


**PROPOSAL FOR IMPLEMENTING UNDERGRADUATE COURSES IN SPEECH THERAPY AND OCCUPATIONAL THERAPY AT THE UNIVERSITY OF GURUPI (UNIRG): A RESPONSE TO SUPPRESSED DEMANDS AND REGIONAL DEVELOPMENT NEEDS**

**PROPOSTA DE IMPLANTAÇÃO DOS CURSOS DE GRADUAÇÃO EM FONOAUDIOLOGIA E TERAPIA OCUPACIONAL NA UNIVERSIDADE DE GURUPI (UNIRG): UMA RESPOSTA ÀS DEMANDAS REPRIMIDAS E ÀS NECESSIDADES DE DESENVOLVIMENTO REGIONAL**

**PROPUESTA PARA LA IMPLEMENTACIÓN DE CURSOS DE PREGRADO EN TERAPIA DEL LOGOPEDIA Y TERAPIA OCUPACIONAL EN LA UNIVERSIDAD DE GURUPI (UNIRG): UNA RESPUESTA A LAS DEMANDAS REPRIMIDAS Y LAS NECESIDADES DE DESARROLLO REGIONAL**

 <https://doi.org/10.56238/sevened2025.029-081>

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**ABSTRACT**

This article proposes the implementation of undergraduate programs in Speech-Language Pathology and Occupational Therapy at the University of Gurupi (UnirG), located in the municipality of Gurupi, Tocantins. Based on data from the 2022 Census, which indicate a growing pent-up demand for rehabilitation and inclusion services for neurodivergent individuals and individuals with psychomotor disabilities, coupled with the scarcity of programs in these areas in the North and Central-West regions of Brazil, the proposal is justified. The new legislation requiring the collection of data on disorders and neurodivergences reinforces this need. Gurupi, as a metropolitan hub and part of a government consortium in southern Tocantins, has sufficient infrastructure and demand, with the recently opened Monsenhor Geraldo Torres Specialized Rehabilitation Center (CER), inaugurated on June 3, 2025, serving as a catalyst. The potential for transferring resources from the Unified Health System (SUS) to Gurupi and the consortium municipalities is also analyzed, given the increased demand.

**Keywords:** Speech-Language Pathology. Occupational Therapy. Higher Education. Public Health. SUS. Economic Development. Public Policies. Gurupi. UnirG. CER.

**RESUMO**

Este artigo propõe a implantação dos cursos de graduação em Fonoaudiologia e Terapia Ocupacional na Universidade de Gurupi (UnirG), localizada no município de Gurupi,

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Tocantins. Com base nos dados do Censo 2022, que indicam uma crescente demanda reprimida por serviços de reabilitação e inclusão de pessoas neurodivergentes e com deficiências psicomotoras, aliado à escassez de cursos nessas áreas no Norte e Centro-Oeste do Brasil, a proposta é justificada. A nova legislação que exige a coleta de dados sobre transtornos e neurodivergências reforça essa necessidade. Gurupi, como polo metropolitano e parte de um consórcio governamental no sul do Tocantins, apresenta infraestrutura e demanda suficientes, com o recente Centro de Reabilitação Especializado Monsenhor Geraldo Torres (CER), inaugurado em 3 de junho de 2025, como catalisador. Analisa-se também o potencial de transferência de recursos do Sistema Único de Saúde (SUS) para Gurupi e municípios consorciados após o aumento da demanda.

**Palavras-chave:** Fonoaudiologia. Terapia Ocupacional. Ensino Superior. Saúde Coletiva. SUS. Desenvolvimento Econômico. Políticas Públicas. Gurupi. UnirG. CER.

## **RESUMEN**

Este artículo propone la implementación de programas de pregrado en Fonoaudiología y Terapia Ocupacional en la Universidad de Gurupi (UnirG), ubicada en el municipio de Gurupi, Tocantins. Con base en datos del Censo de 2022, que indican una creciente demanda acumulada de servicios de rehabilitación e inclusión para personas neurodivergentes y personas con discapacidad psicomotora, sumada a la escasez de programas en estas áreas en las regiones norte y centro-oeste de Brasil, la propuesta se justifica. La nueva legislación que exige la recopilación de datos sobre trastornos y neurodivergencias refuerza esta necesidad. Gurupi, como centro metropolitano y parte de un consorcio gubernamental en el sur de Tocantins, cuenta con infraestructura y demanda suficientes, con el recientemente inaugurado Centro de Rehabilitación Especializada (CER) Monsenhor Geraldo Torres, el 3 de junio de 2025, como catalizador. También se analiza la posibilidad de transferir recursos del Sistema Único de Salud (SUS) a Gurupi y a los municipios del consorcio, dado el aumento de la demanda.

**Palabras clave:** Logopedia. Terapia Ocupacional. Educación Superior. Salud Pública. SUS. Desarrollo Económico. Políticas Públicas. Gurupi. UnirG. CER.



## 1 INTRODUCTION

The North and Midwest regions of Brazil face a shortage of undergraduate courses in Speech-Language Pathology and Audiology and Occupational Therapy, crucial areas for the rehabilitation and social inclusion of vulnerable populations, such as neurodivergent people and people with psychomotor disabilities. The 2022 Census revealed a pent-up demand for these services, aggravated by the absence of locally qualified professionals. The new legislation that requires the collection of data on disorders and neurodivergences highlights the urgency of regional training. Gurupi, in the south of Tocantins, is an organized municipality, part of a government consortium, with educational (UnirG) and health infrastructure expanded by the CER, inaugurated on June 3, 2025. This article analyzes demographic data, regional scarcity, the impact of the CER and the potential for transferring SUS resources, proposing UnirG as a training center.

## 2 METHODOLOGY

The research adopted a qualitative and quantitative approach, using secondary data from the 2022 Census, health reports from the state of Tocantins and Gurupi, and information on UnirG and CER. Estimates of repressed demand and transfer of resources were calculated based on national prevalence, population of Gurupi (approximately 100,000 inhabitants) and SUS financing patterns, adjusted to the regional context. No primary studies were conducted due to time constraints, but the data were triangulated with local information.

The Study is based on implementation with the admission of students on an annual basis with limited perspectives in a period of 4 years, with 60 students for each course during the years 2028-2035, totaling approximately 400 graduated academics, 200 of whom have a bachelor's degree in Speech Therapy and 200 have a bachelor's degree in Occupational Therapy, considering a school dropout rate close to 20%.

### 2.1 EXPECTED RETURN (8 YEARS) 2028-2035

- Training of 400 professionals with bachelor's degrees (200/course);
- Enable the availability of Qualified Professionals for comprehensive and efficient care for SUS users, with current and future demands;
- Provide the generation of R\$ 4.2 to 6 million/year in SUS transfers, and proactive diagnostic and treatment activities can be promoted earlier;
- 60% reduction in travel costs and lower risks for families and SUS users;

- To enable the contribution to the regional vocation of diagnosis and treatment in collective health in Tocantins;
- Consolidation of UnirG as an inducer of social and economic development in the southern region and the State of Tocantins.

## 2.2 STUDY RESULTS AND ANALYSES

### 2.2.1 Pent-Up Demand and Identified Population

Table 1 presents an estimate of the population of Gurupi with diagnoses of neurodivergences and psychomotor disabilities, demonstrating a 2022 scenario that, added to the new data and the 2030 census, this demand could reach 15 thousand families by the year 2035 in the southern region of Gurupi alone.

**Table 1**

*Estimated Population with Neurodivergences and Psychomotor Disabilities in Gurupi (2025)*

Category	National Prevalence (%)	Population Estimated in Gurupi	Repressed Demand (Lack of Professionals)
Spectrum Disorder Autistic (ASD)	1,0%	1.000	800
Intellectual Disability	1,5%	1.500	1.200
Cerebral palsy	0,2%	200	160
Other Disabilities Psychomotor	0,5%	500	400
Total	3,2%	3.200	2.560

Source: Estimates based on the 2022 Census and adjusted health reports (authors).

Table 2 highlights the pent-up demand for professionals in Gurupi.

**Table 2**

*Repressed Demand for Professionals in Gurupi*

Profession	Professionals Needed	Professionals Existing	Demand Repressed
Audiologist	20	2	18
Occupational Therapist	20	1	1G
Total	40	3	37

Source: Estimates based on regional proportions and population of Gurupi (authors).

Table 3 shows the demand and financial impact on the SUS in the municipality of Gurupi

**Table 3**

*Projection of SUS Transfers (202C-2030)*

Procedure	Unit Price (R\$)	Demand Estimated/Year	Annual Total (R\$)
Speech therapy (individual)	45,00	20.000	G00.000,00
Therapy Occupational (group)	60,00	15.000	G00.000,00
Multiprofessional assessment	120,00	5.000	600.000,00
Total			2.400.000,00

Source: Ordinance GM/MS No. 3,224/2023 (SUS Table).

**2.2.2 The CER of Gurupi as a catalyst for professionals in the region**

CER data (Inauguration: June/2025)

- Installed capacity: 2,000 calls/month;
- Current team: 1 speech therapist and 1 occupational therapist (insufficient for demand);
- Partnerships signed: UnirG (internships), SESAU and Ministry of Health (funding).

**Table 4**

*Need for Professionals (2025-2030) – CER GURUPI*

Position	Existing Vacancies	Required Vacancies	Deficit
Audiologist	1	6	5
Occupational Therapist	1	4	3

Source: Projection based on regional public health priorities (authors).

**2.2.3 The Potential for the Transfer of SUS Resources**

Table 5 estimates the increase in SUS resources for Gurupi and consortium municipalities (assuming 16 more municipalities in the consortium, with a total population of 250,000 inhabitants) after the increase in demand for CER services.

**Table 5**

*Estimated Transfer of SUS Resources (2025-2026) GURUPI AND REGION*

Municipality/ Consortium	Population (inhab.)	Expense Current Per Capita (R\$)	Increased Demand (%)	Estimated Additional Spend (R\$/year)
Gurupi	100.000	300	10%	3.000.000
Consortium members	150.000	250	8%	3.000.000
Total	250.000	-	-	6.000.000

Source: Estimates based on average per capita SUS spending and projected increase in demand (authors).

Table 6 details the potential allocation of the additional resources.

**Table 6**

*Potential Allocation of Additional SUS Resources by Category*

Category	Percentage (%)	Estimated Value (R:)
Infrastructure (CER)	40%	2.400.000
Hiring of Professionals	30%	1.800.000
Equipment and Materials	20%	1.200.000
Training and Research	10%	600.000
Total	100%	6.000.000

Source: Projection based on regional public health priorities (authors).

**Table 7**

*Savings with Reduction of Displacements Consortium Municipalities and Other Regions*

Municipality of Origin	Patients/Year (2024)	Average Cost of Transportation (R\$)	Savings with Service Location (R\$)
Gurupi	1.200	0 (base)	0
Dawn	450	300,00	135.000,00
Dianópolis	c00	450,00	270.000,00
Total Consortium Member	2.250	Average: R: 350.00	787.500,00

Source: Tocantins Health Department (2025).

**2.2.4 Budget proposal for the implementation of the courses within the scope of UNIRG**

The budget and the estimate of the costs and maintenance of the Speech Therapy and Occupational Therapy courses at the University of Gurupi (UnirG) play a central role in the feasibility and sustainability of this strategic initiative, aligned with the social, educational and economic demands of southern Tocantins. The preparation of a detailed budget proposal, such as the one presented in Table 6, 7 and 8 of the study, with an estimated initial cost of R\$ 4,120,000 for the first two years, is essential to ensure the necessary infrastructure, faculty and resources, ensuring that the courses meet the requirements of the National Curriculum Guidelines (DCNs) and the State Council of Education of Tocantins (CEE/TO). This projection reflects a balanced allocation that takes advantage of the integration with the Monsenhor Geraldo Torres Specialized Rehabilitation Center (CER) in relation to infrastructure and laboratories of academic practices.

**Table 8***Initial Investments (CAPEX) Implementation of Courses (Phono/T.O.)*

Item	Unit Cost (R\$)	Quantity	Total (R\$)
Speech Therapy Laboratory	250.000,00	1	250.000,00
Occupational Therapy Laboratory	180.000,00	1	180.000,00
Equipment Procurement	120.000,00	2 lots	240.000,00
Adaptation of rooms	80.000,00	4	320.000,00
Total CAPEX			GG0,000.00

Source: Prepared by the authors.

**Table 9***Recurring Costs (OPEX – Annual) Course Maintenance (Phono/T.O.)*

Item	Annual Cost (R\$)
Teachers (10 teachers)	720.000,00
Internship scholarships (40 students)	240.000,00
Laboratory maintenance	60.000,00
Teaching materials	50.000,00
Total OPEX/Year	1.070.000,00

Source: Prepared by the authors.

**Table 10***Sources of Financing – Maintenance*

Source	Value (R\$)	Conditionality
MEC (Reuni Program)	500.000,00	Counterpart of 20%
State Department of Health	300.000,00	Binding to the CER
Intermunicipal Consortium	200.000,00	Resident Jobs
Total Funded	1.000.000,00	

Source: Prepared by the authors.

**2.2.5 The Regional Shortage of Professionals and Specialized Training Courses**

The North and Midwest concentrate less than 10% of the Speech Therapy and Occupational Therapy courses in Brazil (Higher Education Census 2022), with no face-to-face courses in Tocantins, increasing the dependence on external professionals.

**2.2.6 Infrastructure and Government Consortium of Municipalities**

Gurupi is part of a government consortium in the south of Tocantins, with the CER as a new landmark, managed by the UnirG Foundation since June 3, 2025, indicating the capacity to support the courses, in addition to being able to directly serve other administrative regions of the SUS in the southeast region of Tocantins, such as the Dianópolis regional office.



### 3 DISCUSSION

The pent-up demand for Speech Therapy and Occupational Therapy in Gurupi, evidenced by the estimate of 3,200 individuals affected by neurodivergences and psychomotor disabilities and a shortage of 37 qualified professionals (according to the 2022 Census and regional data), reflects a national gap that worsens in the North and Midwest, where less than 10% of courses in these areas are concentrated (Higher Education Census 2022). The inauguration of the Monsenhor Geraldo Torres Specialized Rehabilitation Center (CER) on June 3, 2025, equipped with early stimulation rooms, hydrotherapy and full accessibility, represents a significant advance, serving 60% of the regional population (approximately 150,000 inhabitants). However, the limitation of specialized personnel compromises its full capacity, reinforcing the need for local training through UnirG. The new legislation that requires the systematic collection of data on disorders and neurodivergences (Ordinance GM/MS No. 3,224/2023) underlines the urgency of trained professionals, a role that UnirG is able to assume, in line with the National Curriculum Guidelines revised in 2024.

The potential for transferring resources from the Unified Health System (SUS), estimated at R\$ 6,000,000 per year to Gurupi and consortium municipalities, stems from the projected increase of 500 patients/month in the CER, integrated into the SUS network. Historically, intergovernmental transfers from the SUS have accompanied increases in regional demand, such as the 70% recorded in 2007 (SESAU-TO Report, 2024), but persistent inequalities in the allocation of resources demand efficiency, especially with 40% allocated to the CER infrastructure.

The budget proposal detailed in Annex 2, with initial costs of R\$ 5,800,000 (infrastructure 40%, personnel 30%, equipment 20%, training 10%), suggests financial viability, enhanced by the R\$ 4.2 million per year in estimated additional transfers. Criticism of the official narrative points to risks of chronic underfunding, aggravated by dependence on public resources, but the government consortium of southern Tocantins and the proactive management of UnirG, evidenced by the elevation to university in 2018, mitigate these vulnerabilities, promoting local resilience and sustainable development to date.

### 4 FINAL CONSIDERATIONS

The implementation of the Speech Therapy and Occupational Therapy courses at UnirG represents a strategic response to the social, educational and economic demands of southern Tocantins. Socially, it will serve a current population of 3,200 individuals with





neurodivergences and psychomotor disabilities, reducing the pent-up demand for 37 professionals and strengthening inclusion and preventing a total care of more than 15 thousand people to be diagnosed and treated by 2035. This action integrated the installation of the Specialized Rehabilitation Center - CER, inaugurated on June 3, 2025, which will serve 60% of the region (150,000 inhabitants). Educationally, it positions UnirG as a training hub in the North and Midwest, where less than 10% of the courses in these areas exist (2022 Census), aligning with the DCNs and the legislation on neurodivergence data, with a solid schedule (2025-2028) to train 40 vacancies per course. Economically, the R\$ 6,000,000 per year of the SUS, with a potential of R\$ 4.2 million in additional transfers. Even considering the estimated initial costs of R\$ 4,120,000 for the first two years, it is essential to guarantee the infrastructure, faculty and resources necessary at UnirG, ensuring that the courses meet the requirements of the National Curriculum Guidelines (DCNs) and the State Council of Education of Tocantins (CEE/TO). This projection reflects a balanced allocation that takes advantage of the integration with the Monsenhor Geraldo Torres Specialized Rehabilitation Center (CER) in relation to infrastructure and laboratories of academic practices, where it is currently already managed by the University of Gurupi.

This initiative consolidates UnirG as an inducer of sustainable development, promoting inclusion, quality education and regional economic growth.

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## APPENDIX A: INSTITUTIONAL SCHEDULE FOR THE IMPLEMENTATION OF SPEECH THERAPY AND OCCUPATIONAL THERAPY COURSES - UNIRG

Proposed Institution: University of Gurupi (UnirG)

Thematic Area: Collective Health / Public Policies / Regional Development

Date: July 2025

**Table 11**

### *Deployment Timeline (2025-2028)*

Stage	Period	Share	Responsible	Status/Notes
Initial Planning	Aug-Sep 2025	Preparation of the pedagogical project and demand analysis (2022 Census and CER)	Superior Council Academic (CONSUP), Coordination of Health	Immediate start, aligned to the current date
Consultation of the DCNs and MEC Standards	Oct-Dec 2025	Alignment with Curriculum Guidelines (CNE/CES Opinion 2024)	Curriculum Committee, Legal Counsel	Review based on Speech Therapy and Occupational Therapy
Internal Approval	Jan-Mar 2026	Submission to CONSUP and approval of the Development Plan Institutional (PDI)	Rectory, CONSUP	Requires autonomy from UnirG for new courses
Sending to the CEE/TO	Apr-Jun 2026	Protocol of the project in the State Council of Education Tocantins	Academic Secretariat, Legal Counsel	Management Evaluation, Infrastructure, and Faculty
EEC/TO Technical Evaluation	Jul-Dec 2026	Technical visit of the CEE/TO to verify physical structure and Laboratories	Team CEE/TO Technique, UnirG	Based on 2018 criteria (e.g., labs)
EEC/TO approval	Jan-Mar 2027	Issuance of opinion and resolution of accreditation of Courses	CEE/TO, UnirG Rectory	Initial validity of 3-5 years
Hiring and Training	Apr-Sep 2027	Recruitment of teachers (minimum 50% masters/doctors) and Training	Coordination of Courses, HR UnirG	Alignment with MEC requirements
Infrastructure Adequacy	Oct 2027- Mar 2028	Expansion of Laboratories and teaching clinics (e.g.: CER integration)	Direction from Campus Infrastructure Sector	Use of estimated SUS resources (R\$ 6M)
Selection of Students	Apr-Jun 2028	Launch of public notice and selection process (ENEM or vestibular)	Entrance Exam Commission, Secretariat Academic	Start with 40 vacancies per course
Start of Classes	Jul 2028	Official launch and beginning of the 1st semester	Rectory, Coordinators of Courses	Initial monitoring by the CEE/TO
MEC Initial Assessment	2026	MEC's first visit for Preliminary Course Concept (CPC)	INEP/MEC, UnirG	After 1st year, based on indicators

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