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Knowledge, Attitude & Practice of Bangladeshi Occupational Therapists in Occupational Therapy Practice: A Cross-sectional study

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Abstract

Occupational therapy (OT) is a rehabilitation profession focused on the support of health, well being and participation in meaningful activities, and is client-centred. The OT workforce in Bangladesh is severely small, at 1.3 therapists per million population, is chronically under-resourced and is poorly distributed. Practitioners' Knowledge, Attitude and Practice (KAP) is crucial for revealing gaps and guiding workforce development, and there is a lack of empirical evidence on KAP of occupational therapists in Bangladesh. Objective: To understand the knowledge, attitude and practices of occupational therapists (OTs) in Bangladesh and investigate the relationship between these factors and selected demographic and work-related factors. Methods: This study is quantitative, descriptive, and cross-sectional, which was conducted in all eight administrative divisions of Bangladesh in the period of January to November 2025. Using an attempted census technique, all occupational therapists (n = 390) registered with the Bangladesh Occupational Therapy Association were invited, of whom 320 (82%) fully responded. Data were gathered through a structured and self-administered questionnaire that included 15-diem knowledge items based on the Occupational Therapy Practice Framework-4, 10-diem attitude items (5-point Likert scale), and 10-diem practice

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items (5-point frequency scale) and sociodemographic/professional profile items. Expert review and pilot testing were used to determine content validity, and internal consistency was good for attitude (α=0.81) and practice (α=0.78). Using Bloom's cut-off scores, performances were rated Good (> or equal to 80%), Moderate (60-79%) or Poor (<60%). Fisher's exact test ($p<0.05$) and descriptive statistics were used for data analysis. Results: The mean age of the participants was 31 years (range 23–51 years), 67.2% were females and 89.1% were bachelor's degree holders. Most practiced in urban areas (78.1%), versus semi-urban (14.4%) and rural (7.5%). The knowledge, attitude and practice values were found to be high at 96.9%, 97.2% and 98.1%, respectively. There was significant association between younger age (≤30 years) and early to mid-career experience (1–10 years) and better knowledge ($p<0.001$). Urban practices showed significantly better practice compared with rural/semi-urban practices ($p=0.001$). Significant associations were found between more positive attitudes and postgraduate education and mid-career experience ($p=0.001$). Conclusion: The occupational therapists in Bangladesh have a significant basic knowledge and positive attitude with good practice. Challenges include significant urban–rural gaps, a drop in senior clinician knowledge, and postgraduate uptake. To maintain and develop the profession, it is recommended that there be mandatory continuing professional development, incentives for rural practice, telehealth infrastructure, and public advocacy campaigns.

Keywords:

Occupational therapy, Knowledge, Attitude and Practice (KAP), Bangladesh, Rehabilitation workforce, Continuing professional development, Urban–rural disparity, Cross sectional study, Evidence-based practice, Health policy, Low- and middle-income countries (LMICs).

Introduction

Introduction Occupational therapy (OT) is a rehabilitation profession that is client-centred and focuses on maximizing an individual's functional abilities in activities of daily living while promoting their health and well-being and ultimately their ability to live their life to the fullest [1]. The need for rehabilitation is growing at an exponential pace, around one in three people worldwide could benefit from rehabilitation services at some point in the course of their illness or injury [2] as the number of non-communicable diseases, injuries, and population ageing continues to rise. OT provides important skills and knowledge for functional assessment, environmental adaptations and occupation-based interventions in this international health agenda [1,3]. Practitioners' Knowledge, Attitude and Practice (KAP) profiles [4] have significant influence on the quality, effectiveness and equity of OT services. Even though evidence-based practice requires a "holy trinity" of research, clinical skills, and client values, there is international research that indicates that good professional attitudes does not necessarily result in regular evidence-informed practice [4,5]. Limited time, access to research databases, lack of critical appraisal skills and sub-optimal organisation have often been cited as barriers to optimum implementation of practice [4,6]. Hence, systematic KAP assessment is systematic way of determining gaps in implementation and professional behaviors that can be modified. The particular challenges of these professional dynamics in low- and middle-income countries (LMICs) include the chronic under-resourcing, poor distribution and inadequate integration of rehabilitation workforces into mainstream health care infrastructures [7]. Internationally, research on OT workforce is still very limited and is mainly focused in high income countries [7]. Structurally experiencing difficulties but expanding in Bangladesh. Data available indicate

the lack of trained professionals (only 1.3 OTs per one million people), extreme urbanization and large rehabilitation needs of people with disabilities which remains unmet [8]. Despite these challenges, there is a definite dearth of empirical literature describing occupational therapists' perspectives and practice of key client-centred principles in limited-resource clinical contexts in Bangladesh [9]. Thus, the objective of this cross-sectional study was to identify the knowledge, attitudes and practices of occupational therapists in the Bangladesh and association of these factors with selected demographic and work-related factors. The building of this evidence base is critical, so that competency-based curricula, continuous professional development (CPD) can be developed, health policy can be influenced, and equitable distribution of OT services can be promoted in Bangladesh. Methodology A quantitative, descriptive cross-sectional study was carried out in Bangladesh during January–November 2025 to evaluate Knowledge, Attitude and Practice (KAP) of the local Occupational Therapists (OTs) in all the eight administrative divisions of the country. The total population of OTs was 390, identified through an attempted census and response-based non-probability participation of Bangladesh Occupational Therapy Association (BOTA) which gave a sample of 320 complete respondents from different clinical, academic and community settings (82% response rate). Only registered and practicing OTs in Bangladesh were considered eligible and others who were inactive, declined to participate the survey and incomplete were excluded. The Institutional Review Board of Bangladesh Health Professions Institute (CRP-BHPI/IRB/05/2025/1080) approved the ethical aspects of the study. All the participants signed informed consent in line with the Declaration of Helsinki and data were anonymized and kept on password-protected systems. The data were collected using a structured and self-administered questionnaire which was subdivided into four sections: Sociodemographic/professional profile (12 variables), Knowledge domain (15 yes/no variables referring to core frames of the OPTF-4), Attitude domain (10 variables scored on a 5-point likert scale), and Practice domain (10 variables scored on a 5-point frequency scale). The content validity was confirmed by the expert and pilot test (n=5) and the internal consistency was very good in attitude (α=0.81) and practice (α=0.78). Using Bloom's cut-off scores, cumulative scores on the domain were trichotomised to make “Good” (>=80%), “Moderate” (60%-79%) and “Poor” (<60%) scores. Descriptive statistics were used to describe the participants' profile and the Fisher exact test ($p<0.05$) was used to test association between the demographic characteristics and the KAP level when the cell sizes were small. Results In this study, 320 occupational therapists (OTs) (179, 55.9% ≤30 years, 215, 67.2% female, 285, 89.1% highest qualification: Bachelor's degree) were considered to be in the early to mid-career stage. Professional experience spanned less than 1 year (16.3%), 1–3 years (25.6%), 4–6 years (20.9%), 7–10 years (23.4%), and over 10 years (13.8%). Geographical centralization of practice was very noticeable, with 78.1% (n=250) of practices located in urban area, 14.4% (n=46) in semi-urban and 7.5% (n=24) in rural areas. The percentages for high competency in the knowledge, attitudes and clinical practice domains were 96.9% (n=310), 97.2% (n=311) and 98.1% (n=314) respectively.

Table 1: Demographic and Professional Characteristics of Participants

Variable	Category	Frequency (n)	Percentage (%)
Age	≤ 30 years	179	55.9
	> 30 years	141	44.1
Gender	Male	105	32.8
	Female	215	67.2
Education	Graduation	285	89.1
	Post-graduation	35	10.9
Years of Experience	< 1 year	52	16.3
	1–3 years	82	25.6
	4–6 years	67	20.9
	7–10 years	75	23.4
	> 10 years	44	13.8
Practice Region	Urban	250	78.1
	Semi-Urban	46	14.4
	Rural	24	7.5

Mean Age: 31 ± 5.01 years (Range: 23–51 years)

In particular, 94.7% had a correct answer regarding the functional independence as the main focus of OT, 87.8% strongly agreed that OT is very important in the field of health care, and 71.6% always used standardized assessments. However, a major public awareness gap did become apparent with 38.8% (n=124) saying that Bangladeshi clients are neutral in terms of understanding the value of OT services.

Table 2: Overall KAP Levels and Associations with Demographic Factors

A. Overall KAP Status

Domain	Good n (%)	Poor n (%)
Knowledge	310 (96.9%)	9 (2.8%)
Attitude	311 (97.2%)	9 (2.8%)
Practice	314 (98.1%)	6 (1.9%)

The bivariate analysis was used to identify the critical professional and environmental determinants of such KAP competencies, with Fisher's exact test. Better baseline knowledge profiles were also significantly associated with both the parameters of “younger age” (≤30 years) and “early/mid-career” (1–10 years) ($p<0.001$), which may indicate a possible knowledge attrition trend among the senior clinicians who had served for more than 10 years.

B. Significant Associations (Fisher's Exact Test)

Association	Test Value	p-value	Key Finding
Age × Knowledge	30.987	< **0.001**	Younger therapists (≤30 yrs) had significantly better knowledge
Experience × Knowledge	30.489	< **0.001**	1–10 years' experience group showed best knowledge; >10 yrs showed decline
Region × Practice	17.796	**0.001**	Urban practitioners had significantly better practice than rural/semi-urban
Education × Attitude	16.086	**0.001**	Postgraduates showed more positive attitudes than graduates
Experience × Attitude	36.672	**0.001**	1–10 years' experience group had strongest positive attitudes

C. Performance Level Distribution

Performance Level	n	%
Excellent	6	1.9
Very Good	254	79.4
Good	56	17.5
Poor	4	1.3

Further, there were significant differences in compliance in clinical practice between geographic regions (p=0.001): urban practitioners (99.6% good practice), semi-urban (93.5%) and rural (91.7%), suggesting a difference in infrastructural support or distribution of resources. Finally, both educational level (postgraduates had a higher positive agreement) (p=0.001) and professional length of service (mid-career cohort had a higher positive agreement with regard to their commitment to CPD and lifelong learning) (p=0.001) were significant.

Discussion

With this study, KAP profile of the occupational therapists (OTs) in Bangladesh has been comprehensively assessed at a national level, which showed that the overall competency was very high - 96.9% good knowledge, 97.2% positive attitude and 98.1% of strong clinical practice. Demographically, the population of working age is young and predominantly female (67.2% female, 55.9% under 31), following international trends, as the number of entry level educational programs increased in recent years [10,14,15]. There is, however, a high geographic centralisation with 78.1% of OTs working in urban areas, and 7.5% in rural areas. The implications of this maldistribution are the health system inequities in Bangladesh and the significant unmet rehabilitation demand of the rural populations particularly children with developmental and/or neurological issues who can benefit from early OT [13,16]. Two-way analysis identified some of the key professional and environmental factors that control these findings. The younger age (≤30 years) and early to mid-career experience parameters (1–10 years) were the ones that were significantly associated with superior baseline knowledge profiles ($p<0.001$), suggesting a possible knowledge attrition trend among senior clinicians who are not exposed to up-to-date curricula or current digital evidence frameworks [8,11,17]. Furthermore, there was a significant difference between the level of clinical compliance self-

reported, and the professional recognition, as only 28.8% strongly agreed that clients are aware of the value of OT services, necessitating the need for public led awareness of services to improve access to services and interprofessional collaboration [4,18]. Quality of clinical practice was also found to vary significantly in terms of geographical location: with a clear urban preference, due to infrastructural supporting facilities, multidisciplinary relationships and continuous training materials [16,19] ($p=0.001$). To address these challenges and limitations of self-reported cross-sectional data, it is essential in Bangladesh to create an obligatory national continuing professional development (CPD) system, promote clinical practice in the rural areas and start specific advocacy campaigns to improve the professional visibility across the country [7,20] Overall, the findings indicate that occupational therapists in Bangladesh are very motivated, and appear to have a good match with the essential values of OT. The challenge in the center is to make sure that knowledge and attitudes are put into practice that is measurable, equitable and continually updated. There is an increasing push towards consolidation of the development of the profession, with a formal national continuing professional development framework, improved research training, greater opportunities for postgraduation, improved access to standardised tools and more focused support of rural therapists, and this will further improve the contribution of occupational therapy to rehabilitation in Bangladesh. Convenience sampling, cross sectional design, self-reported data and under representation of rural practitioners may contribute to problems of generalizability, social desirability bias and selection bias.

Conclusion

The results of this study indicate that Bangladeshi occupational therapists have good basic knowledge, highly positive attitudes and good clinical practice which is favourable for the future development of the OT profession. Nevertheless, there are great hurdles that remain including the disparity in practices between urban and rural, the lack of knowledge of senior therapists, inadequate post graduate training, public awareness and interest in telehealth. It is strongly recommended that there be mandatory frameworks of Continuing Professional Development, more postgraduate education, incentives for practicing in rural areas with tele-supervision, the creation of infrastructure for telehealth and specific public campaigns to promote telehealth. A smart investment in these areas will facilitate the realization of OT's potential as a key component of the health-care, rehabilitation and disability-inclusion system in Bangladesh.

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Author Contributions

Sharmin Sultana — GROUP 1: Conception of the work, Acquisition and Analysis of data; GROUP 2: Revising the work critically for important intellectual content; GROUP 3: Final approval of the version to be published; GROUP 4: 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.

Md. Safayeter Rahman — GROUP 1: Design of the work, Analysis and Interpretation of data; GROUP 2: Revising the work critically for important intellectual content; GROUP 3: Final approval of the version to be published; GROUP 4: Agree to be accountable for all aspects of the work.

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