Interprofessional work experience of health sciences students for diagnosing and intervening in risk factors for community partners' health in La Araucanía.

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Abstract.

This research describes the experience of interprofessional work of students from five different careers in the health area to develop diagnoses and interventions on risk factors for the health of community partners in the region of La Araucanía in Chile. Through the pedagogical strategy of Learning and Service, 230 students in their third year in the careers of Medical Technology, Kinesiology, Occupational Therapy, Speech Therapy, and Nutrition and Dietetics will address during the academic year 2023 the health problems of 20 groups determined as community partners in the Araucanía region. Through the standard plan course, Integrated Health Module I and II (MIS I, MIS II), in the first semester, students will obtain the necessary tools to carry out a Participatory Community Health Diagnosis (PCD), as well as methods of prioritization of risk factors for the health of community partners. Subsequently, in the second semester, they will be able to design an intervention plan agreed upon with the community agents according to the health requirements detected jointly. The students of different careers will integrate interprofessional health teams covering such requirements.

Keywords: interprofessional education, health promotion, preventive medicine, service-learning.

1 Introduction

Interprofessional Education is a pedagogical strategy in which members or students of two or more professions related to health or social care participate in learning among themselves, with others, and around others (Ugarte et al., 2021). It allows students to generate skills and share knowledge from different professional disciplines to address health problems with shared values and respect for the functions of health professionals (García Herrera et al., 2018; González Pascual et al., 2019).

Given the above, this research aims to systematize the experience of students from five different health careers on inter-professional work to diagnose and intervene in risk factors for the health of community partners in the Araucanía region in Chile.

2. Theoretical Framework.

The training of health professionals in the model of Competency-Based Education (CBE) is a training process oriented towards training that achieves the achievement of competent performances in students and thus that they integrated into different areas of people's work (Vera-Carrasco, 2015). From there, the pedagogical strategies of learning and service allow responding in an integrated manner to resolve community problems, generating a space for training in values for students (Maldonado-Rojas and Toro-Opazo, 2020).

On the other hand, participatory diagnosis constitutes a democratic opportunity for the entire community to participate. In this sense, community organizations should seek the broad and active participation of their members and, as far as possible, of the entire community, from the definition of problems to the formulation of conclusions. The community mustn't limit itself to acting as a "source of information," but, on the contrary, it knows and participates in formulating the objectives, methods, and results of the reality it is diagnosing (Geilfus, Frans, et al. 2002).

The objective of community action is the deepening of awareness and the strengthening of the community identity of residents in its individual and collective aspects (Moura et al., 2014).

3. Methodology.

The methodology of this research is of a mixed cross-sectional and descriptive nature. It will consist of two phases, of which the first one is in the analysis stage.

In the first phase, a systematization of the issues addressed in the participatory diagnosis developed by the students and community partners will be carried out, as well as the approach to the intervention strategies created. The students will form interprofessional groups of 10 to 12 students to cover 20 different community partners and, from there, propose participatory diagnoses and their respective intervention strategies over four months.

The second phase will investigate the perception and interprofessional experience of students and community partners through focus groups that collect the interprofessional expertise and the interaction with community partners. The sample of students will be composed of 230 students currently enrolled in the subject and coming from the careers of Kinesiology, Occupational Therapy, Speech Therapy, Medical Technology Nutrition, and Dietetics.

4. Results.

The Integrated Health Module (MIS) is developed in the third year of the careers of Kinesiology, Medical Technology, Nutrition and Dietetics, Speech Therapy, and Occupational Therapy, during the first and second semesters, under the educational model

of competencies. Sections are created, incorporating students from different careers, to generate interdisciplinary teams to intervene in various community partners through the pedagogical strategy of Service-Learning.

In this way, the subject in the first semester of 2023 covered 231 students, distributed in 5 sections that included students from the careers above. Table Nº1 summarizes the students for each section.

Table 1. Summary of students by race distributed in 5 sections.

Sections	Medical Technology	Nutrition and Dietetics	Occupational Therapy	Logother-apy	Physical therapy	Total
1	10 (21%)	5 (10%)	13 (27%)	4 (8%)	16 (33%)	48 (21%)
2	12 (26%)	7 (15%)	12 (26%)	5 (11%)	11 (23%)	47 (20%)
3	12 (25%)	6 (13%)	9 (19%)	6 (13%)	15 (31%)	48 (21%)
4	11 (24%)	9 (20%)	9 (20%)	4 (9%)	12 (27%)	45 (19%)
5	5 (12%)	10 (23%)	13 (30%)	6 (14%)	9 (21%)	43 (19%)
Total	50 (22%)	37 (16%)	56 (24%)	25 (11%)	63 (27%)	231 (100%)

Twenty subgroups (10 to 12 students in each interprofessional group) were formed to engage in field work with 20 community partners from different areas. Table Nº2 summarizes the community partners that participated in developing the initial diagnosis in the first academic semester.

Table 2. Community partners linked to the subject, first semester 2023.

	Community partners	Nº subgroups
1.	Centro Intercultural Mapuche Remolino	2
2.	Agrupación de Mujeres Emprendedoras de Temuco	1
3.	Agrupación de personas con Enfermedad de Parkinson. Familiares y Amigos	1
4.	Escuela Mundo Mágico (6º to 8º Elementary education)	5
5.	Liceo Metodista La Granja Nueva Imperial (1º and 2º Secondary education)	4
6.	Colegio Adventista de Temuco (1º, 2º, and 3º de Secondary education)	3
7.	Escuela Intercultural *Trañi Trañi* (1º to 8º de Elementary education)	4

The course was developed in 16 teaching weeks with two chronological hours of direct classroom teaching, chronological hours of mixed work (land and tutorials), and 3 hours of autonomous work for developing the contents each week.

Students were provided with conceptual content and learning strategies during the face-to-face classes, such as lectures, bibliographic analysis, and group tutorials. In the mixed hours, procedural and attitudinal contents were delivered through the execution of 12 workshops (role-playing, group discussion, search for evidence, among others); here, the theoretical contents were taken to the practical performance incorporating the professional view of each discipline. Also, in mixed hours, the students carried out four field sessions in the designated community to embroider health problems through a participatory diagnosis; table Nº 3 shows the actions carried out in the field sessions with the community partners. During the autonomous hours, the students reviewed the conceptual contents, read the complimentary bibliography, and prepared the field sessions and evaluations of the subject.

Table 3. Actions and performances of students in the field sessions with community partners.

Sections	Field activities
1	a. Linkage with the community (key agents): Minutes of the linkage and photographic record. Socialize the informed consent form with the community. b. Information gathering (Computer/field): Definition of the characteristics and health situation of the assigned community. c. Coordination of activities with key agents.
2	d. Problematization with the community: Search for health problems related to prevention and promotion. e. Problem prioritization: A methodology was used to prioritize one of the problems presented by the community.
3	f. With the prioritized problem, the students execute the Problem Tree technique with the community to identify the causes and effects of the pain and the tree of objectives to search for solutions.
4	g. Return and validation of the results of the participatory community diagnosis. h. Acceptance by the community of the intervention proposal delivered by the students.

The contents associated with the course are summarized in Table 4.

Table 4. Conceptual, procedural, and attitudinal contents of the subject.

Conceptual	Procedural	Attitudinal
- Phases of community health work - Participatory Community Assessment - Nature and foundations, convening stages, information-gathering methodologies, etc. - Problem analysis based on scientific evidence. - Return of the results of Participatory Diagnosis: methodologies - Choice of activities in conjunction with the community	- Development of critical thinking about CPD concepts. - Information search and collection techniques, analysis methodologies, and prioritization of problems. - Application of interdisciplinary observation guidelines - Application of CPD methodologies - Implementation of interventions according to the stages of CPD - Preparation of an evidence-based intervention plan - Planning of the return of the results of the CPD to the community - Planning of methodologies for participatory choice of activities. - Return of FCD to the community - Choice of activities to be implemented with the community	- Skills for community work: confrontation with the community. - Work in interdisciplinary/multidisciplinary teams. - Respect for the cultural expressions of the community. - Appreciation of the knowledge and health strategies of the community. - Orientation towards quality in community health work. - Respect for ethical and bioethical principles in working with the community.

On the other hand, the subject was evaluated through 5 activities to achieve the learning outcome of the course, "Perform a Participatory Community Health Diagnosis in interdisciplinary teams, from a family, community and intercultural approach, through the implementation of participatory methodologies based on values of justice, common good and dignity of the person and communities." Thus, the evaluations were

distributed in an assessment focused on contents corresponding to a written test (weighting of 25%) and four integrated performance evaluations that included field reports (weighting of 30%), a proposal to return results to the community (weighting of 15%); expository activity (weighting of 25%) and peer evaluation (weighting of 5%).

In this last evaluative instance, the generic and specific competences of the subject are validated: "Ethical Performance"; "Acts with ethical sense sustaining its discernment in values of justice, common good and dignity of the human being, understanding the profession as a service that responds to the needs of people, the community and the environment", with a level 2 of mastery, "Acts with ethical sense, discerning dilemmas of the local and global context based on values of justice, common good and dignity of the person, as a citizen response to the needs of people, the community and the environment". Specific competency "Family, Community and Intercultural Health"; "Applies the family, community and intercultural health approach, considering the different contexts and settings throughout the life cycle", with a level 2 of mastery, "Plans health intervention strategies with a family, community and intercultural approach considering the different contexts and settings throughout the life cycle".

Table Nº 5 summarizes the primary grades obtained in the assignment in all sections with a grading scale from 1.0 (minimum) to 7.0 (maximum).

Table Nº 5. Semester grades of the subject.

Evaluations	Mean ± SEM
Theoretical test	4.8 ± 0.66
Grounds report	6.2 ± 0.31
Report to the community	5.9 ± 0.47
Exhibition	6.2 ± 0.52
Peer evaluation	6.8 ± 0.36
Final grade	5.8 ± 0.35

5. Discussion

In the first semester of MIS I, the students obtained the necessary tools to carry out a Participatory Community Health Diagnosis, learning the theoretical foundations, problem-solving methodologies, and prioritization methods to have the community agents prioritize a problem associated with risk factors for their health (unhealthy eating, smoking, sedentary lifestyle, harmful alcohol consumption, etc.).

Subsequently, in consensus with the community, the students determined the objectives for the intervention plan and the activities to be developed in the second academic semester of 2023, where they will complete the plan's design, emphasizing prevention and health promotion in interprofessional performance groups.

6. Conclusions

The different groups of students of the "Módulo Integrado en Salud I" course carried out a Participatory Community Health Diagnosis through interprofessional work groups. It was carried out from a family, community, and intercultural approach by implementing participatory methodologies based on values of justice, common good and dignity of the person and the communities. During the first semester, 20 community partners from different areas and organizations participated.

In this first stage, the following facilitators were identified in the Learning and Service methodology implemented in the subject:

- Access to remote communities of Temuco.
- Flexibility of teachers and adjustments to the requirements of community partners.
- Coordination of the course and management of interprofessional work groups.

Among the main obstacles were the following:

- Availability of flexible schedules on the part of some community partners due to their organizations' activities.
- The high number of student groups (10 to 14 students) makes it challenging to approach some of the topics proposed by the community partners.
- Time to intervention (45 to 60 minutes).
- Travel time does not allow teachers to supervise all groups directly in remote communities.

Finally, the students made an intervention proposal by prioritizing health problems, which was agreed upon with the community partners for subsequent implementation in the second semester.

7. Limitations and Future Research

The research is currently in the execution stage, with results from the first phase expected in July 2023 and the second phase in September 2023.

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