

**A STUDY ON THE PURCHASING POWER OF PERIODICALS BY THE MEDICAL LIBRARY, UNIVERSITY OF JAFFNA DURING THE PERIOD FROM YEAR 2000-2012**

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**Abstract**

Medical periodical is of prime importance in the field of medical sciences. Increasing price of medical periodicals creates challenges to medical librarians in Sri Lanka. This paper examines the price increases that have occurred during the last twelve years from year 2000 for the journals subscribed by the University of Jaffna, medical library. This information was compared with general inflation rate experienced in Sri Lanka as reflected by the Consumer Price Index (CPI). It is apparent from these data that despite the current low general rate of inflation, the buying power of the medical library continued to dwindle. The study will allow the librarians to understand better, what is happening to a library's real buying power. E journal consortia, regular periodical user survey, subscribing document delivery services and finding external funding sources are the suggestions to improve the availability of medical periodicals. Further, each institution can develop their own institutional repository and educate the authors about open access publishing.

**Key Words:** Medical periodical, University of Jaffna, E journal consortia

**Introduction**

Medical education and training have increased in complexity and are followed by specialization and possibly also research. Medical information is continuously updated and with such rapidity that the acquired information becomes obsolete very quickly. Medical periodicals become the principal conduits through which this newly acquired knowledge is

effectively disseminated to every corner of the medical world. Current information is something without which medical professionals cannot perform their work effectively.

The financial crisis faced by the libraries and the proliferation of research communication have made the periodical collection development a challenging task for the modern day libraries. Medical libraries in Sri Lanka spend a large amount of library budget in acquiring periodicals. Among the many problems encountered by medical librarians in Sri Lanka, one of the most acute is that the provision of foreign periodical titles. The vast majority of the periodicals that medical professionals require are of foreign origin. The reliance of the overseas publication makes a significant impact of the purchasing power of periodicals in a library. In order to efficiently manage, it is necessary that the medical librarians must have a thorough knowledge about the price changes of medical periodicals.

### **Literature Review**

There is no doubt that most periodicals are important for research and teaching and the libraries must either acquire or provide access to them if they wish to support research activities in the Universities. But with the increase in journal subscription prices, most academic libraries tend to spend a major portion of their allocation on journal subscription. Over emphasis on journal subscriptions may hamper the development of under graduate collection which is mainly of textbooks (Jayasuriya, 2000). With regard to the declining trend in periodical subscription by the University of Colombo, medical library, where the number of journals had decreased from 301 in 1969, 141 in 1979, 125 in 1982 and 120 in 1987 (Amarakoon, 1985). In a study on the analysis of fluctuations of the American dollar and Sterling pound against the Sri Lankan rupee during the period of 1989 – 1993 to see the escalation of prices of medical periodicals. It was indicated that prices of periodicals were increasing in rupees at a higher rate than in American dollar and Sterling pounds. The average percentage of the annual price increase of the selected periodicals in Sri Lankan rupees ranged from 11% - 38%. The study revealed that 1989-1993 budget allocation of Ruhuna medical library, while the money spent on periodicals has increased from Rs 440,000 to 8000,000 the number of titles subscribed during the study period came down from 88 to 64 (Sirisena, 1995).

A study conducted by Kronefeld and Gable to examine the increases in prices during the 20 years (1967 – 1987) for the journals listed in the Brandon /Hill list. Price information was taken from 1967. The



information was compared to the general inflation rate experienced in the United States as reflected by the Consumer Price Index(CPI). It was readily apparent from the study that despite the current low general rate of inflation, the buying power of libraries continued to dwindle. The buying power of the dollar as compared to 1975 dollar was 64% in 1983 and 59% in 1987. It was found that even during inflationary times increases in the cost of journal subscriptions far outstripped increases in the general cost of living. The study revealed a steady increasing trend over a twenty years period 1963- 1983 (Kronenfeld and Gable (1989). Price increases that occurred during the twenty six years from 1967 -1995 for the journals listed in the 1995 Brandon/Hill list. The study revealed a library with a journal acquisition budget that increased from 1967 to 1995 at the same rate, as did the CPI would be able to purchase in 1995 only 37% of the journals it purchased in 1967. USA medical library which realized acquisition budget increases equal to the rate of inflation during the twenty eight years study period had been fortunate, but still incurred dramatic erosion in its purchasing power. Further the general inflationary pressures could not explain the continued rapid increases in periodical prices (Kronenfeld,1996).The American Library Association's US periodical prices , 2002 shows increase of 53.20% from 1996 to 1999 and 29.30% from 1999 to 2002 for journals in medicine ( Van & Born, 2003).

### **Objectives of the Study**

1. To study the price changes of medical periodicals subscribed in a medical library during the period from year 2000 to 2012.
2. To analyze the impact on purchasing power of periodicals by the medical library due to the price increases of medical periodicals during the study period.
3. To find the ways and means to improve the availability of medical periodicals.

### **Research Methodology**

The method of study was mainly a documentary research. All subscribed periodicals by the Medical library, University of Jaffna from year 2000 to 2012 were considered for the study. The medical library subscribed only printed periodicals till 2012. The titles continually subscribed throughout the study period were selected; remaining titles were dropped. It ended up a sample of 12 printed periodical titles as a selected sample for the study. Country of publication of each periodical was taken from Ulrich's International periodical directory, 1996. Cost information was taken from the proforma invoices received by the library. The Consumer Price Index(CPI) was used as a base line for comparison of periodical prices

because it is the most widely recognized measure of the general rate of inflation of a country. Colombo CPI of required years were collected from Central Bank of Sri Lanka annual report. Data on currency exchange rates were also obtained from Central Bank of Sri Lanka annual report. The study was formulated to analyze the price changes in every two years period considering year 2000 base year. Collected data were analyzed to get more meaningful information by using the mathematical calculations done by Kronenfeld (1996).

## Results and Discussion

### Fund allocation and the expenditures of medical library from 2000-2012.

Table 1 clearly shows the medical library receives about 25% of the total allocation of the University library allocation. As an average the medical library spent about 85% of its total allocation for purchasing periodicals during the study period. It further shows that the money spent on periodicals has increased from 2.6 million rupees to 4 million rupees, but the number of titles subscribed has come down from 38 to 19. Similarly all medical libraries in Sri Lanka face the same difficulties in subscribing periodicals.

**Table 1: Fund allocation and the expenditures of medical library from 2000-2012 in Sri Lankan rupees.**

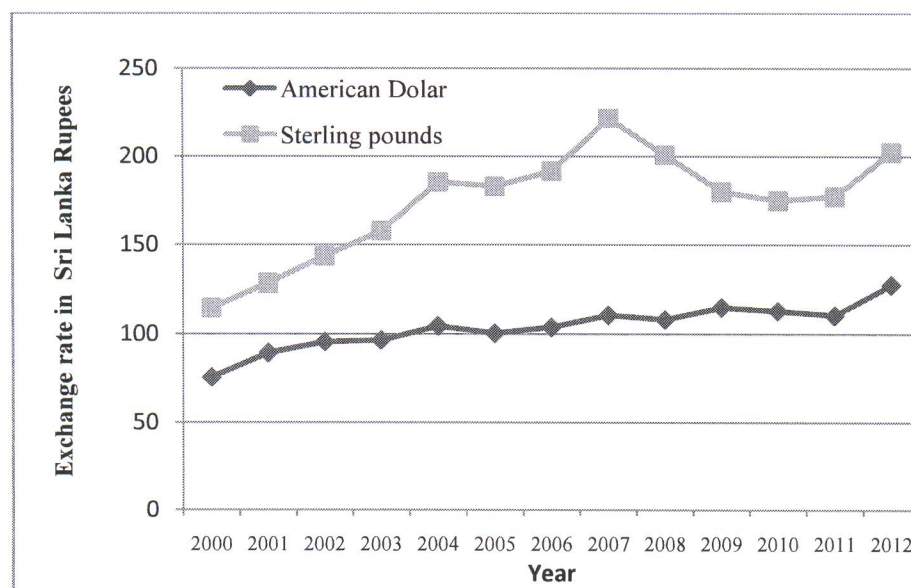
Year	Total allocation for library(M)	Medical library (M)	Medical library		% of Periodicals expenditures	No of periodical titles
			Periodicals (M)	Books (M)		
2000	9	2.80	2.60	0.20	92.8	38
2002	13	3.25	3.00	0.25	92.3	30
2004	15	3.75	3.25	0.50	86.6	18
2006	15	3.70	3.20	0.50	86.5	17
2008	18.60	4.60	3.95	0.65	85.8	21
2010	15	3.70	3.10	0.60	83.7	18
2012	16.8	4	3.4	0.60	85	19

### Change in currency exchange rate of USA and United Kingdom against Sri Lankan rupees.

The list of periodicals subscribed in year 2012 was considered to see the country of publication of periodicals. It shows that (7 titles) 37% of the



titles were from UK publications whereas (11 titles) 58% from USA periodicals. Only one title was from Sri Lanka which is Ceylon medical journal. It clearly shows the overdependence on medical periodicals of foreign origin especially in developed countries. As ninety five percent (95%) of the periodicals were subscribed from USA and UK, the fluctuation in the currency exchange rate of rupees against USA and UK significantly influence the purchasing power of medical periodicals of the library.



**Figure 1: Currency exchange rate of USA and United Kingdom against Sri Lankan rupees.**

Since a major portion of the periodicals were subscribed from UK and USA, it is important to study the change in exchange rate of these two major currencies, which are American dollar and Sterling pound.

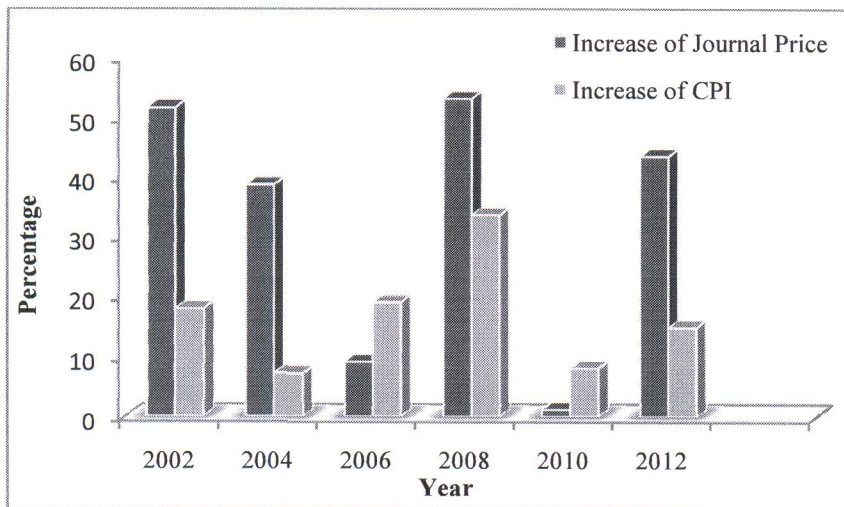
Figure 1 shows the fluctuation of these two currencies. It shows the changes in currency value of American Dollar and Sterling pound during the study period. American dollar shows an increase over the study period except in year 2005 and year 2011. But Sterling pound shows fluctuations during the period under consideration. Due to falling of these two currency values since 2007 to 2011 in the international market, there was decrease over the Sri Lankan rupees from 2007 to 2011. Again, it had been started to increase in year 2011. In year 2007 currency value of both countries increased. These figures clearly indicate that even when the periodical prices are stable we are compelled to pay more money due to devaluation of Sri Lankan rupees.

**Analysis of inflationary trend in medical periodical prices from year 2000 to 2012.**

**Table 2: Data and calculations from journal prices and consumer price index.**

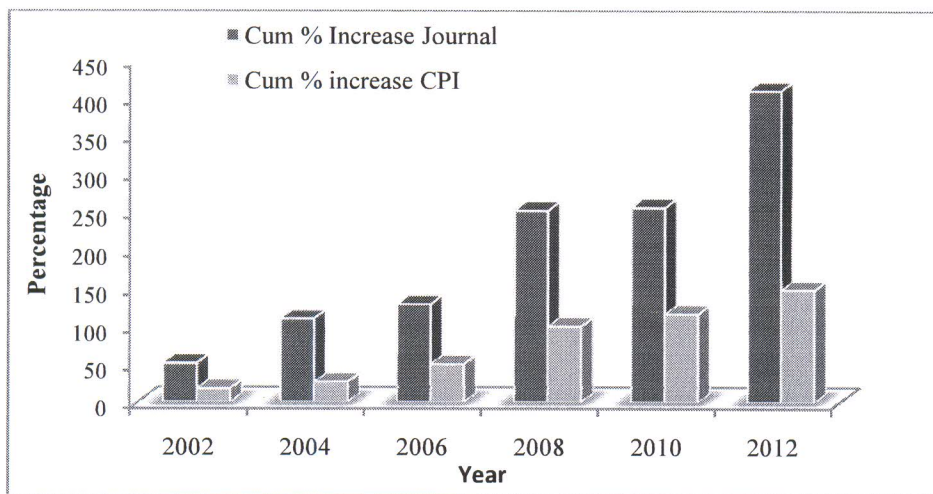
	2000	2002	2004	2006	2008	2010	2012
1 Average journal price in rupees.	48,900	74,162	102,902	112,288	1,711,978	173,997	249,619
2 Percentage increase of journal price increase	-	51.66	38.75	9.12	53.16	1.17	43.46
3 Journal Cumulative% price increase since 2000	-	51.66	110.44	129.63	251.7	255.83	410.47
4 CPI	117.5	138.5	148.5	176.6	235.7	254.9	292.6
5 Percentage increase of CPI increases	-	17.9	7.2	18.9	33.5	8.1	14.8
6 CPI Cumulative % increase since 2000	-	17.9	26.4	50.3	100.6	116.9	149.0
7 Cumulative % buying power Journal		65.94	47.52	43.55	28.43	28.10	19.59
8 Cumulative % of buying power CPI	-	84.84	79.12	66.53	49.85	46.10	40.16
9 Cumulative % buying power ratio (Journal/CPI)	-	0.78	0.60	0.65	0.57	0.61	0.49

Table 2 displays the data used to calculate the pricing trend. The total cost and average cost of selected twelve medical periodicals for each two year period covered from 2000-2012 and the CPI for the same years. CPI is used as an economic indicator to measure the changes in the purchasing power of the money.



**Figure 2: Percentage increase in journal price and CPI**

Figure 2 gives the percentage increase in periodical prices and CPI across each two year period from 2000-2012. Significant here is that the percentage increase of periodical prices reduced in year 2006 and year 2010 while percentage increase in CPI dropped in 2004 and 2010. These changes show that the inflationary trend in the country as a whole does not match with the rate of increase in the prices of periodicals during study period. The changes in the periodical prices are mainly due to the changes in the currency exchange rate of USA and UK. Though some of the periodical prices were decreased in some years, as an average changes in periodical prices were continuously increasing in trend.

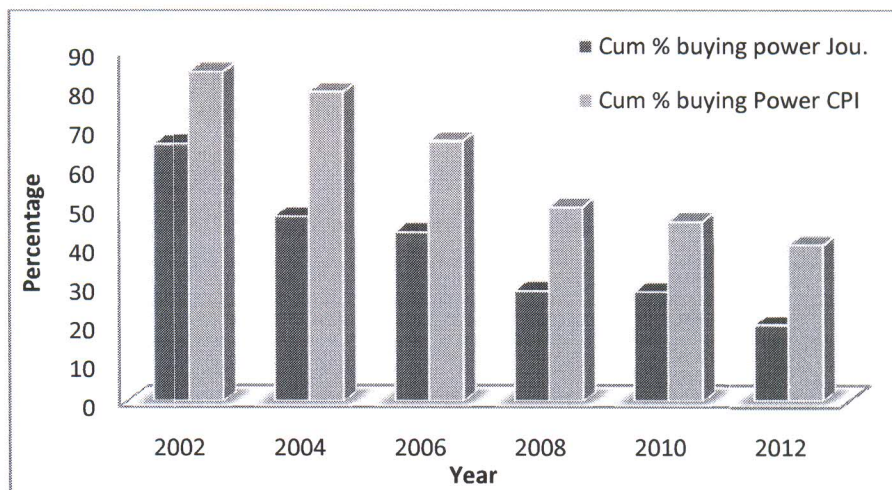


**Figure 3: Cumulative price increase at two years intervals and the CPI (2002 - 2012)**

Figure 3 gives the idea to differentiate the increasing trend in periodical prices and CPI. It clearly shows that the increasing trend in periodical prices is higher than the increase in CPI. It reveals that even if the library

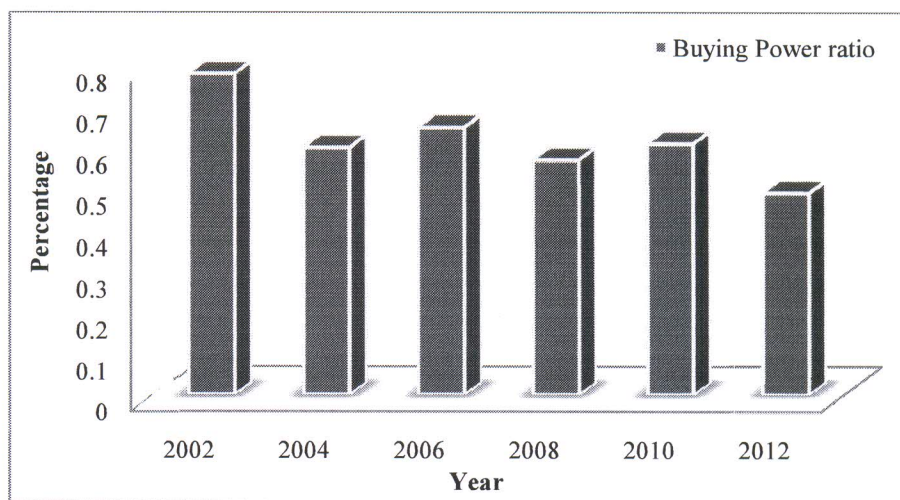


gets the fund allocation based on the change in the CPI of our country, libraries will not be able to manage to subscribe the periodicals.



**Figure 4: Cumulative decline in the buying power of a library.**

Figure 4 gives the cumulative decline in the buying power of the library from year 2000 to 2012. Year 2000 was considered as a base year. There was a drastic decline in the cumulative buying power of periodicals by 65.94% to 19.59% while the CPI decreased by 84.84% to 40.16%. The figure 4 clearly reveals that the value of money spent on subscription of periodicals deteriorated relatively that of money spent in the general economy.

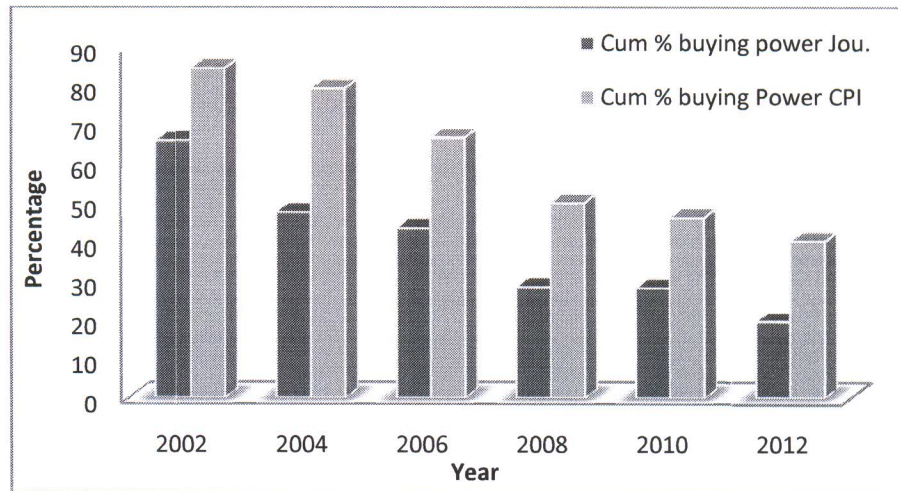


**Figure 6: Difference between the CPI and journal prices**

Figure 6 reveals that the buying power had deteriorated 78% of the value of Sri Lankan rupees in 2002, then 49% in year 2012. The medical library with a periodical subscription budget that increased from 2000 to 2012 at the same rate as did the CPI would be able to purchase in year 2012 only

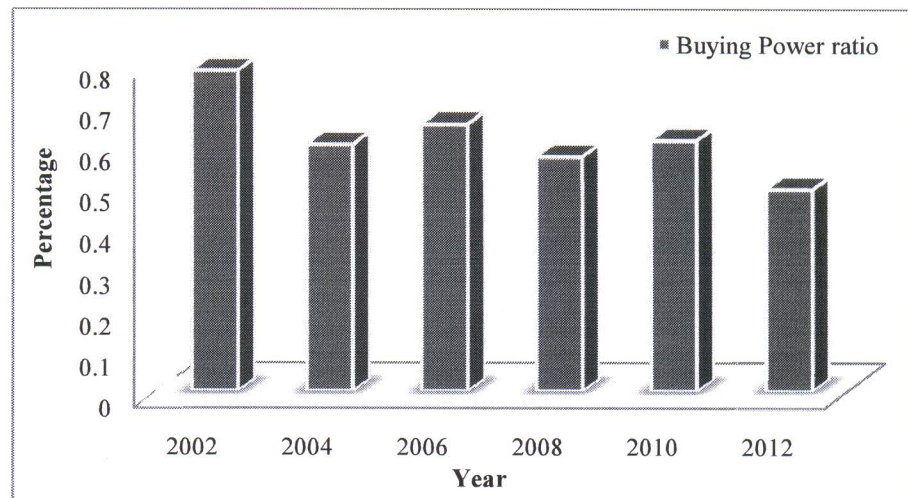


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49% of the periodicals purchased in year 2000. It had incurred dramatic erosion in its purchasing power.

### **Conclusion and Suggestions**

The total number of periodical subscription dwindled by 50% from year 2000 to year 2012. The number of periodicals subscribed has decreased while the amount of money spent on periodical subscription has increased over the years. This is mainly due to the increase in periodical prices and devaluation of Sri Lankan rupees against American dollar and UK Sterling pound. Periodical prices have continued to increase at a much higher rate than the general rate of inflation. The studied library's buying power had deteriorated from 78% to 49% during the period from year 2000- 2012. An important point which emerges from the study is that if the budget increases equal to the CPI changes in Sri Lanka also has still suffered dramatic erosion of its purchasing power. This information can be used by the medical librarians when justifying request for budget increases.

As periodical prices continue to raise cooperative resource sharing is fast becoming the primary tool. It should be subscribed on a consortia basis with other libraries. Regular periodical user survey is essential to confirm the usage of the subscribed periodicals. Subscribing document delivery services and finding external funding sources will be suggestions to improve the availability of periodicals to the medical libraries. Further, each institution can develop their own institutional repository and educate the authors about open access publishing in order to eliminate the barriers in accessing periodical articles.

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