
An assessment of knowledge on the public procurement process among health sector officials in Matale district, Sri Lanka

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Abstract

Introduction: Health sector utilizes a significant portion of public funds to acquire infrastructure, drugs, consumables, and services. Therefore, to achieve the best value for money the officials should possess a thorough knowledge of procurement procedures.

Objective: To assess the knowledge on the public procurement process among the officials involved in procurement activities in the health sector of Matale district.

Methodology: A descriptive cross-sectional study was conducted in the office of the Regional Directorate of Health Services, the District General Hospital Matale, and the Base Hospital Dambulla in Matale district during the year 2021. All officials involved in public procurement were included. A self-administered structured questionnaire consisting of 50 knowledge-assessing questions in eight domains was consensually validated through a modified Delphi technique and utilized after pretesting.

Results: Out of 29 officials, 22 (75.9%) responded. The majority (41%) were technical evaluation committee members. The overall knowledge score was 66 percent (95% CI 62.6-69.5; Range 48%-83%). It was an "above-average" level. The highest score was obtained for the knowledge domain of evaluating bids (Mean=82%). The lowest score was obtained for procurement objectives

and ethics (Mean=45%). Officials at Dambulla Hospital (Mean=70.2%) and males (Mean=70.3%) scored high scores. Opinions on knowledge-sharing culture ($F=5.053$, $p=0.017$) and experience-sharing culture ($F=4.146$, $p=0.032$) were statistically associated with knowledge scores at a 95% confidence level.

Conclusion and Recommendation: Knowledge among the officials on the procurement process was above average. Factors related to less knowledge among females and less knowledge on procurement objectives and ethics should be investigated and corrected. The involvement of top management to strengthen knowledge and experience-sharing culture is recommended as those domains are significantly associated with the acquisition of knowledge in the procurement process.

Key Words: Knowledge of Public Procurement, Public Procurement Process, Health Sector Procurement

Introduction

Public procurement is simply defined as a process of acquisition of goods, works, and services by public institutes to strengthen infrastructure and human capital to lay foundations for national development¹. From an economic point of view, public procurement is a factor that considerably affects Gross Domestic Product (GDP)². The Sri Lankan government's capital expenditure in 2019 was around 4.1 percent of GDP and,

as a value, was around Rs.614.1 billion. The usage of budgetary allocations for capital expenditure was 83.5 percent; the rest were unutilized due to procurement process delays³. It shows that improper procurement management can hinder the country's economic development.

The absence of adequate knowledge in the procurement process can cause grave consequences including breaches of ethics and rules of law⁴. A procurement assessment report published by the World Bank⁵ highlights that most procurement activities are carried out by general engineering and accounts cadres, and they often do not have proper training in the field of procurement. It was found that the integration of sustainability concepts in the process of goods procurement was unsatisfactory in the office of the Provincial Director of Health Services in the Central Province⁶. It is observed that most academics have failed to identify public procurement as an important area for research and education⁷. Therefore, it is a timely requirement to carry out a study to assess whether the public officials of the health sector have adequate knowledge of the procurement process.

Objective

To assess the knowledge on the public procurement process among officials involved in procurement activities in the public health sector of the Matale district.

Methodology

A descriptive cross-sectional study was conducted in the office of the Regional

Directorate of Health Services (RDHS) Matale, District General Hospital (DGH) Matale, and Base Hospital (BH) Dambulla from 1st September to 31st of January 2022. Officials involved in the public procurement of the above institutes were recruited for the study. Officials appointed after 1st January 2021; officials who worked for less than 3 months before 1st January 2021, and clinical specialists were excluded. Since the number of officials involved in procurement activities was less than the calculated sample size (384)⁸, the total study population was included in the study.

A self-administered, structured questionnaire consisting of three parts was developed. Part A collected socio-demographic data and information related to individual factors affecting the knowledge, Part B collected perceived institutional factors affecting the knowledge, and Part C assessed the knowledge. Relevant literature^{1,9-12} was identified and referred by the investigators with the consultation of a panel of three medical administrators having postgraduate qualifications in public procurement, to prepare the questionnaire. The questionnaire was consensually validated through a modified Delphi technique by inviting 15 experts in public procurement having five years of experience in the field. Pre-testing of the questionnaire was done at BH Theldeniya in the Kandy district and changes were made accordingly. Ethical clearance was obtained from the Ethics Committee of the National Hospital, Sri Lanka. Administrative clearance was obtained from the Provincial

Director of Health Services, Central Province.

It was assured that sharing physical objects or conducting physical interviews did not happen due to the COVID-19 pandemic. The anonymous data collection was done by administering the questionnaire through Google forms, and explanations about the study were done over the phone.

After cleaning the data, descriptive analysis was performed initially, and then inferential analysis to determine the knowledge level among different categories and factors affecting knowledge. The statistical analysis was carried out by consulting a statistician.

Results

The response rate in the 1st round of the modified Delphi technique was 66.67 percent (n=10) and 60 percent (n=9) in the 2nd round. Based on the expert opinion, 50 items were selected for Part C of the questionnaire. Knowledge of procurement was measured in eight dimensions (Table 01).

The total response rate was 75.9 percent (n=22, N=29). Of them, 54.5% percent, (n=12) were from DGH Matale; 27.3 percent (n=6) were from RDHS Office Matale, and the rest 18.2 percent (n=4) were from BH Dambulla. There were 12 (55%) females and 9 (41%) males, and one respondent selected the response “prefer not to mention the gender”. The mean age of the participants was 44.77 years. Most participants were technical evaluation committee members (n=9, 41%). There were 36 percent (n=8) procurement planners, 27 percent (n=6) bid opening committee members, 14 percent

(n=3) procurement assistants, and 9 percent (n=2) procurement committee members. It was found that three respondents were procurement committee members for the appointed institute and technical evaluation committee members for some other institutes.

The majority (31.8%, n=7) had obtained a postgraduate degree. Of the rest of the respondents, 22.7 percent (n=5) had passed GCE Advanced Levels, 13.6 percent (n=3) had a Diploma, 27.3 percent had a degree, and one (4.5%) had a doctorate level qualification. Only two respondents (9%) had academic qualifications in public procurement. One had a Diploma in public procurement and contract administration, and another respondent had a certificate course in public procurement. About 54.5 percent (n=12) of the respondents had not participated in any in-service training programs. The mean years of experience in public procurement were 4.59 (95% CI, 3.24-5.94), and the mean years of experience in the public sector were 17.59 (95% CI, 14.16-21.02).

The level of knowledge of the public procurement process

Descriptive statistics of the scores on eight knowledge dimensions are shown in Table 1.

The overall knowledge score was 66 percent. (95% CI, 62.6%-69.5%). Kruskal-Wallis H test which was used to assess the difference among institutions as the sample size was less than 30 and the distribution was skewed,

Table 1: Descriptive Statistics of the scores in eight knowledge dimensions

Dimensions	Statistics		BH Dambulla	DGH Matale	RDHS Office Matale	Comparison across institutions	
	Mean Knowledge score % of the sample	Standard Deviation	Mean Knowledge score %	Mean Knowledge score %	Mean Knowledge score %	Kruskal- Wallis H	Sig. df=2
1. Procurement Objectives and Ethics	45	0.180	42	47	42	1.130	0.568
2. Duties and responsibilities of procurement entities and procurement committees	50	0.170	54	49	50	0.221	0.895
3. Procurement methods	63	0.180	70	55	73	5.043	0.080
4. Procurement planning	70	0.150	69	65	83	6.169	0.046
5. Preparation of bidding documents	72	0.110	79	70	71	1.740	0.419
6. Inviting bids, closing, and opening of bids	68	0.180	83	63	70	6.030	0.049
7. Evaluation of bids	82	0.170	79	81	86	0.968	0.616
8. Awarding of contracts and contract administration	78	0.170	86	74	80	1.585	0.453

indicated that two dimensions of knowledge, namely, the “Procurement planning” and “Inviting bids, closing and opening of bids” were different and the difference was statistically significant at a 95% confidence level, as the corresponding probability value is less than 0.05. On both occasions, DGH Matale scored the lowest values.

Comparison of the level of knowledge among different categories of officials

The knowledge was high among males (mean=70.3%) compared to females (mean=62.9%) but there was no statistically significant difference ($F=3.37$, $p=0.08$). The officials overseeing procurement had the highest knowledge (76%) followed by procurement committee members (68%). The lowest knowledge (61.8%) was found among assistants in the preparation of bid documents.

Determining the factors affecting the level of knowledge

Data on individual factors such as age, level of education, gender, academic qualifications, extra time available to acquire knowledge, perceived importance of acquiring knowledge, personal satisfaction in participating in procurement, IT skills, years of experience in procurement, years of service experience in the public sector, number of in-service training programs attended, level of personal interest on the subject, and the workload in the workplace were analyzed performing ANOVA, independent T-test, and Spearman correlation to examine any association to knowledge scores. None of the factors were significantly related to knowledge scores. Data related to respondents' views on organizational factors that can affect gaining knowledge on procurement such as top management

support, assistance received from the immediate supervisors, opportunities available to learn procurement procedures, availability of an official who has mastered procurement, the extent to which the organization has the management procedures and tools that help to learn, access to procurement guideline, job rotation, the extent of supportive knowledge-sharing culture and extent of supportive experience-sharing culture of the organization was analyzed performing same statistical tests to examine any association to knowledge scores.

The knowledge scores were significantly associated with respondents' opinions on supportive knowledge-sharing culture ($F=5.053$, $p=0.017$) and supportive experience-sharing culture ($F=4.146$, $p=0.032$). Conferring to the respondents' opinion on supportive organization culture on knowledge sharing, it was highest in BH Dambulla and was lowest in DGH Matale. Respondents' opinion on supportive organization culture related to experience sharing was highest in BH Dambulla and lowest in RDHS Matale. Other organizational factors that can influence gaining knowledge were not statistically related to knowledge scores.

Discussion

The response rate was 75.9 percent, and it is compatible with studies conducted in similar settings⁶. The overall knowledge score of the sample was 66 percent (95% CI 0.626-0.695) and it can be categorized as “above average”.

It is a good level of knowledge with some inaccuracies according to a modified 7-point knowledge assessment scale¹³.

The mean knowledge scores of procurement objectives and ethics, and duties and responsibilities of procurement entities and procurement committees, were noticeably below the average levels, 45% and 50% respectively. Therefore, it needs administrative attention. Officials involved in technical evaluation and procurement planning represented a majority of the sample ($n=17$, 77.3%) Therefore, the results reflect the knowledge level and their opinion. Although half of the sample had some IT education, the lack of computer literacy might cause some of them not to respond.

The study sample consisted of experienced public officials (mean years of experience=17.59) which could have been reflected in the obtained knowledge scores, but a majority (54.5%) have had no in-service training. This is alarming for the administrators to seek remedies to inculcate organizational learning.

Officials at DGH Matale represented the largest portion of the sample (54.5%) and scored the lowest average knowledge score (62.9%) but were not statistically different from other institutions. This may be due to the fact that other organizations had a lesser number of officials to get involved in procurement. Therefore, the individual knowledge of some officials may have affected the average figures. Although it was

not statistically significant, male gender can be a factor influencing knowledge level (mean knowledge score among males=70.3%, mean score among females 62.9%). Knowledge-sharing culture and experience-sharing culture are statistically significant factors affecting knowledge acquisition in public procurement, indicating that organizational culture along with training plays a key role in knowledge acquisition.

Conclusion

The officials involved in procurement activities in the public health sector of Matale district had a good level of knowledge on the process but with some inaccuracies. Further, the average knowledge on procurement objectives and ethics was below average level. Most of the participants in the study had no training in public procurement. Acquisition of knowledge on the procurement process was significantly associated with the organizational culture and climates of knowledge-sharing and experience-sharing.

Recommendations

On-the-job training for officers involved in public procurement paying due attention to low-performed knowledge dimensions as shown in Table 01 is recommended. It is pertinent that female officials working in Health institutes of Matale District participate in those programs. Healthcare administrators should lead the way to improve knowledge-sharing and experience-sharing culture to uplift the knowledge levels

among the respective officials.

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