based on evaluative criteria of access to care, which appeared in the literature.

#### **Consensual validity**

The final version of the instrument was reviewed by a team of multi-disciplinary experts in the field of Community Medicine and Pharmacology.

#### **b) Construct validity**

With the psychometric measures, the crux of validation is the assessment of construct validity, which is defined as the determination of the extent to which an instrument measures a theoretic construct. Techniques which contribute to construct validation include:

Factor analysis

Internal -consistency measures

Convergent-discriminant measures

#### **Factor analysis**

A factor analysis was performed to identify independent dimensions of access to medical care and groups of homogenous items suitable for measuring each dimension of care. The appropriateness for factor analysis was assessed using the Kaiser-Olkin Measure of Sampling Adequacy (MSA) and inspection of the anti-image correlation matrix. Principal components were extracted and rotated using Varimax rotation with Kaiser normalisation. The number of extracted factors was based on:

- The root criterion of selecting factors with Eigen values greater than 1.0
- The Scree test which directs the investigator to examine a plot of Eigen values and stop factoring at the point where the plot levels off
- Interpretability and meaningfulness of rotated factors

For a rotated factor to be interpretable, cut off levels of factor loading is essential. Some have used 0.4 while the others have used less stringent criteria of 0.3 and above as the cut off. In this study, we used 0.3 as the cut off for interpretation with a view to retain the maximum respondent input while preserving the content validity and interpretability (4,8). Pure variables having factor loadings of 0.3 or greater on only one factor was assigned to that factor. Complex variables having factor loadings above 0.3 on more than one factor were assigned on the basis of the difference of factor loadings. Complex variables with a difference > 0.2 between loadings were assigned to the factor of the highest loading while variables with a difference < 0.2 between loadings were as-

signed on the basis of "logical fit" (content validity) and verified by item analysis (4).

#### **2. Assessment of reliability- internal consistency**

Two techniques were used to assess the internal consistency of the scale: Cronbach's alpha and item internal consistency corrected for overlap (4). Kuder-Richardson formula 21 was used to determine the reliability of the ARS scale (9).

#### **Internal consistency- Cronbach's alpha**

Cronbach's alpha measures the overall correlation between items within a scale. Some authors opine that more stringent Nunally's criteria of 0.7 is a more acceptable for Cronbach's alpha (10). Others accept that a value of 0.5 is adequate and a higher standard is especially important when short multi items are used (4). They are of the opinion that a particular reliability coefficient should be compared with general level of coefficients reported for similar measures of the same construct. Since less stringent 0.5 had been used in similar studies of satisfaction and access to medical care, a value of 0.5 was used as an adequate estimate of reliability in the present study.

#### **Item-internal consistency – item scale correlation and item-discriminant validity**

High and consistent correlation is assumed between an item and its own tentative scale (Item-internal consistency) and significantly lower association between that item and all other scales (Item-discriminant validity) (4). Matrix of item-scale correlation will test hypothesised items grouping corresponding to scales. Item-discriminant validity also can be determined from the same matrix of item scale-correlation. Like in many other studies, in the present study, corrected item-scale correlation of 0.3 was used as the standard.

#### **Results**

Inspection of the correlation matrix revealed that a considerable number of correlations exceeded 0.3. This is suggestive of the suitability of the matrix for factor analysis. Kaiser-Meyer-Olkin measure of sampling adequacy was 0.66 and Bartlett's test of sphericity revealed that the approximate chi-square was 1331.77 with a degree of freedom of 595. The Bartlett's test of sphericity was significant ( $p < 0.01$ ). Anti-image correlation matrix included 32 items (91.4%), MSA of which were above the acceptable level of 0.5. Twelve factors met the Eigen value greater than one criterion and Scree test breaks occurred at 4 and 8 factors. Therefore, four, eight and twelve factor solutions were selected for Varimax rotation. Of these, most

interpretable was four-factor solution. It accounted for 41% of the variance. Factor coefficients above 0.3 are given in Table 1.

There were 25 pure variables. One variable did not load onto any of the factors extracted (Item No. 29) and was not considered for item - analysis. Of the remaining nine complex variables, eight had a difference < 0.20 and they were assigned on the basis of "logical fit". Group of items related to regularity of service provision, hypothesised to be in the availability dimension, was loaded onto factor where a majority of hypothesised "Acceptability of Services" items were clustered. This factor was named "Acceptability of Services and Regularity of Service provision

(AC & RS)".

One hypothesised affordability item (No.32) loaded onto the factor where the majority of "Availability of Services" items was clustered. Three items hypothesised to be "Acceptability" loaded separately and they were named logically as a new dimension "Concern for Clients (CC)". The last of the clustered four factors was named "Affordability (AF)". These dimensions were analysed for item-internal consistency. The separated dimensions and items are as follows:

#### Availability of services (AS)

AS1 (item 1), AS2 (item 2), AS3 (item 5) , AS4

**Table 1 - Factor coefficients of the individual items of the scale assessing accessibility to medical care**

| Item Number         | Factor 1     | Factor2     | Factor 3    | Factor 4    |
|---------------------|--------------|-------------|-------------|-------------|
| 1                   |              | .612        |             |             |
| 2                   |              | .303        |             |             |
| 3                   | .438         |             |             |             |
| 4                   | .374         |             |             |             |
| 5                   |              | .700        |             |             |
| 6                   | .466         |             |             |             |
| 7                   | .489         | .430        |             |             |
| 8                   | .320         | .414        |             |             |
| 9                   | .475         | .350        |             |             |
| 10                  | .340         | .483        |             |             |
| 11                  | .307         | .424        |             |             |
| 12                  |              | .420        |             |             |
| 13                  | .301         | .433        |             |             |
| 14                  | .687         |             |             |             |
| 15                  | .707         |             |             |             |
| 16                  | .630         |             |             |             |
| 17                  | .317         |             |             |             |
| 18                  | .516         |             |             |             |
| 19                  | .646         |             |             |             |
| 20                  |              |             | .448        |             |
| 21                  | .372         |             |             |             |
| 22                  | .777         |             |             |             |
| 23                  |              |             | .429        |             |
| 24                  |              |             | .608        |             |
| 25                  | .438         |             |             |             |
| 26                  | .337         |             |             |             |
| 27                  | .328         | .512        |             |             |
| 28                  | .555         |             |             |             |
| 29                  |              |             |             |             |
| 30                  | .442         |             |             |             |
| 31                  | .380         |             |             |             |
| 32                  | .304         | .473        |             |             |
| 33                  |              |             |             | .779        |
| 34                  | .322         |             |             | .746        |
| 35                  |              |             |             | .657        |
| <b>Eigen values</b> | <b>21.55</b> | <b>7.76</b> | <b>6.52</b> | <b>5.59</b> |

(item 7), AS5 (item 8), AS6 (item 9),  
AS7 (item 10), AS8 (item 11), AS9 (item 12),  
AS10 (item 13), AS11 (item 27), AS12 (item 32).

**Acceptability of services & Regularity of service provision (AC & RS)**

AC & RS1 (item 3), AC & RS2 (item 4), AC & RS3 (item 6) AC & RS4 (item 14), AC & RS5 (item 15), AC & RS6 (item 16), AC & RS7 (item 17), AC & RS8 (item 18), AC & RS9 (item 19), AC & RS10 (item 21), AC & RS11 (item 22), AC & RS12 (item 25), AC & RS13 (item 26), AC & RS14 (item 28), AC & RS15 (item 30), AC & RS16 (item 31).

**Concern for Clients (CC)**

CC1 (item 20), CC2 (item 23), CC3 (item 24),  
CC 4 (item 32)

**Affordability (AF)**

AF1 (item 33), AF2 (item 34), AF3 (item 35)

**Item-analysis**

**Item internal consistency and item-discriminant validity**

Item scale correlation matrix is given in the Table 2. All item-scale correlations were greater than 0.30. Inspection of the item-scale correlation matrix revealed that item - discriminant validity was low in two items (AS -4, AS-6) loaded on the dimension "AS".

**Table 2 – Item –scale correlation matrix corrected for overlap**

| Item      | AS    | AC&RS | CC    | FF    |
|-----------|-------|-------|-------|-------|
| AS1       | 0.54* | 0.13  | 0.29  | 0.01  |
| AS2       | 0.49* | 0.10  | 0.08  | 0.18  |
| AS3       | 0.73* | 0.31  | 0.16  | 0.13  |
| AS4       | 0.43  | 0.45  | 0.23  | 0.05  |
| AS5       | 0.73* | 0.37  | 0.16  | 0.13  |
| AS6       | 0.37  | 0.49  | 0.24  | 0.10  |
| AS7       | 0.77* | 0.36  | 0.35  | 0.08  |
| AS8       | 0.60* | 0.37  | 0.28  | 0.04  |
| AS9       | 0.59* | 0.31  | 0.30  | 0.05  |
| AS10      | 0.73* | 0.40  | 0.38  | 0.16  |
| AS11      | 0.47* | 0.21  | 0.16  | 0.12  |
| AS12      | 0.73* | 0.38  | 0.37  | 0.16  |
| AC&RS-1   | 0.21  | 0.43* | 0.02  | 0.22  |
| AC&RS-2   | 0.31  | 0.52* | 0.27  | 0.14  |
| AC&RS-3   | 0.26  | 0.48* | 0.07  | 0.19  |
| AC&RS-4   | 0.29  | 0.64* | 0.19  | 0.16  |
| AC&RS-5   | 0.25  | 0.63* | 0.08  | 0.27  |
| AC&RS-6   | 0.37  | 0.63* | 0.28  | 0.25  |
| AC&RS-7   | 0.17  | 0.34* | 0.12  | 0.01  |
| AC&RS-8   | 0.31  | 0.49* | 0.04  | -0.05 |
| AC&RS-9   | 0.27  | 0.53* | 0.16  | 0.04  |
| AC&RS-10  | 0.30  | 0.66* | 0.21  | 0.16  |
| AC&RS -11 | 0.16  | 0.52* | 0.20  | 0.17  |
| AC&RS-12  | 0.19  | 0.46* | 0.29  | 0.23  |
| AC&RS-13  | 0.23  | 0.47* | 0.30  | 0.23  |
| AC&RS-14  | 0.23  | 0.53* | 0.14  | 0.29  |
| AC&RS-15  | 0.16  | 0.52* | 0.31  | 0.20  |
| CC-1      | 0.31  | 0.32  | 0.57* | 0.21  |
| CC-2      | 0.27  | 0.17  | 0.69* | -0.12 |
| CC-3      | 0.24  | 0.25  | 0.71* | -0.05 |
| CC-4      | 0.39  | 0.37  | 0.70* | 0.09  |
| AF-1      | 0.52  | 0.23  | 0.01  | 0.38  |
| AF-2      | 0.18  | 0.39  | 0.04  | 0.81* |
| AF-3      | 0.03  | 0.15  | 0.13  | 0.85* |

p<0.05

AS - Availability of Services

AC & RS – Acceptability and Regularity of services

AF- Affordability of Services

CC – Concern for Clients

### Internal Consistency

Internal consistency reliability estimates for defined scales of the access to medical care are given in Table 3. All dimensions exceeded the accepted level of 0.5.

### Manifestation of Acquiescent Response Set (ARS)

Seventy six (42.6%) respondents showed some form of ARS. The percentages of manifestation of ARS for only 1, 2, 3 and 4 pairs were 27.6%, 23.7%, 7.9%, 13.2% respectively. Only 21 (27.6%) had manifested ARS for more than 4 pairs.

### Reliability of the ARS scale

Kuder-Richardson (KR) formula was used to determine the reliability of ARS scale. Reliability of the ARS scale was found to be 0.45. Correlation of the ARS scale was smaller but significant with scales "AC & RS" and "CC". A very small and

**Table 3- Internal Consistency- Cronbach's alpha**

|                     | AS   | AC<br>&RS | CC   | AF   |
|---------------------|------|-----------|------|------|
| Cronbach's<br>alpha | 0.78 | 0.82      | 0.51 | 0.81 |

**Table 4- Inter scale correlation matrix for dimensions assessing the access to medical care**

| Scale | AS    | AC&<br>RS | CC     | AF    | ARS |
|-------|-------|-----------|--------|-------|-----|
| AS    | 1.0   |           |        |       |     |
| AC&RS | 0.46* | 1.0       |        |       |     |
| CC    | 0.43* | 0.29*     | 1.0    |       |     |
| AF    | 0.12  | 0.31*     | -0.07  | 1.0   |     |
| ARS   | -0.03 | 0.22      | -0.27* | -0.03 | 1.0 |

\*  $p < 0.05$

non-significant correlation of the ARS scale was observed with other two scales (Table 4).

### Inter scale correlation

No inter-scale correlation met Anastasi's criteria of 0.55-0.70 (Table 4).

### Discussion

An instrument was constructed to measure the perceived access to medical care to be used in a drug utilisation study as an enabling variable of medication use. We followed the steps given below to prepare the instrument as suggested in the literature: selection of appropriate and logically related items that refer to the hypothesised constructs of access to medical care in an extensive literature review which also ensured building of content validity into the questionnaire; perform a factor analysis to fit items together into a meaningful way and verifying it by an item analysis; testing the reliability and validity of the extracted dimensions (11).

The first step was achieved by conceptualising access to medical care by incorporating items related to availability, acceptability and affordability of medical care. The Likert type scaling was preferred in preparing the instrument considering the following reasons: ability to collect more information per item, higher reliability with fewer items than Thurstone scale, simplicity for the respondent and allocating scores on the intensity of opinion (11).

The second step was achieved by performing an exploratory factor analysis. This helped to identify homogenous items suitable for measuring each dimension of access to care.

The third step was testing the validity and reliability of the developed scale. *Triangulation* i.e. the use of several complementary methods, however imperfect each may be, provides the most accurate assessment of the instrument properties in the absence of standard validation methods (4). A "gold standard" for measure of access to care cannot be defined and consequently, the criterion validity cannot be assessed for the scale (12). Construct validity becomes the crux of scale validation in psychometric measures (4). Of the techniques contributing to construct validation, factor analysis and internal consistency measures were applied in this exercise. As we were unable to find a similar instrument, convergent discrimination validity was not assessed.

The assessment of the structural model of a questionnaire, via factor analysis is a fundamental aspect of determining the instrument's construct validity (13). The factor analysis supported a multi dimensional conceptualisation of access to medical care. This structure was corroborated by two measures of internal consistency for each scale: Cronbach's alpha measure and corrected

item scale correlation.

Factor analysis produced four independent dimensions contrary to the three anticipated in the conceptualisation. Items related to regularity of services hypothesised to be in the "availability of services" dimension collapsed into a single factor with items related to "acceptability of services". This means that the respondents were not able to distinguish between these aspects or that these aspects did not vary independently in the study sample. Therefore, it is advisable to reword these items to improve variability, include a wide array of questions and partial ARS in the correlation matrix for sorting out difficulties in interpretation of the factor structure in future studies.

As expected, items related to affordability were extracted as a single factor. However, one item (item assessing if they choose not to seek medical care due to lack of money) hypothesised to be in the dimension "affordability of medical care" loaded to the factor where items of "availability of services" were. The answer to this item may be influenced by the effect of a socially desirable bias because of the way the item was worded. People may not give the real answer to the question implying neglect of medical consultation due to poverty. The other reason is that there could not be a variation in answer to such a question in a setting where government medical care is free of charge, although expensive private facilities are available. Thus, the pattern of the answer to this question may differ from the answer to other items assessing the price of available medical care. Even, those who frequently utilise government health facilities are also able to assess the reasonableness of the cost of care at paying facilities from their point of view. This may be the reason for poor correlation of the deviated item with the rest. Therefore, the option is to reword the item to suit the affordability item in a future study. On the other hand, extracted affordability dimension needs more items to maintain a good content validity of the instrument in a subsequent validation.

All items related to "concern for clients" hypothesised to be under the dimension "acceptability" were extracted as a separate factor. This suggests that these items varied independently in the sample and respondents were able to distinguish these items clearly from the other items related to acceptability of care. At the conceptual level, acceptability has been theorized as patient satisfaction and trust. Thus, it is natural that respondents distinguish items related to trust separately from the items of satisfaction with

care. This has been experienced in other study based on the same concept where items considering "considerations" have clustered into a separate factor (4). Since this separately extracted dimension "concern for clients" contained a few items, it is advisable to write more items for it in a future research in order to increase the reliability.

In the subsequent stage of testing, item discriminant validity was low in two items (AS-4, AS-6). These two questions were hypothesised to be of and loaded on to "availability of services although it had an item scale correlation that was not significantly different from that of the scale of "regularity and acceptability of services". However, it was assigned to the scale "availability of services" on the logical fit despite the low discriminant validity.

Cronbach's alpha as a measure of internal consistency were above 0.5 in all four dimensions. Generally, the coefficient above 0.5 is considered as adequate and reliable. However, some considers that this is too low and the more conservative Nunally's criterion of 0.7 would be more acceptable (12). The high standard Nunally's criterion is especially important when short multi-item scales are used and a particular reliability coefficient should be compared with the general level of coefficients reported for similar measures of the same concept (5). In similar studies of satisfaction and access to care, less stringent 0.5 had been used. In this study, even if more stringent Nunally's criterion had been applied, three fourth of dimensions would have had adequate reliability.

Kuder Richardson reliability of ARS scale was determined to be 0.45. This was less than the 0.5 recommended by Helmstadter (5). Thus, to improve the reliability of the ARS scale, it is necessary to increase the length of the scale by writing additional matched pairs to the instrument. No inter-scale correlation met Anastasia's criterion of 0.55-0.70 indicating the similar content of scale without redundancy. Thus, none of these scales can be considered as sub scales of a higher order scale.

In conclusion, the developed instrument was valid and reliable. It was consistent with our theoretical hypothesis though there were some small differences than anticipated. Underlying factor structure of items was identified and tested for validity and reliability. Scales which contained fewer items i.e., "affordability of care" and "concern for care" need further testing for validity with more items. More matched pairs are also needed to improve ARS scale in a future validation.

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## Annex -1

### Scale measuring perceived access to medical care

Response categories ; 1. A- Always 2. S- Sometimes 3. N- Never 4. NR- Not relevant

#### I. Perceived availability of medical care

#### Response

Can you find help from a qualified western medical practitioner if you have a medical problem ?

A S N NR

Does it take more than 30 minutes to get to a medical facility (Govt./private) where you can receive treatment when you have a medical problem ?

A S N NR

Does the medical facility (Govt./private) where you generally seek treatment, provide a regular service ?

A S N NR

Are the working hours of the medical facility where you generally seek treatment (Govt./private) convenient for you ?

A S N NR

In case of an emergency do you have difficulty in finding a medical facility (Govt./private) where proper care is available ?

A S N NR

Do you have to wait longer periods to obtain care at the medical facility (Govt./private) where you generally seek treatment ?

A S N NR

When you have a medical problem, do you think that you can meet the doctor whom you think relevant for your problem straight away ?

A S N NR

Do you think that the medical facility (Govt./private) where you generally seek medical care, has enough doctors skilled in different fields to attend to your medical problem ?

A S N NR

Do you think that the medical facility (Govt./private) where you generally seek medical care has enough other health workers to attend to your medical problem ?

A S N NR

When you have a medical problem, is it difficult to meet the doctor whom you think relevant for your problem straight away ?

A S N NR

According to your knowledge , do you think that the

A S N NR

medical facility (Govt./private) where you generally seek medical care, carries a range of facilities that is adequate enough to make a correct diagnosis of your health problem ?

Do you think that there is a shortage of other health workers at the medical facility (Govt./private) where you generally seek medical care ?

A S N NR

## II Perceived acceptability

Do you prefer to meet the same doctor whom you generally consult when you have a medical problem ?

A S N NR

Are the doctors whom you consult courteous and respectful ?

A S N NR

Are the doctors whom you consult friendly enough with their patients ?

A S N NR

Have you felt that the doctors whom you generally meet are concerned with your medical problems when you present your complaints ?

A S N NR

Are you dissatisfied with the medical care (Govt./private) you receive ?

A S N NR

Are you certain that the doctors whom you generally consult are qualified doctors not quacks ?

A S N NR

According to your knowledge, do you think that doctors (Govt./private) whom you generally meet possess enough skills and experience to make a correct diagnosis and treat you properly ?

A S N NR

Do you think that the doctors (Govt./private) whom you generally meet should pay more attention to your medical problem when you present yourself with complaints ?

A S N NR

Do you think that the services offered by medical specialists in your area should be better than what it is now ?

A S N NR

Do you feel that the doctors (Govt./private) whom you generally meet do not ask adequately important information necessary to make a diagnosis clearly ?

A S N NR

|                                                                                                                                                                                                           |   |   |   |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|
| Do you think that doctors (Govt./private) whom you generally consult spend as much time as necessary with you ?                                                                                           | A | S | N | N  |
| Do you think that doctors (Govt./private) whom you generally consult have genuine interest in you as a patient ?                                                                                          | A | S | N | NR |
| Do you think that the medical care you generally receive (from Government or private sector ) should be better than what it is now ?                                                                      | A | S | N | NR |
| Do you think that doctors (Govt./private) whom you generally consult provide inadequate explanation about your condition ?                                                                                | A | S | N | NR |
| According to your knowledge, are the explanations given about drugs prescribed by doctors (Govt./private) whom you generally consult inadequate ?                                                         | A | S | N | NR |
| Do you think that doctors (Govt./private) whom you generally consult can do more to make sure that you understand everything about your condition ?                                                       | A | S | N | NR |
| Do you think that a better specialist service is Available in your area so that the doctors you generally meet can refer you to the relevant specialist (Govt./private) when they think it is necessary ? | A | S | N | NR |
| Do the doctors (Govt./private) whom you generally consult give adequate explanation about drugs prescribed by them ?                                                                                      | A | S | N | NR |
| Do the doctors (Govt./private) whom you generally meet make sure that you understand Everything about your condition ?                                                                                    | A | S | N | NR |

### III

#### Perceived affordability of medical care

Have you ever delayed medical care due to lack of money ?

A S N NR

Do you think that the charges for diagnostic tests are too high ( Tick "Not Relevant " if you have not been asked to have test done for a fee)

A S N NR

Do you think that the amount charged by doctors whom you generally consult for consultation is too high ( Tick "Not Relevant " if you have never consulted a doctor for a fee)

A S N NR

Do you think that the cost for diagnostic test is reasonable (Tick "Not Relevant " if you have not been asked to have test done for a fee)

A S N NR

