

Jayasinghe, Yovanthi Anurangi et al.

## Article

# Challenges faced in dental care delivery amid financial crisis in Sri Lanka: An evidence-based analysis from the perspective of health professionals

Businesses

## Provided in Cooperation with:

MDPI – Multidisciplinary Digital Publishing Institute, Basel

**Suggested Citation:** Jayasinghe, Yovanthi Anurangi et al. (2023) : Challenges faced in dental care delivery amid financial crisis in Sri Lanka: An evidence-based analysis from the perspective of health professionals, *Businesses*, ISSN 2673-7116, MDPI, Basel, Vol. 3, Iss. 4, pp. 524-533, <https://doi.org/10.3390/businesses3040032>

This Version is available at:

<https://hdl.handle.net/10419/338730>

## Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

## Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

*Perspective*

# Challenges Faced in Dental Care Delivery Amid Financial Crisis in Sri Lanka: An Evidence-Based Analysis from the Perspective of Health Professionals

Yovanthi Anurangi Jayasinghe <sup>1</sup>, Shalindu Malshan Jayawickrama <sup>1</sup>, Sakuntha Ratnapreya <sup>2</sup>, Rasika Manori Jayasinghe <sup>3</sup>, Dileep De Silva <sup>2</sup> and Ruwan Duminda Jayasinghe <sup>4,\*</sup>

<sup>1</sup> Center for Research in Oral Cancer, Faculty of Dental Sciences, University of Peradeniya, Peradeniya 20400, Sri Lanka

<sup>2</sup> Department of Community Dental Health, Faculty of Dental Sciences, University of Peradeniya, Peradeniya 20400, Sri Lanka

<sup>3</sup> Department of Prosthetic Dentistry, Faculty of Dental Sciences, University of Peradeniya, Peradeniya 20400, Sri Lanka

<sup>4</sup> Department of Oral Medicine and Periodontology, Faculty of Dental Sciences, University of Peradeniya, Peradeniya 20400, Sri Lanka

\* Correspondence: ruwanja@dental.pdn.ac.lk



**Citation:** Jayasinghe, Y.A.; Jayawickrama, S.M.; Ratnapreya, S.; Jayasinghe, R.M.; De Silva, D.; Jayasinghe, R.D. Challenges Faced in Dental Care Delivery Amid Financial Crisis in Sri Lanka: An Evidence-Based Analysis from the Perspective of Health Professionals. *Businesses* **2023**, *3*, 524–533. <https://doi.org/10.3390/businesses3040032>

Academic Editor: Jungho Baek

Received: 15 July 2023

Revised: 15 September 2023

Accepted: 21 September 2023

Published: 22 September 2023

**Correction Statement:** This article has been republished with a minor change. The change does not affect the scientific content of the article and further details are available within the backmatter of the website version of this article.



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

**Abstract:** Over the years, Sri Lanka achieved excellent scores in health indicators relative to the national expenditure on health. However, due to several challenging situations such as the 2019 Easter bombings, COVID-19 pandemic and economic crisis, there was a depletion of the GDP as well as rising inflation. This created a humanitarian crisis for all socioeconomic groups. Among them, the health sector was widely affected, including healthcare providers and healthcare recipients. The objective of this study was to elaborate on the challenges faced in dental care delivery by private general dental practitioners and the impact on dental education for undergraduate and postgraduate dental students during the economic crisis. A descriptive cross-sectional survey-based questionnaire ( $n = 28$ ) was conducted and assessed among the dental surgeons of various districts in Sri Lanka. An interviewer-based questionnaire was carried out via telephone conversation by the principal investigator of dental surgeons for those who managed and owned the respective dental clinic. Data from the computed questionnaires were analyzed using the SPSS Statistical Software Package (SPSS, Version 21). Descriptive statistics were expressed as frequency distributions and percentages. Based on the results, a significant decrease was observed in the number of patients requesting restorative dental procedures including implant crowns (36.29%), implant over dentures (35.63%), crowns (39.03%), bridges (49.12%), amalgam restorations (47.38%), composite restorations (42.11%) and dentures (49.69%). In surgical dental treatment, the extractions and surgical removal of teeth were reduced by 2.11% and 43.71%, respectively. The availability of dental materials such as light cure composite (LCC) bonding, silver amalgam, impression materials and surgical consumables was reduced in the post-economic crisis situation compared to the pre-economic crisis status. Furthermore, dental laboratory charges per item, fees per procedure, salaries to support staff, utility bills including electricity and water, payments to government bodies, travelling costs to the clinic (for the doctor) and other expenses have increased in the post-economic period.

**Keywords:** Sri Lanka; economic crisis; health sector; dental care; dental education

## 1. Introduction

### The Background of the Current Economic Crisis

For many years, Sri Lanka's economic trajectory was unfavorable. Challenges including the 2019 Easter bombings and the COVID-19 pandemic were a few reasons for the mounting crisis. In the year 2022, the national economy collapsed, depleting the country's

GDP by—17.08% [1]. This was intensified by political instability and poor policy decisions such as decreasing taxation and prohibiting chemical fertilizer importation overnight. As a result of the Easter Sunday bombings in 2019, tourism, which was a crucial source of the foreign exchange in Sri Lanka, dropped rapidly. During the pandemic, due to the health-related restrictions, foreign revenue generated by sectors such as food and agriculture, tourism and textiles in Sri Lanka massively dropped by approximately 1.5 billion USD [2,3]. In 2020, the largest tax cut in Sri Lankan history was imposed, resulting in a loss of about one million taxpayers between 2020 and 2022. This posed a significant challenge to an economy already plagued by widespread tax misconduct. Furthermore, the ban on the importation of chemical fertilizers resulted in a 50% fall in paddy, vegetable and tea crop yields [3]. In addition, Sri Lanka delayed foreign debt repayments pending the conclusion of discussions with the International Monetary Fund (IMF) on a bailout package [3,4]. During 2021, Sri Lanka's revenue dropped drastically, depreciating to 8.3% of the GDP, considered one of the lowest in the world. As a result of the depreciation of the local currency and the depletion of foreign reserves, the country lacked sufficient foreign exchange to acquire basic necessities [3]. As foreign revenue declined, the government expected to increase taxes to SL Rs 3.1 trillion (8.5 billion USD) from SL Rs 1.3 trillion rupees, where the income tax would be increased by threefold, from 302 billion rupees (824 million USD) to 912 billion rupees (2.5 billion USD) [3]. This resulted in a rapidly increased inflation rate, and more than 5.7 million people were reported to be in need of urgent humanitarian assistance [3,5].

## 2. The Dental Care of Sri Lanka

Since the downfall of the economy, the health sector has been widely affected. The health service of Sri Lanka is categorized as a 24/7 essential service and is mainly dominated by a tax-funded public system that is complemented by a fee-for-service private sector with equal access to health services for all socioeconomic groups [6]. Among them, the government sector accounts for 95% of the inpatient care and 50% of outpatient care [7,8]. The Dental Health Services of Sri Lanka comes under the purview of the Deputy Director-General (Dental Services) (DDG/DS), who is responsible for dental specialists, dental surgeons and dental therapists providing island-wide services. The current work force of dental healthcare consists of 1700 dental surgeons of the Department of Health and 100 specialists in the fields of oral and maxillofacial surgery, orthodontics, restorative dentistry and community dentistry [9].

From a health economic perspective, there are a few medical procedures with elastic demand, such as certain aspects of plastic surgery, dental surgery and dermatology. For instance, the COVID-19 pandemic had widely affected dental care delivery due to adaptability to the situation. Moreover, access to dental care was reduced, as well as the volume of patients due to the travel restrictions imposed to prevent the further spread of infection. According to the evidence from Subasinghe et al., [10] there was a considerable increase in follow-up loss in the pandemic group compared to the pre-pandemic group. Also, in the pre-pandemic group, the average delay for the second visit was 27 days; for the third visit, it was 127 days. For the pandemic group, it was 89 and 152 days, respectively [10]. Another study on the financial cost of COVID-19 in dentistry by Jayasinghe et al. [11] also stated that most practitioners developed their practice within the latter part of the COVID-19 outbreak but with a low patient volume. Corresponding to the same study, the majority of responders' total patient volume was less than 25% of the normal practice, and a majority of practitioners earned less than 25% of their usual salary. Also, a similar percentage of the participants held expectations for the clinics to return to normal income within the next 6–8 weeks [11,12]. Among them, 55.1% of the respondents highlighted financial hardship due to the COVID-19 outbreak [10]. Furthermore, the COVID-19 pandemic has had a generally negative influence on dental education by interrupting clinical training. The difficulties of undergraduate teaching such as theory, skill development, assessment and consequences on the mental health and wellness of students were some of the areas

affected [13,14]. Moreover, these medical fields were highly affected when in an economic recession along with the health policies made during the COVID-19 pandemic, particularly in the private sector.

### 3. Economic Hardships from Different Perspectives

Moving towards the economic crisis, the World Health Organization claims that it is rapidly turning into a health catastrophe due to a rising demand for essential medications and medical supplies. Sri Lanka imports 80% of its pharmaceuticals and practically all of its medical supplies, including equipment [15]. The estimated annual budget for importing medications and surgical supplies is 300 million USD; however, only 80 million USD has been made available for 2023 through donations. To import necessary medicines and supplies, Sri Lanka had a budget need of 220 million USD as of January 2023 [3]. As a result of inflation and the devaluing of the rupee, the government has increased the price of some of the essential medications, such as painkillers, antibiotics and drugs used in diabetes and heart conditions, by 40% during April 2022 [16]. Hence, overall health is neglected by the public. Furthermore, middle- and low-income socioeconomic groups are highly affected by the current situation in the country. The economic burden is associated with elevated stress levels, higher risks of behavioral problems, reduced social competence and poor cognitive ability in both children and adults [17]. Poor maternal nutrition, higher maternal psychological distress, food insecurities among people and malnutrition in children are some of the major factors affecting individuals' physical health [17,18]. Therefore, according to reports by UNICEF, there are about 6.2 million people with moderate–acute food insecurity [3].

The education system of Sri Lanka has been continuously affected in recent years due to the Easter bombings, the COVID-19 pandemic and the ongoing economic crisis. Due to the temporary closure of schools, universities and educational institutes, the government had introduced urgent remote education. Nevertheless, regular power disruptions made the rudimentary remote education even more difficult [19,20]. As a result of decreased education attainment and lower nutritional status, there will be an impact on long-term employment as well as on the economy of the nation [3]. Existing scientific literature has not explored the impact of the economic crisis on the field of dentistry in Sri Lanka in particular. Thus, the objective of this perspective is to elaborate on the current issues faced by dental professionals during dental care delivery due to the economic crisis and explore the impact on dental education amid the economic crisis.

### 4. Methodology

We decided to conduct a survey-based study to address this knowledge gap. Accordingly, a descriptive cross-sectional survey-based study was conducted among randomly selected dental hospitals, multi-specialty dental clinics and single provider dental clinics ( $n = 28$ ) of different districts (Colombo, Kandy, Anuradhapura, Badulla, Ratnapura, Vavuniya, Kegalle, Kurunegala, Polonnaruwa, Galle, Monaragala, Trincomalee and Gampaha) in Sri Lanka from the 1st of March to the 1st of May 2023. The study instrument used to collect data included a predetermined interview guide and a predetermined questionnaire, which were designed according to the experts' knowledge based on scenarios that were current among dental surgeons and dental specialists due to the economic crisis [21]. The survey evaluated the number of patients who visited the clinic per week; the availability of dental materials as well as the cost for dental procedures such as implant crowns, implant over dentures, crowns, bridges, amalgam restorations, dentures, extractions, surgical removal of teeth, light-cured composites (LCC), bonding, etc.; lab charges; travelling costs to the clinic (for the dental surgeon); salaries to support the staff; the total amount of utility bills including electricity, water, telephone, internet, pay TV, etc.; the total amount of other services (e.g.: maintenance, service agreements); bank charges or loans; the total amount of payments to government or local bodies, etc.; and further costs such as monthly income, migration plans, as well as other expenses before the economic crisis (early 2022/2021)

and after the economic crisis (Late 2022/2023). The questionnaire was administered via interview with a dental surgeon who managed and owned a respective dental clinic. This was carried out by the principal investigator via telephone conversation. All the collected data were verified for completeness and accuracy. The computed data of the survey was subjected to a descriptive analysis conducted in SPSS Statistical Package (SPSS, Version 21). The descriptive statistics were expressed as frequency distributions and percentages.

### 5. The Impact of the Economic Instability on Dental Care

Prior to the current economic crisis, healthcare costs were minimal. It was approximately 3.2% of the GDP, with the government contributing approximately 2% of the GDP since 2000. The Value Added Tax (VAT) on healthcare services is a crucial component of indirect taxes, which were free in Sri Lanka until May 1, 2016 [22,23]. Most countries have a 0% or reduced VAT rate on socially desired items such as basic food, healthcare services, electricity, and water. In Sri Lanka, the VAT on health services was recently increased from 12% to 15% [24]. Hence, according to the survey, utility bills including electricity, water, telephone, internet and pay TV among 27 dental surgeons had increased (Table 1). In a country where health insurance penetration is less than 7%, a 15% VAT on healthcare service providers and laboratory service providers is unreasonable [19]. The private health sector of Sri Lanka provides 55% of outpatient care. As a result of increased costs, the lower middle-income group who previously sought healthcare services in the private sector will now be forced to rely on the already overexerted state system [3]. Comparatively, the new tax system considers all allowances, including fuel charges, phone charges, and even food, as income that must be taxed. Many taxpayers, including doctors, think that the tax system is unjust because, although wage workers in the formal sector are caught in the net, other groups of prospective taxpayers may not be paying taxes in the same way. This was further confirmed by the results obtained by the survey-based study, where payments to the government or local bodies such as the municipality tax, Private Health Services Regulatory Council (PHSRC) fees and business registration have increased to 28.6%. However, for 32.1%, there were no changes and for 39.3%, this was not applicable. Considering the monthly income of the dental surgeons, the monthly income category remained the same among 18 participants, whereas 28.6% stated a decrease. But for 35.7%, monthly income remained the same prior to the economic crisis due to increased charges. Further, due to sky-high inflation rates, salaries for the support staff were increased. However, according to the survey among 23 participants, 47.8% had increased support staff salaries in the range of 0–25%, and 30.4% had increased them in the range of 26–50%. Only 8.7% and 13% increased the salaries of the support staff by 51–75% and more than 75%, respectively, due to the economic burden (Table 1).

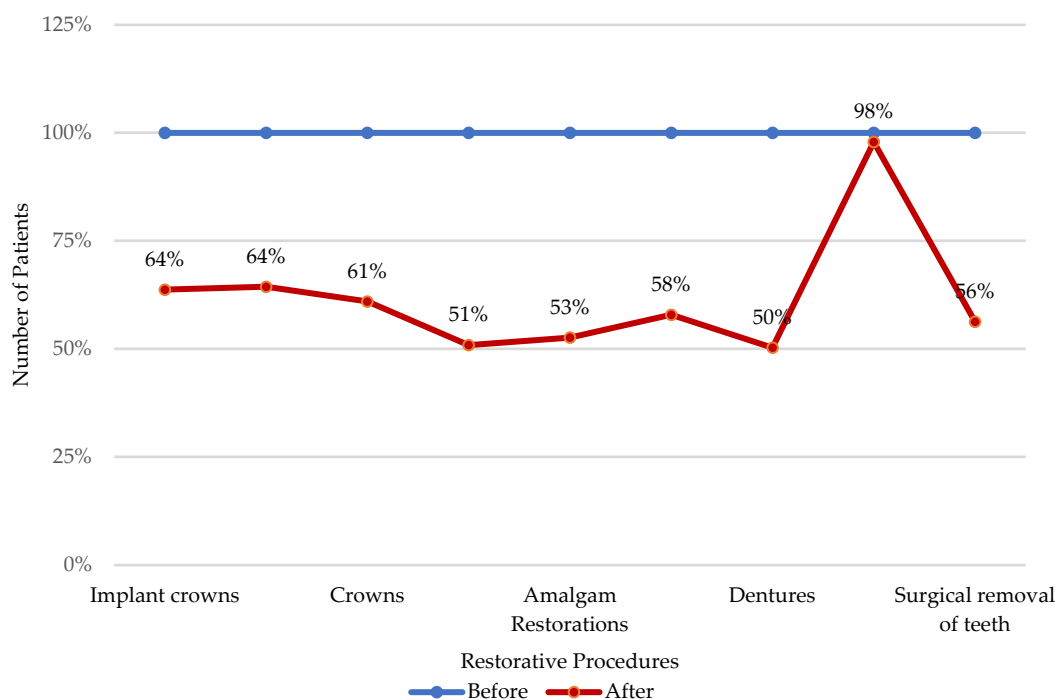
**Table 1.** The increased percentages of fees and the migration plans of dental professionals due to the post-economic crisis.

|                                                           | N (%)     |
|-----------------------------------------------------------|-----------|
| Increased percentage of lab charges per one item (N = 27) |           |
| 0–100%                                                    | 20 (74.1) |
| 101–200%                                                  | 4 (14.8)  |
| 201–300%                                                  | 3 (11.1)  |
| Increased percentage of charges per procedure (N = 26)    |           |
| 0–25%                                                     | 10 (38.5) |
| 26–50%                                                    | 11 (42.3) |
| 51–75%                                                    | 2 (7.7)   |
| 75%<                                                      | 3 (11.5)  |
| Travelling cost to clinic for the doctor (N = 28)         |           |
| Affected                                                  | 16 (57.1) |
| Not Affected                                              | 12 (42.9) |

Table 1. Cont.

|                                                                                                                               | N (%)     |
|-------------------------------------------------------------------------------------------------------------------------------|-----------|
| Increased percentage of salaries to support staff (N = 23)                                                                    |           |
| 0–25%                                                                                                                         | 11 (47.8) |
| 26–50%                                                                                                                        | 7 (30.4)  |
| 51–75%                                                                                                                        | 2 (8.7)   |
| 75%<                                                                                                                          | 3 (13.0)  |
| Increased percentage of utility bills including electricity, water, telephone, internet, pay TV, etc. (total amount) (N = 27) |           |
| 0–25%                                                                                                                         | 3 (11.1)  |
| 26–50%                                                                                                                        | 12 (44.4) |
| 51–75%                                                                                                                        | 2 (7.4)   |
| 75%<                                                                                                                          | 10 (37.0) |
| Other services (e.g., maintenance, service agreements) (total amount) (N = 28)                                                |           |
| Increased                                                                                                                     | 15 (53.6) |
| No change                                                                                                                     | 9 (32.1)  |
| N/A                                                                                                                           | 4 (14.3)  |
| Bank charges/loans (total amount) (N = 27)                                                                                    |           |
| Loans taken                                                                                                                   | 7 (25.9)  |
| No loans taken                                                                                                                | 16 (59.3) |
| N/A                                                                                                                           | 4 (14.8)  |
| Payments to government/local bodies, etc. (total amount) (N = 28)                                                             |           |
| Increased                                                                                                                     | 8 (28.6)  |
| No change                                                                                                                     | 9 (32.1)  |
| N/A                                                                                                                           | 11 (39.3) |
| Monthly income (N = 18)                                                                                                       |           |
| Decreased                                                                                                                     | 8 (44.4)  |
| No change                                                                                                                     | 10 (55.6) |
| Migration any plan (N = 25)                                                                                                   |           |
| No                                                                                                                            | 20 (80)   |
| Yes                                                                                                                           | 5 (20)    |
| Any other expenses                                                                                                            |           |
| Courier charges are doubled                                                                                                   | 2 (7.1)   |
| Dental material cost has increased                                                                                            | 24 (85.7) |
| Building rent has increased                                                                                                   | 1 (3.6)   |
| No change                                                                                                                     | 1 (3.6)   |

Besides the increased VAT, failed decisions to settle the foreign debt resulted in an island-wide fuel shortage in May 2022, creating miles-long vehicle queues, which directly affected the day-to-day life of the general public as well as the health professionals. As a result of this and trade union action by health workers, the overburdened public health sector was less crowded. Based on the survey-based analysis of dental care, an overall decrease was observed in the number of patients who visited the clinic per week for restorative procedures post-economic crisis (late 2022/2023) prior, comparatively, to the economic crisis (early 2022/2021). Consequently, the highest decrease was reported for dentures (49.69%), and the lowest decrease was reported for the surgical removal of teeth at 2.11% (Figure 1).



**Figure 1.** Changes over the number of patients who visited the clinic for restorations before the economic crisis and after the economic crisis. An overall decrease in the number of patients visiting the dental clinics for restorative procedures was observed post-economic crisis. Consequently, the highest decrease was reported for dentures (49.69%), and the lowest decrease was reported for the surgical removal of teeth at 2.11%. The corresponding decreased percentages for Implant crowns, Implant over dentures, Crowns, Bridges, Amalgam Restorations, LCC restorations and Surgical removal of teeth are 36.29%, 35.63%, 39.03%, 49.12%, 47.38%, 42.11% and 43.71%, respectively.

## 6. The Impact of Economic Instability on Dental Education

The intricate web of the dental education of Sri Lanka comprises training, resources and quality of care, which can be profoundly affected due to the onset of the economic downturn that began in 2022. The impacts of economic instability have led to a series of challenges that have the potential to shape the future of dental education in the country.

## 7. The Quality of Education

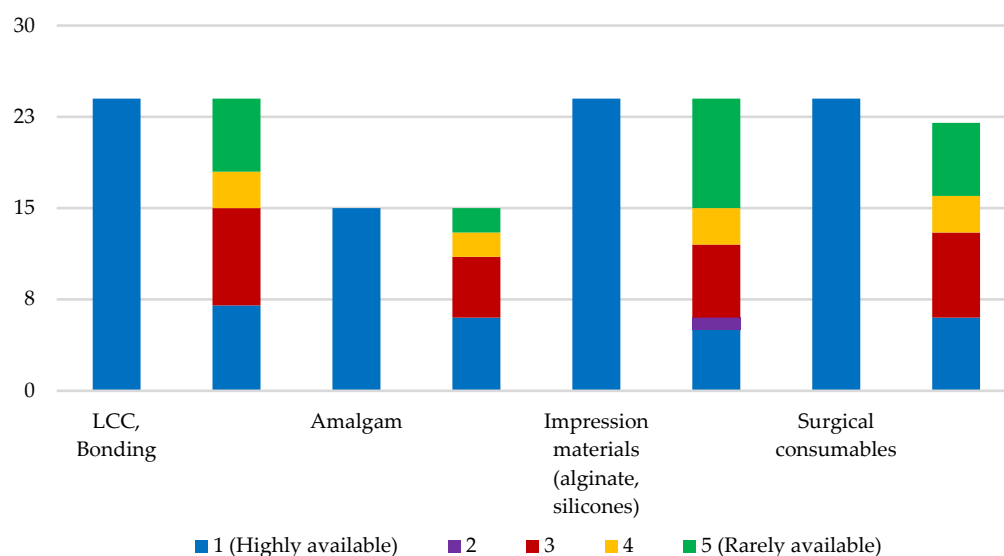
Among the various undergraduate programs, the state-sponsored dental academic curriculum stands out for its high cost. The ongoing economic crisis has affected the quality of dental education, as it relies heavily on practical training in a clinical setting. Economic uncertainty and limited clinical teaching opportunities can lead to a reduction in the availability of qualified academic staff members [25]. This can result in a gap between theoretical knowledge and practical skills, ultimately affecting the competence of future dental graduates produced in Sri Lanka.

## 8. The Disruption of Training Programs

Economic instability often results in reduced funding for educational institutions. For example, the government temporarily suspended monthly stipends for trainees pursuing postgraduate training abroad, causing distress among these trainees and families. Furthermore, the Postgraduate Institute of Medicine in Sri Lanka (PGIM) imposed limitations on payment for external examiners, placing additional strain on dental disciplines. Despite these challenges, discussions at the PGIM level explored opportunities for foreign nationals to engage in postgraduate training, potentially alleviating some economic burden.

## 9. The Scarcity of Resources

In the case of dental education, the scarcity of resources translates to limitations in acquiring the necessary resources, such as dental materials, equipment and laboratory tools. These resources are vital for hands-on training and the skill development of dental students and trainees [25]. The scarcity of resources can compromise the quality of education, hindering students' exposure to tools and techniques (Figure 2). This financial strain was further confirmed through survey analysis, which demonstrated escalated laboratory charges, procedure costs and expenses for maintenance and service agreements (Table 1). Modern dentistry relies on advanced technology such as dental implant-retained prostheses and fixed tooth-supported restorations for diagnostics, treatment planning and patient care. As an example, a variety of cases treated by postgraduates were conducted with no proper X-rays and material for advanced dental procedures. The current situation can hinder the purchasing of advanced technology due to escalated laboratory service charges, leaving dental students and professionals without exposure to the latest innovations. As a matter of fact, this can hinder their ability to compete on a global scale.



**Figure 2.** The availability of dental materials before and after the economic crisis.

## 10. Impact on Patients

Dental education is closely linked to the provision of oral healthcare services to the community [26]. Economic instability can lead to the reduced availability of affordable dental care services, affecting vulnerable populations who rely on educational institutions for treatment. This can result in delayed or inadequate treatment and the worsening of oral health issues in the population. With regard to clinical trainings, it was exacerbated as some patients were lost for follow-up due to the impact of the financial crisis and reduced interest in dental treatment amidst various financial struggles (Figure 1).

## 11. The Loss of Skilled Professionals

The departure of dental specialists from the country emerged as a significant setback in dental education, with implications for both the present and future. The number of specialists returning to Sri Lanka dwindled considerably, with a significant drop by 2022 [3]. The survey indicated that a substantial portion of participants had migration plans, either with certainty or without concrete plans, underscoring the risk of losing highly skilled professionals.

It is estimated that in 2010, there were about 5700 Sri Lankan-born medical professionals working in high-income countries belonging to the OECD [27], which is about 25% of the current medical workforce in Sri Lanka. Given that undergraduate and postgraduate

medical education in Sri Lanka is totally funded by the state, this migration of trained professionals represents a substantial loss of investment.

The current brain drain augmented by the economic crisis could critically impact the nation's already resource-limited healthcare system. Factors such as escalating fuel prices, the cost of daily necessities and challenges in funding higher education for their children motivated professionals to leave. Furthermore, high payee taxes further encouraged their departure. Proposed modifications to the pension scheme for state sector officials added to their concerns.

## 12. Limitations

Survey-based studies are a valuable research method for gathering information and insights from a specific population. However, the current perspective contends with the limitations associated with conducting a survey-based study. Some of the key limitations of this perspective were the lack of a proper sampling technique, questionable sample representation and the lack of qualitative data. For the impact of economic instability on dental education, the perspective was limited; thus, assessing undergraduate and postgraduate students with interviews about conditions pre- and post-economic crisis was important. Recent income and the cost of living was approximated due to taxation; thus, the current survey did not measure the taxation of the dental surgeons. Apart from that, the loans, remittance and business confidence of the dental surgeons were not specifically mentioned in the survey. Biased sampling did not accurately represent the targeted population; for instance, in this perspective, only private dental clinics were selected, and there was no standardization between districts nor clinics. Furthermore, the questionnaire evaluated past and present scenarios related to the economy of dental care delivery and dental education; certain information provided by the participants might not be accurately recalled. To have reliable information and conduct a qualitative study, this study requires a proper sampling technique that can represent the private and government dental clinics of the rural and urban areas of Sri Lanka.

## 13. Implications

The implications to be addressed in this cross-sectional survey necessitate following a cohort of undergraduate and postgraduate students, and a long-term follow-up in dental surgeons affected by the economic crisis is recommended. As dental education is highly demanding and mostly relies on interactive sessions, clinicals, skills and experience, providing cost-effective persistent education opportunities are effective during such crises. One such example of cost-effective education is digital and remote learning. Because dental education requires practical exposure and interactive sessions, online learning is not feasible. However, improving e-learning by enhancing its interactivity, demonstrating real life dental procedures and encouraging dental professionals to collaborate within professional networks are suggested [25]. To manage their student loan debt, offering financial counselling and resources to dental students and introducing opportunities for loan repayment or forgiveness programs for graduates serving in underprivileged areas are also suggested. Furthermore, for managing cost-effective dental care delivery in Sri Lanka, the implementation of tele-dentistry could allow for remote consultations, follow-ups and preventive education. This can expand access to oral health advice via online platforms minimizing the need for in-person visits during a crisis [28].

## 14. Conclusions

The ongoing economic crisis in Sri Lanka is a burden as well as a challenge to mainly low- and middle-income socio-economic groups for survival in their day-to-day life. Among the widely affected sectors such as education, electricity, nutrition and fuel, focus was mainly placed on the oral health sector. Within that, the dental care service of Sri Lanka is widely affected, as it consists of procedures with an elastic demand. Survey-based analysis has demonstrated the effects of the elastic demand procedures in dentistry for

both patients and health professionals. Moreover, considering the economic crisis, the downfall of dental education will affect the production of well-trained dental surgeons and skillful dental specialists. To overcome these obstacles, the government is expected to make applicable decisions along with experts' knowledge to minimize the negative impact on the sector from the economic challenges that already exist and may be seen in the future. Furthermore, the Sri Lankan health system needs to address its insufficient resources for health services, which has become even worse due to the current economic crisis, as indicated by almost every relevant indicator showing that Sri Lanka spends less than countries of a comparable economic status.

**Author Contributions:** Conceptualization, D.D.S., R.M.J., and R.D.J.; methodology, Y.A.J., S.M.J. and S.R.; validation, S.R.; formal analysis, Y.A.J. and S.M.J.; investigation, S.R., Y.A.J. and S.M.J.; resources, R.D.J., D.D.S. and R.M.J.; data curation, Y.A.J. and S.M.J.; writing—original draft preparation, Y.A.J. and R.M.J.; writing—review and editing, Y.A.J., S.R., S.M.J., R.M.J., D.D.S. and R.D.J.; visualization, Y.A.J.; supervision, D.D.S., R.M.J. and R.D.J.; project administration, R.D.J. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics review Committee of the Faculty of Dental Sciences, University of Peradeniya (ERC/FDS/UOP/2022/22) on 6 September 2022.

**Informed Consent Statement:** Informed consent for participation was obtained from all subjects involved in the study.

**Data Availability Statement:** The data that support the findings of this study are available on request from the corresponding author, [R.D.J.].

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. O'Neill, A. Gross Domestic Product (GDP) in Sri Lanka 2022. 2022. Available online: <https://www.statista.com> (accessed on 10 December 2022).
2. Rishandani, D. COVID-19 and its impact of Sri Lanka economy. *SSRN Electron. J.* **2021**. [CrossRef]
3. De Silva, D. An Update on Current Economic Crisis and Health Sector [Internet]. Sri Lanka Medical Association. 2023. Available online: [https://issuu.com/slmanews/docs/newsletter\\_2023\\_april\\_03\\_2023](https://issuu.com/slmanews/docs/newsletter_2023_april_03_2023) (accessed on 21 May 2023).
4. Matthias, A.T.; Jayasinghe, S. Worsening economic crisis in Sri Lanka: Impacts on health. *Lancet Glob. Health* **2022**, *10*, e959. [CrossRef]
5. UNICEF Sri Lanka Humanitarian Situation Report #3 (Economic Crisis), 1 January to 31 December 2022—Sri Lanka [Internet]. 2023. Available online: <https://reliefweb.int/report/sri-lanka/unicef-sri-lanka-humanitarian-situation-report-3-economic-crisis-1-january-31-december-2022> (accessed on 10 December 2022).
6. Kumar, R. Public–private partnerships for universal health coverage? The future of “free health” in Sri Lanka. *Glob. Health* **2019**, *15*, 75. [CrossRef] [PubMed]
7. Records at HR Unit of the Ministry of Health Sri Lanka 2022. Ministry of Health *Ministry of Health—STAFF ACCESS*. 2022. Available online: [http://www.health.gov.lk/moh\\_final/english/staff.php](http://www.health.gov.lk/moh_final/english/staff.php) (accessed on 13 July 2023).
8. Doherty, S.; Sureshkumar, D.S.; Thayakaran, R.; Surenthirakumaran, R. Characteristics and influencing factors of healthcare utilization in post-conflict primary care attendees in Northern Sri Lanka. *Front. Health Serv.* **2022**, *1*, 719617. [CrossRef] [PubMed]
9. Rajapaksa, L.; De Silva, P.; Abeykoon, P.; Somatunga, L.; Sathasivam, S.; Perera, S.; Fernando, E.; De Silva, D.; Perera, A.; Perera, U.; et al. Sri Lanka health system review. *Health Syst. Transit.* **2021**, *10*.
10. Subasinghe, K.J.; Piyarathne, N.S.; Hettiarachchi PV, K.S.; Jayasinghe, R.D. The Impact of the COVID-19 Pandemic on the Management of Patients with Oral Potentially Malignant Disorders in a Tertiary Care Hospital, Sri Lanka. *Asian Pac. J. Cancer Care* **2023**, *8*, 29–34. [CrossRef]
11. Jayasinghe, R.D.; Jayasinghe, R.M.; De Silva, M.D.K. Survey on finance cost of COVID-19 on Dentistry. *J. Multidiscip. Dent. Res.* **2020**, *6*, 63–68. [CrossRef]
12. Koyama, S.; Aida, J.; Mori, Y.; Okawa, S.; Odani, S.; Miyashiro, I. COVID-19 effects on income and dental visits: A cross-sectional study. *JDR Clin. Transl. Res.* **2022**, *7*, 307–314. [CrossRef] [PubMed]
13. Li, B.; Cheng, L.; Wang, H. Challenges and Opportunities for Dental Education from COVID-19. *Dent. J.* **2022**, *10*, 188. [CrossRef] [PubMed]

14. Ilangarathna, G.A.; Ranasinghe, Y.; Weligampola, H.; Attygalla, E.; Ekanayake, J.; Yatigammana, S.; Pinnawala, M.; Godaliyadda, R.; Herath, V.; Ekanayake, P.; et al. A Comprehensive Overview of Education during Three COVID-19 Pandemic Periods: Impact on Engineering Students in Sri Lanka. *Educ. Sci.* **2022**, *12*, 197. [CrossRef]
15. Jayasinghe, C. Sri Lanka Faces Essential Drug Shortage; Experts Warn of Health Crisis [Internet]. Available online: <https://economynext.com/sri-lanka-faces-essential-drug-shortage-experts-warn-of-health-crisis-92663/> (accessed on 21 May 2023).
16. Ethirajan, A. Sri Lanka Hikes Price of Medicines 40% amid Economic Crisis. 2022. Available online: <https://www.bbc.com/news/world-asia-61285290> (accessed on 8 January 2023).
17. Rohanachandra, Y. Economic recession: The effects on children and adolescents. *Sri Lanka J. Child Health* **2022**, *51*, 338–343. [CrossRef]
18. Cader, A.A.; Perera, L. Understanding the Impact of the Economic Crisis on Child and Maternal Health among the Poor: Opportunities for South Asia. In *ADBI Working Paper 293*; Asian Development Bank Institute: Tokyo, Japan, 2011; Available online: <http://www.adbi.org/working-paper/2011/07/01/4624.impact.economic.crisis.child.health.poor/> (accessed on 15 September 2023).
19. The Lancet Regional Health-Southeast Asia. Sri Lanka-Health in the middle of a crisis. *Lancet Reg. Health-Southeast Asia* **2022**, *4*, 100067. [CrossRef] [PubMed]
20. Liyanagunawardena, T.; Williams, S.A. Emergency remote education: Experience from Sri Lanka during COVID-19. *Asian J. Distance Educ.* **2021**, *16*, 207–229.
21. Charalambous, C.; Theodorou, M.; Galanis, P. The effects of the economic crisis on dental care in Cyprus: The opinion of the dentists. *Arch. Hell. Med. /Arheia Ellenikes Iatr.* **2015**, *32*.
22. Abeysuriya, R. Sri Lanka Value Added Tax on Healthcare Is Unconscionable [Internet]. Available online: <https://economynext.com/sri-lanka-value-added-tax-on-healthcare-is-unconscionable-4567/> (accessed on 21 May 2023).
23. Sarkar, S. The devastating health consequences of Sri Lanka's economic collapse. *BMJ* **2022**, *377*, o1543. [CrossRef] [PubMed]
24. Bhowmick, S. Role of Tax Cuts in Sri Lankan Crisis [Internet]. Asia Times. 2022. Available online: <https://asiatimes.com/2022/10/role-of-tax-cuts-in-sri-lankan-crisis/> (accessed on 21 May 2023).
25. Hassan, M.G.; Amer, H. Dental education in the time of COVID-19 pandemic: Challenges and recommendations. *Front. Med.* **2021**, *8*, 648899. [CrossRef] [PubMed]
26. Fernández, S.C.; Ajuria, A.F.; Martín, J.J.; Murphy, M.J. The impact of the economic crisis on unmet dental care needs in Spain. *J. Epidemiol. Community Health* **2015**, *69*, 880–885. [CrossRef] [PubMed]
27. World Health Organization. Health Labour Market Analysis: Sri Lanka. In *Colombo: Ministry of Health, Nutrition and Indigenous Medicine and WHO Country Office*; World Health Organization: Geneva, Switzerland, 2018.
28. Tella, A.J.; Olanloye, O.M.; Ibiyemi, O. Potential of teledentistry in the delivery of oral health services in developing countries. *Ann. Ib. Postgrad. Med.* **2019**, *17*, 115–123. [PubMed]

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.