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# Assessing Responsiveness of Primary Healthcare Facilities in Rawalpindi: A Cross-Sectional Study

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## ABSTRACT

***Objective:*** To assess responsiveness at First Level Healthcare Facilities at Rawalpindi by using an adapted WHO World Health Survey tool.

***Study Design:*** Cross-sectional study.

***Place and Duration of Study:*** Three first level care facilities of Nationally Administered Healthcare Organization at Rawalpindi, Pakistan from Jan 2024 to 2024.

***Methodology:*** Four Hundred participants were included in the study through nonprobability consecutive sampling following the inclusion criteria after informed consent. The data was collected by one to one interviews held on with outdoor patients presenting in these facilities using WHO World Health Survey tool. Data analysis was done using Statistical Package of Social Sciences (SPSS) software version 21.

***Results:*** Out of 400 participants, 104(26%) perceived that responsiveness was poor in the First Level Care Facilities at Rawalpindi whereas majority 278(69.5%) of the patients found the responsiveness as satisfactory. A mere 18(4.5%) considered responsiveness as good. Out of the essential elements of the responsiveness, Prompt attention was considered the most important by 123(30.8%) participant and 74(18.5%) respondents rated communication as an equally important part of the responsiveness in health care system. The least important domain as considered by the respondents were the choice of provider and social support by 10(2.5%) and 4(1%) respondents respectively.

***Conclusion:*** Following the results of the study conducted, the domains of responsiveness still need improvement to enhance patient satisfaction and is directly associated with the domains of responsiveness. However, it is the need of an hour to standardize the care being provided at these facilities to improve the healthcare delivery system.

**Keywords:** Domains of responsiveness, First Level Care Facilities, Primary Healthcare (PHC), Responsiveness.

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## INTRODUCTION

The essential objective of health systems is to treat everyone with equity and dignity which is responsiveness factor of WHO Health Framework. Responsiveness is one of the three objectives of health systems, including equitable financing and improving health outcomes.[1] Amongst all objective responsiveness is least studied.[2] WHO defines responsiveness as: "The ability of the health system to meet the population's legitimate expectations regarding their interaction with the health system, apart from expectations for improvements in health or wealth.[3]

With a responsiveness value of 8.10, the USA came in first. China is placed 88th, Iran at 100th India at 110th and Pakistan at 120th place out of 191 countries with a responsiveness rating of 5.20, 5.10, 5.02, and 4.95 respectively.[4] National Health Vision of Pakistan (2016–25) states that "goal is to enhance the health of all Pakistanis, with primary focus on children and women with the provision of universal access to high-quality, affordable healthcare services that are provided by a responsive and strong healthcare system that is prepared to fulfill the demands of the global health community and the Sustainable Development Goals.[5] National Healthcare Organization is a nationally administered organization in the country and serves as medical support provider which deliver the healthcare through hospitals which are the basic functional units of healthcare delivery system. Rawalpindi zone has three First level Healthcare Facilities for providing primary health care to its clientele of national institution.

Research indicates that multiple factors are involved in evaluating the responsiveness of the medical care so this study will help to analyze the gaps in approaches under practice along with assisting the policy makers by identifying the areas of improvement in quality of service. The objectives include assessing the responsiveness at First Level Healthcare facilities of Rawalpindi by using an

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adapted WHO World Health Survey tool and to determine the relationship of responsiveness with socio-demographic variables.

## METHODOLOGY

This Cross Sectional Study was carried out, after getting approval from Ethical Committee (377-AAA-ERC-AFPGMI), at Primary Healthcare facilities of National Healthcare organization in Rawalpindi, Pakistan from Jan 2024 to June 2024. The sample size calculated was 400 using the WHO sample size calculator and keeping the prevalence of responsiveness 50%, CI 95%, level of significance 0.05 with 10% non-response rate. Non-Probability Consecutive sampling technique was used in selecting the participants.

**Inclusion Criteria:** Adults patients of 18 years and above reporting to First level Healthcare facilities were included.

**Exclusion Criteria:** The patients who did not give consent and critically ill and terminally ill patients were excluded.

Informed Consent was taken from the participants followed by data collection by interviews held on one-to-one basis with the participants on a Pre-validated Structured Questionnaire adapted from WHO (World Health Responsiveness Survey). Validated Urdu version of Questionnaire was used for those unable to answer in English. The satisfaction level was measured on a 5-point Likert scale ranging from 1 (very poor) to 5 (very good). Independent Variables included Age, Gender, Place of Residence, Occupation, Educational status, Income and Self-assessed Health status while Dependent Variables were Dignity, Autonomy, Confidentiality, Communication, Prompt attention, Quality of Basic amenities and Social support. Data analysis was done using Statistical Package of Social Sciences (SPSS) software version 21. Numerical variables expressed as means and standard deviation. Categorical Variable expressed as frequencies and percentages. Responsiveness score was measured by adding the scores against all eight items. Maximum score can be 80 and minimum can be 15. Responsiveness score 15-35 labeled as poor, score between 36 and 55 labeled as satisfactory and 56 and above marked as good responsiveness. Chi-square test was used to determine the relationship between independent variables and dependent domains of the responsiveness. Bivariate analysis was done to identify the determinants associated with poor score within the responsiveness domains.

## RESULTS

A total of 400 participants were enrolled and interviewed in the study. Out of 400 participants, 224(56%) were males and 176(44%) were females. Majority of the respondents 127(31.8%) belonged to age group of 27-38 years. 238(59.6%) respondents reporting to first level care facilities were serving including 65(27.3%) were employed serving self and 77(32.3%) were entitled whereas 61(25.5%) were families including children reporting in these facilities (Table-I).

**Table-I: Descriptive Statistics of Study Population (n=400)**

| Categories | n (%) |
|---|---|
| **Gender** | |
| Males | 224(56%) |
| Females | 176(44%) |
| Total | 400(100%) |
| **Age** | |
| 18-26 | 38(9.5%) |
| 27-38 | 127(31.8%) |
| 39-50 | 109(27.3%) |
| 51-62 | 65(16.3%) |
| 63-74 | 44(11%) |
| 75+ | 17(4.3%) |
| Total | 400(100%) |
| **Occupation** | |
| Employed (serving self) | 109(27.3%) |
| Unemployed (families) | 102(25.5%) |
| Retired | 60(15.0%) |
| Others | 129(32.3%) |
| Total | 400(100%) |

According to the results of our study, a mere 18 (4.5%) considered responsiveness element to be good in the First Level Care Facilities of Nationally Administered Healthcare Organization in Rawalpindi while 278(69.5%) respondents found responsiveness as satisfactory whereas 104(26%) respondents perceived that responsiveness was poor (Figure-1).

Out of the essential elements of the responsiveness, 123(30.8%) respondents considered Prompt attention as the most important domain followed by communication as an equally important part of the responsiveness in health care system by 74(18.5%) respondents. The least important domain as considered was choice of provider and social support by 10(2.5%) and 4(1%) respondents respectively as shown in Figure-2. Out of 127 respondents of aged 27-38 years 91(71.6%) considered communication as good

by the health care providers. Out of all 400 respondents 160(40%) rated their own health as average while 118(29.5%) respondents rated their health as bad whereas approximately 100(25%) of the respondents perceived themselves in good state of health.

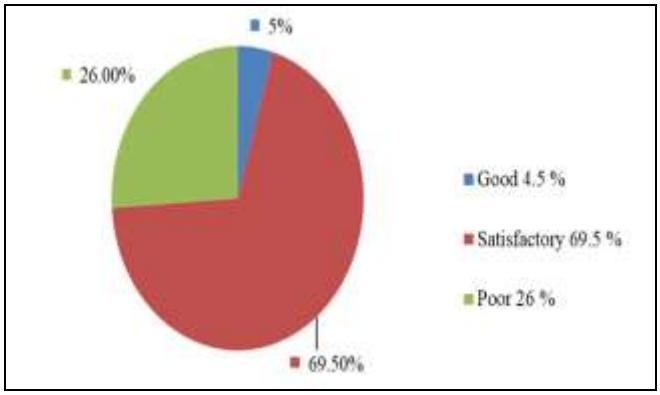


**Figure-1: Perceived Level of Responsiveness in First Level Healthcare Facilities**

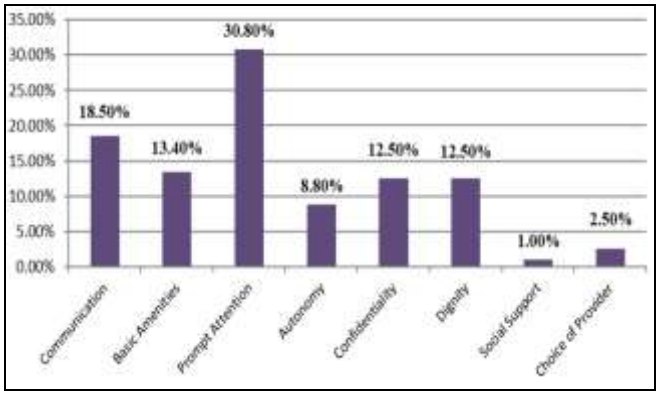


**Figure-2: Importance of Responsiveness Domains by Respondents**

Cross tabulation of independent and dependent variables showed statistically significant relation of age and occupation with dignity (Table-II). The bivariate analysis showed that with the increasing age the patients rated dignity as poor compared to the younger age groups. For age 39-50 years (n=109), 27(24.7%) considered poor response to the dignity element, age 51-62 years (n=65); 20(30.7%) rated poor dignity and among aged 63-74 years (n=44), 17(38.6%) considered health care providers response to dignity element of responsiveness as poor.

There was statistically significant relation of level of education with communication between patient and healthcare provider. Similarly, there was a statistically significant relationship of age with communication. (Table-II). Overall, the worst performing domains were confidentiality and communication with comparatively poor score as compared to the rest of the domains as derived from bivariate analysis.

## DISCUSSION

Responsiveness measures people's experiences and concentrates on the nonclinical facets of healthcare. The majority of responsiveness research has concentrated on inpatient treatment.[6] Our study showed that 104(26%) of the participants perceived that responsiveness was poor whereas majority 278(69.5%) found responsiveness to be satisfactory and 18(4.5%) considered responsiveness to be good in the First Level Healthcare Facilities of National Healthcare Organization in Rawalpindi. Out of the essential elements of the responsiveness, Prompt attention was considered the most important by 123(30.8%) participants. Overall the worst performing domains were confidentiality and communication as compared to the rest of the domains. The responsiveness was found to be satisfactory in our study centers as opposed to the general perception of poor responsiveness at first level contact facilities in Pakistan.[7]

The majority of respondents perceived prompt attention as important component of the responsiveness which is evident by the fact that upon entering any healthcare facility, patients anticipate that their fears and concerns will be given top priority.[8,9] The results of our study are in line to a study conducted in Kenya.[10] as well as study conducted in Iran by Askari et all in 2016 which revealed that prompt and special attention was an efficient way to increase the health system's responsiveness.[11] Our study showed that majority of the participants didn't consider choice of the provider as important. The discrepancy in mean responsiveness scores amongst the centers under investigation can also be explained by this problem.[12]

Compared to older people, younger people had higher expectations for responsiveness. Alternatively, staff members' compassionate attitudes toward the elderly population may have contributed to the disparities in views between the age groups.[13] This study did not find any correlation between sex and the response domains, as found by study carried out in Iran by Ahmadpour in 2023.[6] According to our study, patient education improves health care providers' ability to communicate with the patients about nature of illnesses and reason for the treatments. Healthcare

**Table-II: Association of Socio-Demographic Variables with Domains of Responsiveness**

| | | Dignity | | Confidentiality | | Communication | | Basic amenity Quality | | Social Support | | Attention | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Poor | Good | Poor | Good | Poor | Good | Poor | Good | Poor | Good | Poor | Good |
| Gender | Male | 65(16.2%) | 159(39.8%) | 78(19.5%) | 146(36.5%) | 59(14.8%) | 165(41.2%) | 30 (7.5%) | 194(48.5%) | 28(7.0%) | 196(49.0%) | 32(8.0%) | 192(48.0%) |
| | Female | 38 (9.5%) | 138(34.5%) | 63(15.8%) | 113(28.2%) | 63(15.8%) | 113(28.2%) | 31 (7.8%) | 145(36.2%) | 18(4.5%) | 158(39.5%) | 25(6.2%) | 151(37.8%) |
| | p- value | 0.092 | | 0.840 | | 0.041* | | 0.244 | | 0.479 | | 0.982 | |
| Occupation | Employed (serving self) | 29 (7.2%) | 80 (20.0%) | 43(10.8%) | 66 (16.5%) | 37 (9.2%) | 72 (18.0%) | 9 (2.2%) | 100(25.0%) | 9 (2.2%) | 100(25.0%) | 10(2.5%) | 99 (24.8%) |
| | Unemployed(families) | 23 (5.8%) | 79 (19.8%) | 36 (9.0%) | 66 (16.5%) | 30 (7.5%) | 72 (18.0%) | 23 (5.8%) | 79 (19.8%) | 16(4.0%) | 86 (21.5%) | 21(5.2%) | 81 (20.2%) |
| | Retired | 24 (6.0%) | 36 (9.0%) | 20 (5.0%) | 40 (10.0%) | 14 (3.5%) | 46 (11.5%) | 5 (1.2%) | 55 (13.8%) | 5 (1.2%) | 55 (13.8%) | 7 (1.8%) | 53 (13.2%) |
| | Others | 27 (6.8%) | 102(25.5%) | 42(10.5%) | 87 (21.8%) | 41(10.2%) | 88 (22.0%) | 24 (6.0%) | 105(26.2%) | 16(4.0%) | 113(28.2%) | 19(4.8%) | 110(27.5%) |
| | p- value | 0.036* | | 0.718 | | 0.528 | | 0.009* | | 0.311 | | 0.111 | |
| Residence | Urban | 68(17.0%) | 182(45.5%) | 87(21.8%) | 163(40.8%) | 76(19.0%) | 174(43.5%) | 40(10.0%) | 210(52.5%) | 29(7.2%) | 221(55.2%) | 32(8.0%) | 218(54.5%) |
| | Rural | 35 (8.8%) | 115(28.7%) | 54(13.5%) | 96 (24.0%) | 46(11.5%) | 104(26.0%) | 21 (5.2%) | 129(32.2%) | 17(4.2%) | 133(33.2%) | 25(6.2%) | 125(31.2%) |
| | p- value | 0.392 | | 0.808 | | 0.955 | | 0.590 | | 0.935 | | 0.284 | |
| Education | never went to school | 19 (4.8%) | 42 (10.5%) | 31 (7.8%) | 30 (7.5%) | 29 (7.2%) | 32 (8.0%) | 8 (2.0%) | 53 (13.2%) | 4 (1.0%) | 57 (14.2%) | 13(3.2%) | 48 (12.0%) |
| | Primary | 9 (2.2%) | 50 (12.5%) | 20 (5.0%) | 39 (9.8%) | 17 (4.2%) | 42 (10.5%) | 8 (2.0%) | 51 (12.8%) | 5 (1.2%) | 54 (13.5%) | 5 (1.2%) | 54 (13.5%) |
| | Middle | 11 (2.8%) | 20 (5.0%) | 13 (3.2%) | 18 (4.5%) | 11 (2.8%) | 20 (5.0%) | 6 (1.5%) | 25 (6.2%) | 6 (1.5%) | 25 (6.2%) | 5 (1.2%) | 26 (6.5%) |
| | Matric | 12 (3.0%) | 55 (13.8%) | 24 (6.0%) | 43 (10.8%) | 23 (5.8%) | 44 (11.0%) | 11 (2.8%) | 56 (14.0%) | 8 (2.0%) | 59 (14.8%) | 9 (2.2%) | 58 (14.5%) |
| | FA/FSc | 12 (3.0%) | 40 (10.0%) | 16 (4.0%) | 36 (9.0%) | 10 (2.5%) | 42 (10.5%) | 7 (1.8%) | 45 (11.2%) | 6 (1.5%) | 46 (11.5%) | 8 (2.0%) | 44 (11.0%) |
| | BA/BSc | 29 (7.2%) | 61 (15.2%) | 26 (6.5%) | 64 (16.0%) | 22 (5.5%) | 68 (17.0%) | 18 (4.5%) | 72 (18.0%) | 13(3.2%) | 77 (19.2%) | 12(3.0%) | 78 (19.5%) |
| | MA or more | 11 (2.8%) | 27 (6.8%) | 10 (2.5%) | 28 (7.0%) | 10 (2.5%) | 28 (7.0%) | 2 (0.5%) | 36 (9.0%) | 3 (0.8%) | 35 (8.8%) | 5 (1.2%) | 33 (8.2%) |
| | *p*- value | 0.111 | | 0.104 | | 0.027* | | 0.482 | | 0.518 | | 0.628 | |
| Income | < 15,000 | 3 (0.8%) | 21 (5.2%) | 6 (1.5%) | 18 (4.5%) | 2 (0.5%) | 22 (5.5%) | 6 (1.5%) | 18 (4.5%) | 6 (1.5%) | 18 (4.5%) | 6 (1.5%) | 18 (4.5%) |
| | 15,000 to 29,999 | 31 (7.8%) | 87 (21.8%) | 39 (9.8%) | 79 (19.8%) | 40(10.0%) | 78 (19.5%) | 19 (4.8%) | 99 (24.8%) | 13(3.2%) | 105(26.2%) | 24(6.0%) | 94 (23.5%) |
| | 30,000 to 49,999 | 51(12.8%) | 126(31.5%) | 67(16.8%) | 110(27.5%) | 55(13.8%) | 122(30.5%) | 24(6.0%) | 153(38.2%) | 21(5.2%) | 156(39.0%) | 19(4.8%) | 158(39.5%) |
| | > 50,000 | 16 (4.0%) | 62 (15.5%) | 27 (6.8%) | 51 (12.8%) | 24 (6.0%) | 54 (13.5%) | 11 (2.8%) | 67 (16.8%) | 5 (1.2%) | 73 (18.2%) | 6 (1.5%) | 72 (18.0%) |
| | p-value | 0.238 | | 0.596 | | 0.101 | | 0.510 | | 0.094 | | 0.014* | |
| Age | 18 - 26 | 2 (0.5%) | 36 (9.0%) | 7 (1.8%) | 31 (7.8%) | 5 (1.2%) | 33 (8.2%) | 8 (2.0%) | 30 (7.5%) | 6 (1.5%) | 32 (8.0%) | 9 (2.2%) | 29 (7.2%) |
| | 27 - 38 | 32 (8.0%) | 95 (23.8%) | 49(12.2%) | 78 (19.5%) | 36 (9.0%) | 91 (22.8%) | 27 (6.8%) | 100(25.0%) | 16(4.0%) | 111(27.8%) | 14(3.5%) | 113(28.2%) |
| | 39 - 50 | 27 (6.8%) | 82 (20.5%) | 37 (9.2%) | 72 (18.0%) | 42(10.5%) | 67 (16.8%) | 14 (3.5%) | 95 (23.8%) | 16(4.0%) | 93 (23.2%) | 13(3.2%) | 96 (24.0%) |
| | 51 - 62 | 20 (5.0%) | 45 (11.2%) | 22 (5.5%) | 43 (10.8%) | 22 (5.5%) | 43 (10.8%) | 5 (1.2%) | 60 (15.0%) | 3 (0.8%) | 62 (15.5%) | 8 (2.0%) | 57 (14.2%) |
| | 63 - 74 | 17 (4.2%) | 27 (6.8%) | 19 (4.8%) | 25 (6.2%) | 15 (3.8%) | 29 (7.2%) | 5 (1.2%) | 39 (9.8%) | 4 (1.0%) | 40 (10.0%) | 10(2.5%) | 34 (8.5%) |
| | 75+ | 5 (1.2%) | 12 (3.0%) | 7 (1.8%) | 10 (2.5%) | 2 (0.5%) | 15 (3.8%) | 2 (0.5%) | 15 (3.8%) | 1 (0.2%) | 16 (4.0%) | 3 (0.8%) | 14 (3.5%) |
| | p-value | 0.021* | | 0.225 | | 0.030* | | 0.127 | | 0.334 | | 0.201 | |

** The Chi-square statistic is significant at the .05 level.*

practitioners' prejudice against well-educated patients and the upper class may also cause a difference in responsiveness, which contributes to the systemic inequalities in health care.[14] The relationship found between respondents' poor health and their negative responsiveness evaluation is consistent with study demonstrating that those who felt their own health was bad also thought their response was poor.[9] Results from our study did not show significant association by any of the domains of responsiveness with the geographical location of the respondents as study from Tanzania conducted by Kapologwe in 2020 showed the similar results that Health system responsiveness was not affected by location of the respondents.[1] Social variables have a significant impact on both the individual's expectations of the health system and how they rated the responsiveness.[15]

Reducing waiting periods, offering services right away, and improving patient satisfaction would all contribute to improved responsiveness. Several studies have revealed that persons with varying political, social, and cultural backgrounds also have varying perspectives on the same experiences related to the health system.[16] Low scores of responsiveness in First level care facilities may be due to the fact of insured patients reporting to these facilities which is in line with a study by Duku *et a*l., conducted in Ghana in 2018 showed that patient with insured medical facilities tend to perceive the worst quality of care leading to decreased responsiveness by health care providers.[17-18]

## RECOMMENDATIONS

It is the need of an hour to be consistently focused on non-medical expectations of patients. From a policy perspective, to enhance the responsiveness of health system of Pakistan requires higher level of financial investment and integrated training programs in curriculums to improve the domains of responsiveness.

## LIMITATIONS OF STUDY

In limiting ourselves to first level medical care facilities in one zones of nationally administered healthcare organization, we were able to present only a part of whole. The results may vary for other zones.

## CONCLUSIONS

Following the results of the study conducted, it can be deduced that the domains of responsiveness still needs to be addressed as patient satisfaction is directly associated with the domains of responsiveness and not merely with the treatment received which is one of the major reasons that health care in Pakistan is still not able to achieve the desired goal.

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**Funding Source:** None.

**Authors' Contribution**

Following authors have made substantial contributions to the manuscript as under:

SIB & HM: Data acquisition, data analysis, critical review, approval of the final version to be published.

NI & MSS: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

AJ & AR: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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