

Active methodologies in interprofessional training: PET-Health experience report

Metodologias ativas na formação interprofissional: relato de experiência do PET-Saúde

Anne Araújo de Jesus Oliveira¹

ORCID: <https://orcid.org/0000-0001-6539-3843>

Jailton Silva dos Santos²

ORCID: <https://orcid.org/0000-0003-1421-7158>

Lorena dos Santos Duarte³

ORCID: <https://orcid.org/0000-0002-0411-9493>

Paloma Andrade Pinheiro⁴

ORCID: <https://orcid.org/0000-0001-7841-3620>

Abstract

Introduction: The biomedical model of health care has been replaced by the biopsychosocial model, which presents Interprofessional Education as one of its pillars, whose proposal is focused on the potentialization of actions and health services, through the reorientation of the conceptual methodological bases present in the professional training process. **Objective:** To present active interprofessional methodologies experienced by students participating in the Education Program for Work for Health (PET-Health)/Interprofessionality. **Methods:** This is an experience report of activities developed with teaching-service-community integration actions with a workload of eight hours per week, over a period of two years, from March 2019 to March 2021. The teams were composed by tutors (teachers), specialists (practicing professionals), and students (health undergraduate students). **Results:** Four experiences were obtained through the activities developed in PET-HEALTH/Interprofessionality, as explained: Sharing knowledge, Collective Portfolio Workshop, Workshop for situational diagnosis and strategic planning and Role-play. **Conclusion:** The experiences contributed, as a whole, to the learning of patient care and cooperative work among different areas of knowledge, with interprofessionalism, both in the academic environment and in the health care setting.

Keywords: health education; interprofessionalism; integrality in health

Resumo

Introdução: O modelo biomédico de atenção à saúde tem sido substituído pelo biopsicossocial, que apresenta como um dos seus pilares a Educação Interprofissional, cuja proposta está voltada para a potencialização das ações e dos serviços de saúde, através da reorientação das bases conceituais metodológicas presentes no processo de formação do profissional. **Objetivo:** Apresentar metodologias ativas interprofissionais vivenciadas por discentes participantes do Programa de Educação pelo Trabalho para a Saúde (PET-Saúde)/Interprofissionalidade. **Métodos:** Trata-se de um relato de experiência de atividades desenvolvidas com ações de integração ensino-serviço-comunidade com carga horária de oito horas semanais, em um período de dois anos, entre março de 2019 a março de 2021. As equipes eram compostas por tutores (docentes), preceptores (profissionais em exercício) e estudantes (graduandos da área da saúde. **Resultados:** Foram explanadas quatro vivências obtidas através das atividades desenvolvidas no PET-SAÚDE/Interprofissionalidade, sendo elas: Compartilhando saberes, Oficina do portfólio coletivo, Oficina do diagnóstico situacional e planejamento estratégico e Role-play. **Conclusão:** As vivências contribuíram para o aprendizado da atenção ao paciente de forma integral e do trabalho cooperativo entre diferentes áreas do saber, com interprofissionalidade, tanto no ambiente acadêmico como no cenário de assistência à saúde.

Palavras-chave: educação em saúde; interprofissionalidade; integralidade em saúde

¹ Graduação em Medicina. Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Medicina. Jequié-BA.

Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Medicina. Jequié-BA. E-mail: ninaannefsa@gmail.com

² Graduação em Fisioterapia. Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Fisioterapia. Jequié-BA, Brasil.

Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Fisioterapia. Jequié-BA. E-mail: 201610673@uesb.edu.br

³ Graduação em Fisioterapia. Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Fisioterapia. Jequié-BA, Brasil.

Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Fisioterapia. Jequié-BA. E-mail: lorena.stduarte@gmail.com

⁴ Doutora em Ciências da Saúde. Graduação em Fisioterapia. Universidade Estadual do Sudoeste da Bahia. Departamento de saúde. Curso de Fisioterapia. Jequié-BA, Brasil.

E-mail: palomaapfisio@gmail.com

Introduction

The biomedical assistencialism, historically limited health care model, mainly characterized by service fragmentation, technification of the medical act and non-adherence to treatment, resulting in non-effectiveness of therapeutic approaches, dehumanization, hospital-centrism and non-democratization of health services and technologies¹.

Nevertheless, a new standard of healthcare, called the biopsychosocial model, presents, among other strategies, the Interprofessional Education (IPE). It is an approach that seeks to reorient the process of health training in order to enhance the actions and services that are offered².

It is inserted in this context, the Education Program for Work for Health (PET-Health [the Brazilian PET-Health]), which was instituted in 2008 through a partnership between the Ministry of Health (MOH) and the Ministry of Education (MOE), aiming at fostering the tutorial education in Family Health Strategy (FHS). Currently, after that, it was implemented also for other levels of complexity and it is the main vehicle for promoting changes in the health professionals training process^{3,4}.

The edition of PET-Health, ended in 2021 with the theme Interprofessionalism, had as its proposal the reorientation of academic training in all health courses to the logic of the IPE, through the accomplishment of actions and services developed collaboratively between the various fields of knowledge, based on the principles of interprofessionalism, interdisciplinarity and intersectionality. Furthermore, it aimed to establish a link between the services provided by the Health System and the educational institutions⁵.

Therefore, the present study aimed to present active interprofessional methodologies experienced by students participating in the Education Program for

Work for Health (PET-Saúde)/Interprofessionalism.

Materials and Methods

This is a descriptive experience report, in which the experiences of students participating in the Education Program for Work for Health, PET-Health/Interprofessionalism were presented. The activities developed were actions of teaching-service-community integration with a workload of eight hours per week, over a period of two years, from March 2019 to March 2021, through a partnership between State University of Sudoeste da Bahia (UESB) Jequié's campus, the city's Municipal Department of Health, and the Ministry of Health (MOH).

The UESB is located in the state of Bahia-Brazil and has three campuses, the Jequié's campus has 16 undergraduation courses, among which Nursing, Pharmacy, Physiotherapy, Medicine and Dentistry integrating the PET-Health/Interprofessionalism⁶. The municipality of Jequié, in the Southwestern Bahia, in the Northeastern region of the country, whose population was estimated at 156,126 thousand inhabitants for the year 2020. The municipality has 85 SUS (SUS - Unified Health System in Brazil) health facilities, according to the 2010 census⁷.

The project was organized according to the number of city's scenarios with the possibility of acting, which are: two Family Health Units; Alcohol and Drug Psychosocial Care Center (CAPS AD); Center for Prevention and Physical Rehabilitation of Jequié (NUPREJ); Physiotherapy School Clinic (CEF-UESB); Prado Valadares General Hospital (HGPV); totaling five subgroups. Each of one of these subgroups were composed of tutors (faculty supervisors), preceptors (practicing professionals), and students (health undergraduate students). The actions developed in the health sectors had an



interprofessional character and considered the specificity of the health service, the territory and the population in the coverage area.

The attributions of each member were established according to the MOH Public Notice No. 10, referring to the PET-Health/Interprofessionality selection, in which it is established that the tutor's role is played by university-affiliated health professionals, who are responsible for acting as reference tutors for health professionals and/or students. The preceptorship is the responsibility of professionals by specific area of expertise or specialty in health, belonging to the context of the corresponding settings, representing the main facilitator for the insertion of the group to the performance scenario. For the students, they had to belong to the institution registered in the current edition of the project, in the health areas offered, and meet the minimum percentage of the course at the institution. It was pertained to this group the development of in-service performance and research activities, under the guidance of the tutor and the preceptor, aiming at the production and dissemination of relevant knowledge in the area of health and work initiation activities.

The activities developed embraced meetings at UESB on different days and shift times and were organized by the PET-Health members themselves, as tutors, preceptors, and students from all the settings. With the purpose of approaching and generating discussion about Interprofessionality and its relevance in health services practice, the actions were called "Sharing knowledge", "Collective portfolio workshop", "Workshop on situational diagnosis and strategic planning", and "Role-play".

Since these are experiences lived by the authors themselves, this study respects the ethical principles governing research with human beings as set forth in the

Resolution No. 466/2012 of the National Health Council/MOH⁸.

Results

Experience one: "Sharing knowledge"

At first, the participants were instructed to take a 30-hour online training course on "Interprofessional Education in Health", produced by the Federal University of Rio Grande do Norte (UFRN) and available on the AVASUS: Virtual Learning Environment of the Brazilian National Health System portal, a digital platform that disseminates knowledge. Subsequently, a meeting was scheduled for socialization of this acquired knowledge.

In this same meeting, parts of the brazilian movie "Nise: the heart of madness" were played, whose plot tells the story of a psychiatrist who, for taking a position contrary to conventional treatments of the time, is isolated by her professional colleagues. The goal was to identify the conceptual aspects of interprofessionality in the movie, as well as to reflect about the damage generated to patients/clients, especially in the public health field, by using fragmented health models and practices that lack communication among professionals.

This meeting had as a product the discussion and critical reflection on the concepts that aggregate teamwork, furthermore the importance in the development of collaborative competencies, such as interprofessional communication, role clarity, patient, family, and community centered care, among others.

Experience Two: "Collective Portfolio Workshop"

This event was divided into two moments. The first one, taught in person in an auditorium, chaired by a tutor, who presented the step-by-step process for making the portfolio and the reasons for its choice as the main mechanism for

evaluating interprofessional actions, as well as a critical-reflective method of active methodology.

To exemplify, she introduced a video of reports of successful experiences with portfolios prepared by professionals from the Sirio Libanês Hospital and an experience report of a multidisciplinary tutorial group in the PET/Health Surveillance, which was identified as a facilitator for building the learning of the participants involved by allowing the critical and reflective record throughout the development. The group used a folder containing all developed activities and experiences explained in graphic and aesthetic ways.

This was very important to the understanding of the proposal by demystifying preconceptions about the methodology and clarifying doubts regarding the effectiveness of this instrument. Thus, all members present were trained to build the collective portfolio, a critical-reflective teaching-learning method required by the Ministry of Health.

In the second moment of this event, there were ludic presentations on the knowledge acquired from the online training through the AVASUS portal. Each group was asked to creatively elaborate an artistic presentation about the concepts and implications that guide interprofessionalism in the context of health professionals.

There was a crossword puzzle which addressed concepts worked on in the AVASUS portal courses, "chair dancing" with members from different groups participating to form two teams that would walk around the chair circle to the sound of a song in order to identify if any group would leave any member standing when the music was paused, whose objective was to reveal the importance of the collaborative practice and stimulate the strengthening of teamwork; parody, which approached the whole trajectory experienced during the meetings, using as inspiration the song "Tá

na cara" by Nosso Louvor band; theatrical play approaching these concepts from day by day situations in health services; theatrical play with the objective of acting out a situation of non-interdisciplinarity, which was made a simulation of a waiting room with patients and professionals, in which everyone acted independently generating a chaotic situation and without resolvability.

The event ended with a choir, chaired by one of the tutors of the project, with the song "O Sal da Terra", composed by the singer Beto Guedes. After that, a big sunflower was made with the participants of the meeting aiming at bringing the team members together as a whole. This dynamic caused in those present a feeling of unity and optimism about the program's future actions, and it was noticeable that the faces that seemed lost and directionless in the first meeting were already aware of what they were doing there and determined to continue on this learning path.

After observing and living the experiences in this event, each group was responsible for the collective construction and constant updating of its portfolio as a way of recording the activities developed throughout the PET-Health period, in each performance scenario.

Experience Three: "Workshop on Situational Diagnosis and Strategic Planning"

The event began with a slide presentation, made by a preceptor of the project, highlighting the landmarks of the theme in discussion. This moment aimed to emphasize the importance of the Situational Diagnosis and Strategic Planning for the health service. Shortly thereafter, a joint analysis of a problem situation of a municipality in Bahia that was experiencing socioeconomic and administrative difficulties was performed. Based on the case analysis, the context was evaluated and later, the hypothesis about the genesis of



that problem and the main associated factors was raised, in addition to the elaboration of proposals for a Strategic Planning that would supposedly solve it.

After this event, each group was invited to perform the situational diagnosis of their scenario in question and subsequently, to develop a strategic plan capable of solving the problems identified. It is important to highlight that the groups themselves developed the actions proposed in the planning during the PET-Health period as a way of feedback to the community and the appropriation of the knowledge built and shared.

Experience four: "Role-play"

This approach aimed to instigate a reflection on the importance of assessment/anamnesis and a careful look at the aspects of the professional approach. Therefore, a dynamics called role-play occurred, which included a undergraduate student playing the role of a physician, a preceptor playing the role of a patient, and the other group members' acting as observers.

First, these characters were explained about their roles. Next, there was the presentation of the scene (action) and after that, the case discussion (debriefing). The tutors brought the scripts with the theme "therapeutic adherence" to guide the subgroups' actions. In the debriefing moment, there was a discussion about the medical conduct regarding the patient's case, and the perception of the professional about himself, highlighting the positive points and the weaknesses of his performance. Then, the patient was asked to give his opinion on his role and his relationship with the doctor during the doctor's appointment. Finally, the observers expressed their considerations about the scene.

Thus, the doctor-patient relationship was analyzed (verbal language - voice; and non-verbal - body posture), as well as the

professional conduct regarding the topic "therapeutic adherence", which does not refer only to the correct ingestion of medications, but also to other possibilities, such as the practice of physical activities, regular sleep, mental health, among others. The treatment of the patient was analyzed; the interest and attention during the appointment; the existence of qualified listening; the use of accessible language; conducting an anamnesis with crucial data for the event segment, etc.

Moreover, in order to relate the role-play methodology to PET, interprofessionality was addressed with discussion about the professionals' roles in the Family Health Unit (USF), how they can organize themselves to optimize the service, and if there is this division of labor based on any document. After this reflective moment, it was suggested to the group to know the functions of each professional in Primary Care and create protocols for the better management of users at the USF, with teamwork in order to make the service more resolute.

Discussion

Experience 1 discussed the concept of "Learning together to work together through collaborative health practices"⁹. It was concluded that interprofessional education is an efficient mechanism to promote interaction, integration, and collaboration among the participants from different health areas, aiming at improving services and the quality of health care focused on the users' needs.

It was clear to those participants that the main challenge lies in the process of "disintegration in order to integrate", that is breaking away the uniprofessional conception already established by academic coexistence to embrace an interprofessional conception. Thus, learning becomes shared and there is interaction among students and/or professionals from different areas, a primordial characteristic to keep a



productive and coherent interpersonal relationship with the activities for better service delivery to the community¹⁰.

During the second experience, it was noticed that the portfolio values the progressive development of the group and individual competencies and skills, as well as creativity, autonomy, responsibility, and criticality of the participants. This collective instrument is a teaching-learning method based on the protagonism of the participants involved and on the promotion of dialogue among them to build their own knowledge, attitudes, and collaborative skills¹¹.

This resource can be elaborated in different ways depending on its purpose and can be by images, paintings, poems, cut-outs, mosaics, or even the traditional dissertation, as long as it truly expresses the meaning of each meeting for each member. In addition, this method enables to identify the competencies exercised by the students¹². This promotes communication, integration, and the improvement of the relationships established among the group, as affectivity, emotions, experiences, knowledge exchange, capabilities, readiness, and difficulties¹³.

Regarding the plays presented at the second moment of the second experience, the reality of inefficient care that lacks communication and qualified listening was simulated, in which repeated and segmented acts do not cover all the singularities of the patient and the context in which he is inserted in¹⁰. Such attitudes violate integral and holistic care.

Concerning the third experience, the workshop on situational diagnosis and strategic planning prepared the participants involved in the project for the subsequent evaluation of the health situations of their respective scenarios by group. Thus, it showed the relevance of the diagnostic process for the health service, since from this process the problems that affect a certain population and the social

determinants associated to that context are verified. Therefore, it provides subsidies for the fulfillment of a more effective action plan.

These are actions were organized with the major purpose of stimulating reflection and critical thinking about that specific need. Consequently, it requires maturity, ability to listen, and respect for the different opinions and thoughts of the subjects involved in the process¹⁴. Thus, diagnosis and strategic planning, common especially in health management, are focused on the need to implement the principles and guidelines of the Unified Health System^{14,15}.

In addition, the analysis of the problem-situation in the workshop exposed the importance of focusing on the context and reality of the patients/users. The individual user needed to travel long distances in search of health care, which pointed out the low coverage of the population by the public network. The lack of cultural activities in the city may be associated with the high rate of alcohol and drug consumption, used as recreation; the presence of a highway that cuts the city may be associated with the large number of sexually transmitted infections, due to prostitution in these places; the poor infrastructure in rural roads may be one of the causes for the high rate of deaths from external causes; and the socioeconomic problems, such as low education and high unemployment, may be one of the causes for the high rate of mental illness and increase in the street population.

The World Health Organization (WHO) defines health as a complete state of physical, mental, and social well-being, and not merely the absence of diseases. Thus, the biopsychosocial model indicates to the multidimensional view of the user directs health care to the field of better decision making and choice of more effective therapeutic tools. The result of this process is the improvement of the system as a whole



and the health conditions of the population¹⁶.

This activity allowed encouraging a critical look at health issues, formulating hypothesis about the causes of problems and planning coping strategies to improve the health conditions of the population, which depend on several factors, such as cultural and recreational activities for the population, access to education, employment, urban infrastructure, coverage of the population by the health service, among others. The social conditioning factors present in the health-disease process greatly interfere in the development of diseases as well as in the prognosis of pathologies. Therefore, they require a joint investigative action and the definition of measures, especially in terms of public policies, in order to provide greater social protection to the population¹⁷.

Finally, in experience four, the role-play revealed the importance of a well-done assessment with clear and objective questions, through a humanized approach, which directs the whole clinical investigation to help in the diagnosis and the conduct to be taken. This learning method is a playful and innovative pedagogical resource that allows the participation of different subjects and in different social positions. In the specific health context, it allows a unique experience of empathy as it inserts undergraduate students and health professionals in the role of users^{18,19}.

Among the purposes of this technique are the improvement of skills and abilities, such as communication, leadership and initiative. Moreover, the fact that it is a collective activity with moments of reflection demonstrates the importance of collaborative work aimed at improving the health conditions of users^{18,19}. The interprofessional practice is marked by the involvement of different areas of health knowledge with involvement, listening, and mutual sharing of different views and

thoughts on the basis of conduct. Consequently, the health actions that are carried out and based on the principles and guidelines of SUS seek to meet the specific needs of users in a comprehensive and quality manner^{2,20}.

Conclusion

This paper presents the report of experiences of health scholars with active methodologies that developed the topic of interprofessionality, favoring the training process for an improvement in the care provided to the population. It is known that health education has been fragmented and individualized, when a shared professional performance is needed. Therefore, experiences like this can be disseminated in order to encourage them to happen more frequently in universities and thus improve the training process and the performance of these professionals, strengthening the principles of the national and international Unified Health System, promoting better quality of life for the population.

PET-Health/Interprofessionality then fulfilled its role of strengthening the exchange of knowledge among students from different courses, as well as integrating them into the health services. Thus, there was a sharing of competencies due to the different views on a certain focus, which is closely related to the patient's well-being.

Besides that, the project was able to expand the capacity of critical analysis and problem solving, through the diagnosis of the situation and the planning of solutions in a joint manner, to the extent that the idea of acting in isolation was deconstructed and the need for collaborative work was understood.

Thus, it helped to break the old fragmented health care pattern coming from the biomedical model and the institutionalization of the biopsychosocial model. Therefore, the lived experiences contributed to the learning of care focused



on the patient's needs and the cooperative work under the interprofessional perspective, both in the academic

environment and in the performance scenario of each group.

Reference

1. Aguiar RAT. A construção internacional do conceito de atenção primária à saúde (APS) e sua influência na emergência e consolidação do Sistema Único de Saúde no Brasil [dissertação]. Belo Horizonte: Universidade Federal de Minas Gerais; 2003.
2. Freire Filho JR, Silva CBG, Costa MV, Forster AC. Educação Interprofissional nas políticas de reorientação da formação profissional em saúde no Brasil. *Rev. Saúde debate.* 2019;43(1):86-96.
3. Brasil. Ministério da Saúde. Ministério da Educação. Portaria Interministerial nº 1.802, de 26 de agosto de 2008. Institui o Programa de Educação pelo Trabalho para a Saúde - PET-Saúde. *Diário Oficial da União* (27 de agosto de 2008).
4. Brasil. Ministério da Saúde. Ministério da Educação. Portaria Interministerial nº 421, de 03 de março de 2010. Institui o Programa de Educação pelo Trabalho para a Saúde (PET-Saúde) e dá outras providências. *Diário Oficial da União* (04 de março de 2010).
5. catalogo.uesb.br [Internet]. Jequié: Universidade Estadual do Sudoeste da Bahia; c2021 [citado em 05 fevereiro 2021]. Disponível em: <http://catalogo.uesb.br/cursos>.
6. ibge.gov.br [Internet]. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística; c2020 [citado em 17 set 2020]. Disponível em: <http://www.ibge.gov.br/cidades-e-estados/ba/jeque.html>.
7. Brasil. Conselho Nacional de Saúde. Resolução nº. 466, de 12 de dezembro de 2012. Diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. *Diário Oficial da União* (12 de dezembro de 2012).
8. Brasil. Ministério da Saúde. Secretaria de Gestão do Trabalho e da Educação na Saúde. Edital nº 10, 23 de julho 2018. Seleção para o Programa De Educação Pelo Trabalho para a Saúde Pet-Saúde/Interprofissionalidade - 2018/2019. *Diário Oficial da União* (23 de julho de 2018).
9. Centre for the Advancement of Interprofessional Education. United Kingdom: CAIPE; 2002.
10. Reeves S. Why we need interprofessional education to improve the delivery of safe and effective care. *Rev. Interface.* 2016;20(56):185-197.
11. Cotta RMM, Costa GD, Mendonça ET. Portfólios reflexivos: uma proposta de ensino e aprendizagem orientada por competências. *Rev. Ciência e Saúde Coletiva.* 2013;18(6): 1847-1856.
12. Cotta RMM, et al. Construção de portfólios coletivos em currículos tradicionais: uma proposta inovadora de ensino-aprendizagem. *Rev. Ciência e Saúde Coletiva.* 2012;17(3).
13. Cardoso DAS, Oliveira JM, Costa LMC, Rozendo CA. Aprendizagem Reflexiva: o Uso do Portfólio Coletivo. *Rev. Brasileira de Educação Médica.* 2015;39(3):442-449.
14. Kleba ME, Krauser IM, Vendruscolo C. O planejamento estratégico situacional no ensino da gestão em saúde da família. *Rev. Texto contexto enfer.* 2011;20(1):184-193.
15. Silva AK, Sousa JP, Rodrigues W, Caçado AC. Planejamento Estratégico Situacional – PES: uma análise bibliométrica da produção científica brasileira. *Rev. Serv. Público.* 2017;68(2):365-388.



16. Dantas DS, Correa AP, Buchalla CM, Castro SS, Castaneda L. Biopsychosocial model in health care: reflections in the production of functioning and disability data. *Rev. Fisioter. Mov.* 2020;33.
17. Moreira ASR, Kritski AL, Carvalho ACC. Determinantes sociais da saúde e custos catastróficos associados ao diagnóstico e tratamento da tuberculose. *J. Bras. Pneumol.* 2020;46(5).
18. Costa PS, Avila JRMS, Santos DV, Cruz FP. *Role-play*: desenvolvendo habilidades e competências do Ensino Embasado na Estrutura Conceitual. *Revista de Contabilidade e Organizações.* 2020;14.
19. Souza LN, Cruz CAB, Vasconcelos JR, Paixão AEA, Silva DP. Inovação e Educação Empreendedora com o Modelo do Role-Play no Ensino Superior. *Rev. GEINTEC.* 2020; 10(3):5505-5516.
20. Busse ACS, Ferreira FG, Mendes GF, Evangelista RA, Matos SQS, Anjos WBA. Pet-Saúde: Interface entre a interprofissionalidade e o cuidado com as pessoas com Diabetes Mellitus e Hipertensão Arterial. *Rev. Ibero-Americana de Humanidades, Ciências e Educação – REASE.* 2021; 7(2).

How to cite this article:

Oliveira AAJ, Santos JS, Duarte LS, Pinheiro PA. Active methodologies in interprofessional training: pet-health experience report. *Rev. Aten. Saúde.* 2023; e20238614(21). doi <https://doi.org/10.13037/ras.vol21.e20238614>

