

THEORETICAL ARTICLE/ESSAY

Extension activities in nursing: Exceptional measures during the COVID-19 pandemic

Atividades de extensão em enfermagem: Medidas excepcionais em tempos de pandemia por COVID-19

Actividades de extensió en enfermeria: medidas excepcionales en tiempos de pandemia por COVID-19

Maria da Conceição Gonçalves Marques Alegre de Sá ¹

 <https://orcid.org/0000-0003-4095-8822>

Elaine dos Santos Santana ²

 <https://orcid.org/0000-0002-5550-8018>

João Luís Alves Apóstolo ^{1,2,3}

 <https://orcid.org/0000-0002-3050-4264>

Paulo Joaquim Pina Queirós ^{1,2}

 <https://orcid.org/0000-0003-1817-612X>

Rosa Carla Gomes da Silva ^{3,4}

 <https://orcid.org/0000-0002-3947-7098>

¹ Nursing School of Coimbra (EEnfC), Coimbra, Portugal

² Health Sciences Research Unit: Nursing (UICISA: E), Nursing School of Coimbra, Coimbra, Portugal

³ Centre for Evidence Based Practice: A JBI Centre of Excellence (PCEBP), Coimbra, Portugal

⁴ Center for Health Technology and Services Research (CINTESIS), Nursing School of Porto, Porto, Portugal

Corresponding author

Elaine dos Santos Santana

E-mail: elainesantana@esenfc.pt

Received: 02.05.22

Accepted: 24.02.23

Abstract

Background: The Nursing School of Coimbra knows the importance of extension units in the articulation between teaching, research, and extension. For this reason, the School has a Service Provision and Community Extension Activities Coordination Unit (UPSCCAEC).

Objective: To describe the work developed by the UPSCCAEC in 2019 and 2020, highlighting its adaptive capacity in the face of the COVID-19 pandemic.

Main topics under analysis: The reports of activities carried out within the scope of the UPSCCAEC in 2019 and 2020 were used as a data source. A comparison was made with findings in the two years, discussed based on the available theoretical framework and considering the COVID-19 pandemic and its impact on Higher Education Institutions' training, research, and extension processes.

Conclusion: The UPSCCAEC's activity in those years contributed to the institution's excellence and academic development and successful response to the current societal challenges in a time of great instability due to the COVID-19 pandemic.

Keywords: nursing; education higher; learning; community-institutional relations; COVID 19 pandemic

Resumo

Enquadramento: A Escola Superior de Enfermagem de Coimbra, ciente do valor das unidades de extensão na articulação do tripé Ensino-Investigação-Extensão tem na sua estrutura a Unidade de Prestação de Serviços à Comunidade e Coordenação das Atividades de Extensão na Comunidade (UPSCCAEC).

Objetivo: Descrever o trabalho desenvolvido pela UPSCCAEC em 2019 e 2020, destacando a sua capacidade adaptativa mediante a pandemia pela COVID-19.

Principais tópicos em análise: Utilizaram-se como fonte de dados os relatórios de atividades realizadas no contexto da UPSCCAEC nos anos civis de 2019 e 2020, e realizou-se a comparação com achados nos dois anos, os quais foram discutidos à luz do referencial teórico disponível, considerando a pandemia COVID-19 e o impacto a nível das Instituições do Ensino Superior (IES) em seus processos formativos, de investigação e extensão.

Conclusão: A atividade da UPSCCAEC nos referidos anos contribuiu para a afirmação da instituição, do desenvolvimento académico, e constituiu recurso de excelência na resposta aos atuais desafios da sociedade, particularmente num período caracterizado por enorme turbulência resultante da pandemia COVID-19.

Palavras-chave: enfermagem; educação superior; aprendizagem; extensão comunitária; pandemia COVID-19

Resumen

Marco contextual: La Escuela Superior de Enfermería de Coímbra, consciente del valor de las unidades de extensión en la articulación del trípede Enseñanza-Investigación-Extensión, cuenta en su estructura con la Unidad de Prestación de Servicios a la Comunidad y Coordinación de Actividades de Extensión Comunitaria (UPSCCAEC).

Objetivo: Describir el trabajo desarrollado por la UPSCCAEC en 2019 y 2020, y destacar su capacidad de adaptación frente a la pandemia por COVID-19.

Principales temas en análisis: La fuente de datos utilizada fueron los informes de las actividades realizadas en el marco de la UPSCCAEC en los años civiles de 2019 y 2020, y se realizó una comparación con los hallazgos en ambos años, los cuales se discutieron considerando el marco teórico disponible, la pandemia del COVID-19 y el impacto en las Instituciones de Educación Superior (IES), en sus procesos de formación, investigación y extensión.

Conclusión: La actividad de la UPSCCAEC en estos años contribuyó a la afirmación de la institución, al desarrollo académico y constituyó un recurso de excelencia para responder a los desafíos actuales de la sociedad, particularmente en un período caracterizado por enormes turbulencias derivadas de la pandemia del COVID-19.

Palabras clave: enfermería; educación superior; aprendizaje; relaciones comunidad-institución; pandemia COVID-19



How to cite this article: Sá, M. C., Santana, E. S., Apóstolo, J. L., Queirós, P. J., & Silva, R. C. (2023). Extension activities in nursing: Exceptional measures during the COVID-19 pandemic. *Revista de Enfermagem Referência*, 6(2), e22049. <https://doi.org/10.12707/RV122049>



Introduction

Higher Education Institutions (HEIs) have a mission towards society to provide their students with the best possible training, foster innovation in research and knowledge within the community, and have the social responsibility to contribute actively and timely to community-based transformational actions (Brito et al., 2021).

Extension services are transversal to several teaching units/courses of HEIs and aim to bring their best available knowledge or services, for the common good, to society. From this perspective, the vision of extension services is to seek solutions to people's and society's problems and allow for the development of students' competencies through real-world learning and knowledge transfer to society in general and citizens in particular (Brito et al., 2021; Conceição et al., 2020).

These extension services are practiced by various teaching units worldwide, possibly with a greater emphasis in Brazil. There are several extension service initiatives in different areas, such as agriculture (Camargo & Bocca, 2019), physical therapy (Ferreira et al., 2021), and nursing (Amado, 2017; Cavalcante et al., 2019).

Portuguese HEIs recurrently use extension services as a teaching, research, and recognition strategy for consultancy and training. These HEIs' social responsibility responses are used in different areas, with a clear emphasis on Health (Amado, 2017). Portuguese nursing schools also have a strong tradition of developing a social responsibility mission by leading their students during their learning processes in clinical placements to develop community-based teaching activities and research studies or community intervention projects with more vulnerable targets (Amado, 2017; Brito, 2018; Brito et al., 2017). In addition to promoting community development through knowledge transfer, products, or services, extension services allow responding to citizens' needs and providing better conditions or resources, with a view to innovation and development through the close relationship between HEIs and society.

Thus, the extension service activities allow the production and dissemination of scholarship, leading to a praxis of academic knowledge based on the exchange of knowledge between higher education and society (Conceição et al., 2020; Silva et al., 2018). Therefore, professional training, especially in health, such as nursing training, foresees the development of teaching-learning competencies that allow, through education, research, and extension, the approximation and transversal dialogue with the social, cultural, psychological, and health contexts of this training process (Silva et al., 2018; Nobre et al., 2017).

According to Paulo Freire (2006), the extension can be understood as a cultural activity with the co-participation of individuals in the learning process. For this reason, it should not be verticalized in a way that "objectifies" the subject and disregards the knowledge of the community. Extension activities stimulate sharing practices centered in the real world and close to the citizen. These practices stimulate HEIs and result in quality education for students and actions for the common good of society. This

notion breaks the vision that knowledge belongs within the walls of scientific institutions and that citizens are merely passive subjects.

In this logic, the extension units of HEIs are the articulation of the Teaching-Research-Extension tripod through initiatives promoting the public welfare and the development of teaching and research (Moraes et al., 2018; W. P. Silva, 2020). The Nursing School of Coimbra [Escola Superior de Enfermagem de Coimbra (ESEnfC)] knows the importance of extension units in the articulation between teaching, research, and extension. For this reason, the School has a Service Provision and Community Extension Activities Coordination Unit (UPSCCAEC), which, according to its statutes, is a differentiated Unit that aims at coordinating the community service provision projects together with the President and the coordinators of the Scientific-Pedagogical Units (UCP; ESEnfC, 2020). The ESEnfC is an HEI dedicated to nursing education in Portugal, committed to promoting global health and sustainable development through comprehensive nursing education, but also dedicated to research, innovation, and the creation and dissemination of a scientific culture. The different projects developed by the UPSCCAEC of the ESEnfC include teachers and students and help to meet societal challenges, transferring and developing the scientific and practical knowledge that characterizes the ESEnfC (ESEnfC, 2020). The community services provided by the UPSCCAEC contribute to the development of the institutional mission and reaffirm one of the main areas of social responsibility of the ESEnfC. In addition to promoting citizenship and health education, the School provides innovative services (ESEnfC, 2020). In view of the above, this article aims to describe the work developed by the UPSCCAEC in 2019 and 2020, highlighting its adaptive capacity in teaching/learning processes in the face of the SARS-CoV-2 pandemic.

Development

The work developed by the UPSCCAEC will be presented based on documentary analysis. The data source used was reports of activities carried out under the scope of this unit in 2019 and 2020, which aggregate all the extension activities developed by the ESEnfC. The activity reports submitted to the approval of the President of the ESEnfC follow the guidelines in paragraph f) of Article 70 of the Statutes of the ESEnfC according to Law No. 62/2007 of 10 September and intend to give an account of the work developed in the UPSCCAEC, given the priorities determined for the Axis for Extension and Service Provision to the Community in the Activity Plan: Strategic Orientation of the ESEnfC for 2019 and 2020.

These reports are based on information from the reports of each project registered in the UPSCCAEC provided by their coordinators and data from the Unit itself. They seek to disseminate the results from the activities carried out by the various registered projects and highlight the specialized service provision activities carried out by some of the teachers.



For data analysis, a comparison was made with the findings of the years 2019 and 2020, which were discussed in the light of the theoretical framework available on the topic and considering the COVID-19 pandemic experienced by the world population and its massive impact on various dimensions of society, including the HEIs and their training, research, and extension processes.

Considering that there was no contact with those involved in the projects and that data was exclusively collected from the reports of activities, there was no need for an ethical review of this study.

Teachers and extension activities

The extension projects registered in 2019 and 2020 involved teachers from the eight UCPs of the ESEnfC, corresponding to 78 teachers each year. Of these 78

teachers, in 2019, 40 were involved in more than one project, and in 2020, 35 teachers were involved in 2 \geq projects.

The team of extension projects comprises full-time ESEnfC faculty members and other professionals: guest assistants, guest lecturers, retired professors, nurses, and other professionals from partner institutions (Table 1).

Students and extension activities

The participation of students in the projects has been a focus of the ESEnfC and has been significant, especially in the Undergraduate Degree in Nursing (CLE). The projects developed in 2019 had the effective participation of 569 students out of 1449. In 2020, despite the pandemic having contributed to a decrease in extension activities, 1150 students were involved (in a total of 1472; Table 1).

Table 1

Characterization of the team of extension projects in 2019 and 2020

	2019 <i>n (%)</i>	2020 <i>n (%)</i>
Teachers	78/91(85.71%)	78/93 (83.87%)
Guest assistants	14/76 (18.42%)	8/117 (6.84%)
Guest lecturers	3/19 (15.79%)	12/27 (44.44%)
Nurses	20	36
Retired professors	2	-
Professionals from partner institutions	1	6
Non-teaching staff	-	1
Students	569/1449 (39.27%)	1150/1472(78.12%)
Total	687	1291

Note. *n* = Absolute frequency; % = Relative frequency.

The ESEnfC is a national and international institution of excellence with the mission of providing the highest-level nursing education in Portugal and is committed to global health and sustainable development. Involving students in curricularized community extension projects is a pedagogical strategy that contributes to the School's mission and, therefore, a priority. At this level, the ESEnfC has consistently sought to ensure transformative learning for its students. Being endorsed by literature, extension projects allow students to develop skills and knowledge through multidimensional experience with reality in the community. This strategy combines theoretical knowledge, discussed in the classroom, and practice and simultaneously encourages and enhances the students' critical-reflexive sense (Amado, 2017; Moraes et al., 2018; Silva et al., 2018).

In addition, the cooperation between students, teachers, guest assistants, guest lecturers, nurses, and other professionals from partner institutions allows them to exchan-

ge experiences and review values and knowledge. This interaction and cooperative dialogue, aiming at better pedagogical processes and social responsibility, helps to mitigate the distance between HEIs and the community, promoting more sustained global health and the country's economic, social, and cultural development (W. P. Silva, 2020).

COVID-19 pandemic and extension activities

The overall analysis of the work done should highlight the COVID-19 pandemic experienced from March 2020 and its impact on the sudden reduction of activities planned in the registered projects.

In 2019, 27 extension projects were registered in UPSC-CAEC and carried out the planned activities. However, in 2020, given the restrictions on health education activities in partner institutions, only 17 of the 26 active UPSC-CAEC projects could develop the previously planned extension activities (Table 2).

Table 2*Data from community extension projects in 2019 and 2020*

	2019 n (%)	2020 n (%)
Projects registered in UPSCCAEC	27 (100)	26 (100)
Active projects in UPSCCAEC	27 (100)	17 (65.38)
Projects Integrated into Course Units	9 (33)	14 (54)
Projects associated with research	18 (66.66)	7 (29.92)

Note. UPSCCAEC = Community Service Provision and Community Extension Activities Coordination Unit; *n* = Absolute frequency; % = Relative frequency.

In 2019, 33% of the registered projects were integrated into course units (Table 2). As of March 2020, the strong impact of the SARS-CoV-2 pandemic prevented the connection of extension projects to clinical teaching course units, except for the 8th-semester clinical teaching course unit, which will be better presented in the “Exceptional measures during the pandemic” section of this article.

The instability of health institutions and their efforts to fight COVID-19 led to the suspension of clinical placements from the 2nd semester onwards and the cancellation of the extension activities of various projects from March onwards, thus preventing the students’ clinical placements planned for the rest of the academic year of 2019/2020 (except for Course Unit Reformulation in exceptional cases).

However, despite the constraints in 2020, 14 of the 26 active extension projects conducted activities in a close connection with the teaching area, corresponding to 54% of the active extension projects.

Research in extension activities

Concerning the association of extension projects with research, in 2019, 18 of the 27 projects (66.7%) had research-associated activities. However, in 2020, the research associated with the extension projects reflects the sudden decrease in community intervention activities

due to the pandemic, and of the 26 extension projects, only seven developed research-associated activities, that is, 30% of the projects.

Within this scope, the largest group of students involved in research associated with the UPSCCAEC projects in these years are CLE students through the research initiation rotation program (RII) (Cardoso et al., 2022), followed by master’s, doctoral, and post-doctoral students.

The combination of extension and research, especially in research initiation, should represent for all students, teachers, and HEIs a connection of the pedagogical proposal across all stages and levels of the academic pathway (Moraes et al., 2018).

An ideal extension model should provide real contributions to citizenship and social transformation. Developing it brings challenges, as does the relationship between teaching and research, aiming to promote health gains in local communities (Brito, 2018).

Service provision areas in extension activities

The service provision and community extension activities carried out in these years comprise the areas of community intervention, training, advisory, and consulting (Table 3). The community intervention activities developed under the extension projects in 2019 represented 3127 sessions with 11851 beneficiaries, while in 2020, 127 sessions were held with 10230 beneficiaries (Table 3).

Table 3*Characterization of the service provision and community extension activities*

		2019	2020	Total
		<i>n</i>	<i>n</i>	<i>n</i>
Community Intervention	Sessions	3127	127	3254
	Beneficiaries	11851	10230	22081
	Social solidarity projects	2	1	3
Training	Sessions	90	67	157
	Beneficiaries	924	1999	2923
Advisory	Educational Institutions	53	3	56
	Social Solidarity	-	1	1
Consulting	Educational Institutions	27	-	27
	Corporation	-	1	1
Institutions connected to the extension projects	Educational Institutions	275	28	
	Health Institutions	17	77	
	Social Solidarity Institutions	18	8	
	Municipalities	2	9	
	Public Venues	10	-	
	Other institutions	9	8	

Note. *n* = Absolute frequency.

Also, in this area of intervention, there was participation in social solidarity projects ($n = 2$, in 2019). The social solidarity activities, organized by the UCP of Fundamental Nursing and the Entrepreneurship Office, fell within the scope of pilgrimage, social exclusion, poverty, and the Food Bank campaign.

In 2020, only one project integrated the social solidarity intervention area and conducted activities in partnership with the Coimbra Municipal Center for Social Integration and the Acreditar Association, targeting adult people living in poverty. The themes explored included health risk assessment, awareness-raising on respiratory etiquette and social distancing, street patrol (street actions for vulnerable populations), and nursing consultations on healthy habits. In 2019, 90 training sessions were held with 924 individuals, including students, teachers, other professionals from educational institutions (such as secondary and primary education institutions), nurses, parents, and older citizens. In 2020, the activities in this area were conducted in 67 sessions with 1999 people (Table 3). The training in both years focused on preventing risky behaviors, promoting healthy behaviors in young people, elderly health, maternal health, and resuscitation.

The third area of the projects' extension activities includes providing advisory and consultancy services.

In 2019, advisory activities contemplated 53 educational institutions and one social solidarity institution. In 2020, advisory activities were carried out in three of the 53 educational institutions that are partners with the ESEnfC and one social solidarity institution.

Consultancy service provision was different in the two years under review. In 2019, the consultancy service was requested by 27 educational institutions, and in 2020, only required by corporations. In this context, consultancy and advisory services in 2019 were provided within the scope of five projects, mostly involving people from the education and local government areas, while in 2020, it only included three extension projects in the business and social solidarity sectors. The community intervention and training areas, which characterize the services and extension activities developed by the UPSCCAEC, endorse the constitution of university extension as a form of social approach and a space of dialogue and interaction with the community based on their needs while reaffirming the university's commitment to social transformation (W.P. Silva, 2020). Extension actions of this nature are in line with the Sustainable Development Goals (SDGs) of the United Nations (United Nations, 2020) in the sense of promoting behavior changes, adoption of healthy habits for a better quality of life, and health and education.

The advisory and consultancy services reaffirm the transition of the extension not only focused on healthcare provision but also on building a culture of innovation and development, leading to essential changes in the academic and business sectors sustained by the exchange of experiences (Conceição et al., 2020; W. P. Silva, 2020).

Extension activities and their partners

The extension project activities have been developed in close connection with care institutions for the well-known

inter-institutional gains, but particularly for allowing the articulation between teaching, clinical practice, and research.

Educational and social solidarity institutions are the primary professional organizations connected to the projects during 2019, followed by health institutions. In 2020, the institutions mainly were health institutions, the majority being primary health care units, followed by educational institutions, including the three levels of education (primary, secondary, and higher education) and vocational education, municipal institutions, particularly city councils, social solidarity institutions and also other institutions, namely associations.

Considering that social transformation and democratization of knowledge are very positive results of the actions and services provided, the ESEnfC has sought to establish solid partnerships with the community. The concern for establishing a link between extension and the community should reflect strong partnerships with the various community institutions where such services are provided (Nobre et al., 2017). Moreover, the mission of social sustainability lacks the creation of networks and the participation of public structures in activities and projects that respond to society's health needs. The work of the UPSCCAEC is developed for this purpose and has also been granted merit in the literature (Amado, 2017).

Exceptional measures during the COVID-19 pandemic

The COVID-19 pandemic prevented organizing the CLE 8th-semester clinical placements in health institutions on a regular basis during the school year 2019/2020, as it had happened until then. The new circumstances required exceptional measures to carry out the optional area of the clinical training course unit, which the ESEnfC

Scientific Technical Board approved. Throughout the training course, learning conditions were ensured so that students could develop knowledge and skills through social interaction and under the pedagogical guidance of a teacher who played the role of learning facilitator.

In this context, the reformulation of the 8th-semester course unit of the CLE is composed of two components: compulsory and optional – Course Unit Reformulation in exceptional cases.

After this course unit's reformulation, the coordinators of the community extension projects were allowed to elaborate proposals for participation in the optional area of the 8th-semester clinical teaching course unit for Course Unit Reformulation in exceptional cases. The proposals elaborated by the coordinators of the extension projects and approved by the Scientific Technical Council were based on student participation in health extension activities to develop knowledge and skills planned for this clinical teaching under the guidance of the teacher(s) of the project(s) and the course unit's pedagogical supervisor. In this sense, it is clear how dynamic the extension concept can be, considering its capacity for adaptation and articulation to meet society's needs and changes (A.R. Silva, 2020). In this particular case, the opportunity was raised by the new pandemic scenario aggravated by the need for CLE students to finish their education because health institutions, among others, and nursing homes lacked human resources in general and nursing staff in particular.

The contribution of the extension projects to the course unit reformulation in exceptional cases consisted of nine proposals that allowed 152 students to complete their optional area of the CLE 8th-semester clinical teaching course unit for a total of 932 hours, involving 61 teachers (Table 4).

Table 4

Extension projects' participation in the optional area of the CLE 8th-semester clinical teaching course unit

Project name	Workload (hours)	Students involved <i>n</i>	Teachers involved <i>n</i>
White Ribbon project - Use of e-health technologies to prevent violence in intimate relationships	170	10	6
Anticipate the Experience of Being Elderly	50	10	6
COVID19-MOVee project. brief and intensive intervention for young and older people about COVID-19 safety precautions	140	26	14
Being healthy – promotion of sexual and reproductive health	100	4	4
Education in Humanitude Care project	30	52	2
Motivation for Entrepreneurship: Poliempreeude	40	8	6
Promoting older people's mental health in difficult times – <i>Com Tacto</i> project	90	18	9
Redesign of nursing information systems using ICNP. Documentation standard in chronic disease management	170	15	7
Tender adventure – Supporting the transition into parenthood using digital tools	142	9	7
Total	932	152	61

Note. *n* = Absolute frequency

The contribution of the extension projects to this course unit was characterized by students' involvement and innovation, making the learning process operational and attractive and enabling multiple learning. It was a twice innovative experience for the learning methodologies it used and the results produced and perceived throughout the students' experiences (Table 5).

Similar reports of the contribution of extension to student learning are positively identified in the scientific literature (Amado, 2017; Silva et al., 2018). The actions held by such studies included the development of handbooks, brochures, guides, and videos to improve patients' understanding and

adherence to nursing interventions. In addition, through the exercise and encouragement of effective communication, extension services have been shown to promote better theoretical-practical understanding and skills development, constituting a basis for evidence-based care and sustained in human care and critical thinking, which will encourage future professionals to be more committed to the community (Amado, 2017; Silva et al., 2018).

Despite taking place in a new scenario due to the new challenges, these extension actions endorse social responsibility and the critical sense of citizenship whose development is made possible by the university extension.

Table 5

Instruments developed within the scope of the optional area of the CLE 8th-semester clinical teaching – Course Unit reformulation in exceptional cases

Project	Instruments for community intervention developed by the students
White Ribbon project - Use of e-health technologies to prevent violence in intimate relationships	Development of a Frequently Asked Questions (FAQ) list, quiz, online library, and testimonies of young people who have experienced violence to be integrated into the project's website.
Anticipate the Experience of Being Elderly	Planning, execution, and evaluation of an extension project and a research study associated with the intervention project and the social and family implications of developing this type of project.
COVID19-MOVEe project. brief and intensive intervention for young and older people about COVID-19 safety precautions	Development and validation of a motivational intervention to improve individual and collective protection measures for preventing COVID-19 infection in 18-35-year-old 65+-year-old groups. It served as a basis for funding applications in Portugal and Brazil.
Being healthy – promotion of sexual and reproductive health	Development of technological tools for health professional and student performance in health education to build a website.
Education in Humanitude Care project	Relational care procedures to facilitate care provision in complex situations and avoid agitated behaviors, opposition/refusal of care, promoting autonomy and self-care.
Motivation for Entrepreneurship: Poliempreende	Development of a project pitch. The projects were presented on 7 July 2020 at the Poliempreende Regional Competition before a Regional Jury.
Promoting older people's mental health in difficult times – <i>ComTacto</i> project	Creation of a psychosocial care algorithm. Survey of community resources and audiovisual, web, and social network resources of the older people in the Years of Life group. Preparation of interventions (breathing exercises, relaxation, normalization messages about fear and anxiety, among others) using digital technologies. Construction of a care manual and care training of participants.
Redesign of nursing information systems using ICNP. Documentation standard in chronic disease management	Development of a support manual for professionals regarding foci centered on patients from the Community Care Units (CCUs) of the ACES Baixo Mondego.
Tender adventure – Supporting the transition into parenthood using digital tools	Design and implementation of digital educational resources for literacy promotion aimed at couples experiencing processes of transition to parenthood during the prenatal and postpartum periods.

Studies conducted during the pandemic revealed the challenges faced by the HEIs in designing and articulating responses to meet society's old and new needs. They also showed the importance of extension and the transforming power of educational institutions in health promotion and the relationship with the community (Diniz et al., 2020). With the purpose of ensuring students' learning

and skill development and solving societal problems, the different activities and projects promoted by the extension services sought to meet the health needs of adults, children, and older people.

These activities covered the most diverse themes related to health in general, well-being, mental health, quality of life, education, violence, human rights, and treatment

for SARS-CoV-2 infection. This opportunity reaffirmed the HEIs' social commitment to society, and teachers and students outlined an effective, creative, and innovative strategy, reinventing themselves with the help of technological tools and developing/enhancing skills, as stated by Diniz et al. (2020), Costa (2020), and A.R. Silva (2020). Thus, in line with the principle of integrality, it is understood that the work developed through the extension projects is based on the paradigm of rupture of fragmented practice and defends the premise that the curriculum is not reduced to a product resulting from the whole. In addition, as has been highlighted in the scientific literature, with the experience of expanding community liaison activities, students experience and reflect on fundamental factors for planning and implementing quality care (Costa, 2020; A.R. Silva, 2020), which, even when faced with adverse situations imposed by a new reality, allowed them to meet the social and learning challenges through the actions proposed by the course unit reformulation (Gadotti, 2017).

Conclusion

The work developed under the UPSCCAEC extension projects reflects the unit's effective presence in the community. The activities carried out and the services provided by the UPSCCAEC in 2019 and 2020 contributed significantly to the development of the institution, its teachers, students, society, economy, and science. Despite the decrease in active projects and the pandemic's impact in 2020, it was possible to achieve much higher indicators than expected in terms of community intervention and training with many beneficiaries, as well as in the advisory and consulting services provided and partner institutions involved.

The path taken to interconnect teaching, extension, and research has revealed the need for a better articulation between the planning proposed for the course units and students' development in intervention/training projects in which they participate, namely in terms of syllabus and evaluation.

Given that extension constitutes a cultural, scientific, and educational area, the services provided by the UPSCCAEC help bring the academic community and society closer together and create synergies because they enhance each element's contributions inside and outside the HEI, establishing a relationship of multiple benefits.

Besides promoting innovation, social responsibility, and citizenship, the UPSCCAEC seeks to respond to the challenges in higher education to relate education with the country's economic, social, and cultural reality and break the paradigm of content reproduction. The unit also seeks to involve students in research and entrepreneurship to design adequate responses to society's current and future problems, preparing them for unpredictability and an inclusive and multicultural future.

In conclusion, the UPSCCAEC's activity in 2019 and 2020 contributed to the institution's excellence and academic development and successful response to the current

societal challenges and the demands of competitiveness in a time of great instability due to the COVID-19 pandemic. In this sense, future research should focus on assessing the impact of the extension activities on teaching, faculty development, and population health and highlight the social and economic value of the extension activities conducted by HEIs in the intervention areas.

Author Contributions

Conceptualization: Sá, M. C., Santana, E. S., Silva, R. C.

Data curation: Santana, E. S., Silva, R. C.

Methodology: Sá, M. C., Santana, E. S., Silva, R. C.

Writing – original draft: Sá, M. C., Santana, E. S., Silva, R. C.

Writing – review and editing: Sá, M. C., Santana, E. S., Queirós, P., Apóstolo, A., Silva, R. C.

Acknowledgments

The authors would like to thank the information provided in the reports of the extension projects registered in the Service Provision and Community Extension Activities Coordination Unit.

References

- Amado, J. D. (2017). *A importância dos serviços de extensão no ensino de enfermagem: A experiência do centro de enfermagem da católica* [Tese de doutoramento]. Universidade Católica Portuguesa.
- Brito, H. R., Alves, E. D., Cruz, E. R., Carneiro, S. V., Bezerra, M. D., Carvalho, M. M., Câmara, C. M., Vidal, A. A., & Carneiro, S. N. (2021). Extensão universitária e ensino em saúde: Impactos na formação discente e na comunidade. *Brazilian Journal of Development*, 7(3), 29895-29918. <https://doi.org/10.34117/bjdv7n3-622>
- Brito, I. (2018). Participatory health research in the education of health and social work professionals. *Participatory Health Research*, 41-54. https://link.springer.com/chapter/10.1007/978-3-319-92177-8_4
- Brito, I. S., Martins, M. E., Daher, D. V., Saboia, V. M., Acioli, S., & Berardinelli, L. M. (2017). Desafios e resultados da pesquisa-ação participativa no campo da promoção da saúde e da enfermagem. *Revista Estreia diálogos*, 2(2), 12- 26. https://www.estreia dialogos.com/_files/ugd/eb8d33_f15e9ef329c547b09c45260f5324ba9f.pdf
- Camargo, R. A., & Bocca, M. F. (2019). Mercados institucionais para a agricultura familiar e a extensão universitária. *Revista Ciência em Extensão*, 15(4), 47-66. https://ojs.unesp.br/index.php/revista_proex/article/view/1827/2330
- Cardoso, M. L., Louçano, C. C., Cardoso, D. F., Silva, R. C., & Rodrigues, M. A. (2022). Rotações de iniciação à investigação: Programa de iniciação à investigação para estudantes de licenciatura. *Revista de Enfermagem Referência*, 5(9), e21021. <https://doi.org/10.12707/RV21021>
- Cavalcante, Y. A., Carvalho, M. T., Fernandes, N. T., Teixeira, L. C., Moita, S. D., Vasconcelos, J., & Moreira, A. C. (2019). Extensão universitária como ferramenta no processo de ensino e aprendizagem na formação do enfermeiro. *Revista Kairós-Gerontologia*, 22(1), 463-475. <https://doi.org/10.23925/2176-901X.2019v22i1p463-475>
- Conceição, M. B., Morgado, E. M., Silva, L. L., & Barros, V. F. (2020).



- Artes, educação e extensão à comunidade. *Cadernos de Educação Tecnologia e Sociedade*, 13(1), 1-9. <http://dx.doi.org/10.14571/brajets.v13.n1.1-9>
- Costa, C. C. (2020). Projeto de extensão “enriquecimento da aprendizagem para o desenvolvimento de habilidades”: Uma presença próxima, mesmo em tempos de pandemia. *Conecte-se! Revista Interdisciplinar de Extensão*, 4(7), 15-22. <http://periodicos.pucminas.br/index.php/conecte-se/article/view/23373/16667>
- Diniz, E. G., Silva, A. M., Nunes, P. H., Franca, W. W., Rocha, J. V., Silva, D. V., Santos, V. H., Araújo, H. D., Albuquerque, M. C., & Lima A. A. (2020). A extensão universitária frente ao isolamento social imposto pela COVID-19. *Brazilian Journal of Development*, 6(9), 72999-73010. <https://doi.org/10.34117/bjdv6n9-669>
- Escola Superior de Enfermagem de Coimbra. (2020). *Manual da qualidade versão 1.4*.
- Ferreira, F. R., Ferreira, É. M., & Vaz, D. V. (2021). Extensão universitária na interface virtual: Estratégias de aprimoramento docente e discente do curso de fisioterapia da Universidade Federal de Minas Gerais (UFMG). *Medicina (Ribeirão Preto)*, 54(Supl 1). <https://doi.org/10.11606/issn.2176-7262.rmrp.2021.184783>
- Freire, P. (2006). *Pedagogia do oprimido* (43ª ed.). Paz e Terra.
- Gadotti, M. (2017). Extensão universitária: Para quê. *Instituto Paulo Freire*, 15, 1-18. http://www.paulofreire.org/images/pdfs/Extens%C3%A3o_Universit%C3%A1ria_-_Moacir_Gadotti_fevereiro_2017.pdf
- Moraes, A., Guariente, M. H., Garanhani, M. L., & Carvalho, B. G. (2018). A formação do enfermeiro em pesquisa na graduação: Percepções docentes. *Revista Brasileira de Enfermagem*, 71(Supl 4), 1556-1563. <http://dx.doi.org/10.1590/0034-7167-2017-0511>
- Nobre, R. S., Moura, J. R., Brito, G. R., Guimaraes, M. R., & Silva, A. R. (2017). Vivenciando a extensão universitária através de ações de educação em saúde no contexto escolar. *Revista de APS*, 20(2), 288-292. <https://doi.org/10.34019/1809-8363.2017.v20.15703>
- Silva, A. R. (2020). Oportunidades para extensão universitária nos tempos de pandemia-COVID-19. *Revista Práticas Em Extensão*, 4(1), 40-41. <https://ppg.revistas.uema.br/index.php/praticasemextensao/article/view/2181/1603>
- Silva, M. B., Silva, R. A., Silva, M. L., Silva, J. M., Andrade, J. L., Brito, M. I., & Lopes, K. A. (2018). Ações de educação em saúde no combate às arboviroses. *Revista de Extensão da UPE*, 3(1), 5-9. <https://doi.org/10.56148/2675-2328reupe.v3n1.240.pp5-9>
- Silva, W. P. (2020). Extensão universitária. *Revista Extensão & Sociedade*, 11(2), 21-32. <https://doi.org/10.21680/2178-6054.2020v-11n2ID22491>
- United Nations. (2020). *Take action for the sustainable development goals*. <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>