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EDUCAÇÃO SANITÁRIA COMO ESTRATÉGIA DE VIGILÂNCIA SANITÁRIA: RELATO DE UMA CAMPANHA EXTENSIONISTA SOBRE INFLUENZA AVIÁRIA

SANITARY EDUCATION AS A SANITARY SURVEILLANCE STRATEGY: REPORT OF AN EXTENSION CAMPAIGN ON AVIAN INFLUENZA

EDUCACIÓN SANITARIA COMO ESTRATEGIA DE VIGILANCIA SANITARIA: RELATO DE UNA CAMPAÑA DE EXTENSIÓN SOBRE INFLUENZA AVIAR

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Resumo: A Influenza Aviária (IA) representa um importante desafio sanitário para a avicultura brasileira, com impactos sobre a sanidade animal, a saúde pública, a biodiversidade e o setor econômico, especialmente devido às restrições sanitárias e comerciais associadas à enfermidade. Nesse cenário, ações de educação sanitária vinculadas à extensão universitária desempenham papel relevante na disseminação de informações técnicas e na conscientização da população. O presente trabalho objetivou descrever e analisar uma campanha de educação sanitária sobre Influenza Aviária, desenvolvida no contexto da extensão universitária, destacando seu potencial como estratégia de conscientização social e aproximação entre universidade e comunidade. A atividade foi realizada durante a Semana Nacional de Ciência e Tecnologia (SNCT-2025) e incluiu a elaboração de materiais didáticos e atividades educativas direcionadas à comunidade acadêmica, produtores rurais e público do entorno. Foram abordados temas relacionados à etiologia, transmissão, sinais clínicos, biosseguridade e importância da notificação precoce da doença. A ação contou com a participação de 50 pessoas e possibilitou a transferência de conhecimento técnico em linguagem acessível. Os resultados demonstram o potencial das ações extensionistas na promoção da educação sanitária, fortalecimento da vigilância e prevenção de enfermidades de impacto coletivo.
Palavras-chave: aves, conscientização, extensão universitária, sanidade.

Abstract: Avian Influenza (AI) represents a major sanitary challenge for Brazilian poultry production, impacting animal health, public health, biodiversity, and the economic sector, particularly due to the sanitary and trade restrictions associated with the disease. In this scenario, sanitary education actions linked to university extension play a relevant role in disseminating technical information and raising public awareness. This study aimed to describe and analyze a sanitary education campaign on Avian Influenza developed within the context of university extension, highlighting its potential as a strategy for social awareness and for bridging the gap between academia and the community. The activity was conducted during the National Science and Technology Week (SNCT-2025) and included the development of educational materials and learning activities targeted at the academic community, livestock producers, and the surrounding public. Topics covered included etiology, transmission, clinical signs, biosecurity, and the importance of early disease reporting. The initiative engaged 50 participants and enabled the transfer of technical knowledge using accessible language. The results demonstrate the potential of extension actions in promoting sanitary education, strengthening surveillance, and preventing diseases of collective impact.
Keywords: awareness; health; poultry; University extension;

Resumen: La influenza aviar (IA) representa un importante desafío sanitario para la avicultura brasileña, con impacto en la sanidad animal, la salud pública, la biodiversidad y el sector económico, especialmente debido a las restricciones sanitarias y comerciales asociadas a la enfermedad. En este contexto, las acciones de educación sanitaria vinculadas a los programas de extensión universitaria desempeñan un papel fundamental en la difusión de información técnica y la sensibilización pública. Este estudio tuvo como objetivo describir y analizar una campaña de educación sanitaria sobre influenza aviar, desarrollada en el marco de la extensión universitaria, destacando su potencial como estrategia para la sensibilización social y el fortalecimiento de los vínculos entre la universidad y la comunidad. La actividad se llevó a cabo durante la Semana Nacional de la Ciencia y la Tecnología (SNCT-2025) e incluyó el desarrollo de materiales y actividades educativas dirigidas a la comunidad académica, los productores rurales y el público circundante. Se abordaron temas

relacionados con la etiología, la transmisión, los signos clínicos, la bioseguridad y la importancia de la notificación temprana de la enfermedad. La acción contó con la participación de 50 personas y permitió la transferencia de conocimientos técnicos en un lenguaje accesible. Los resultados demuestran el potencial de las actividades de extensión para promover la educación sanitaria, fortalecer la vigilancia y prevenir enfermedades con impacto colectivo.
Palabras clave: aves; concienciación; extensión universitaria; salud

INTRODUCTION

Avian Influenza (AI) is a highly contagious viral disease affecting domestic and wild birds, caused by Influenza A virus, belonging to the family Orthomyxoviridae (Long et al., 2019). Highly pathogenic strains have been responsible for high-mortality outbreaks, substantial economic losses to the poultry production chain, and significant impacts on biodiversity, particularly in wild migratory bird populations (Gupta et al., 2025).

In recent decades, the expansion and intensification of poultry production systems, combined with increased animal mobility and interaction among domestic birds, wild birds, and humans, have favored the emergence, re-emergence, and dissemination of Avian Influenza virus variants across different regions of the world (Nagoba et al., 2025). Beyond productive impacts, AI falls within the realm of public health, as certain viral subtypes exhibit zoonotic potential, reinforcing its relevance within the One Health framework (Chou et al., 2025).

The prevention and control of Avian Influenza depend on integrated strategies involving epidemiological surveillance, implementation of biosecurity measures, early diagnosis, and immediate notification to competent authorities. In this regard, international organizations have highlighted that awareness and training for producers, technicians, students, and the general public are essential components for the effectiveness of sanitary actions, especially in countries with a strong poultry industry like Brazil (FAO, 2011; WOAH, 2023).

However, a deficit of qualified information persists among different segments of society regarding AI transmission routes, clinical signs in birds, preventive measures, and the importance of official notification. Misinformation or lack of knowledge regarding these aspects can delay outbreak identification, facilitate viral spread, and exacerbate the sanitary, economic, and social damages associated with the disease (Nascimento et al., 2022).

In this context, university extension plays a strategic role by fostering closer ties between the scientific knowledge generated in higher education institutions and the actual demands of society. Through educational actions, courses, dissemination campaigns, and interactive activities, the university contributes to educating more informed, critical, and aware citizens, strengthening preventive practices and the culture of health surveillance (Nascimento et al., 2020).

Extension initiatives focused on sanitary education regarding Avian Influenza are particularly relevant as they integrate the principles of One Health by linking animal health, human health, and the environment. Furthermore, such actions enhance the academic training of students by stimulating the development of skills in scientific communication, social responsibility, and ethical professional practice—core aspects within agricultural and health sciences (Dacroce et al., 2018).

Given this scenario, the present study aims to describe and analyze a sanitary education campaign on Avian Influenza developed within the context of university extension, highlighting its potential as a strategy for social awareness and for bridging the gap between academia and the community.

MATERIALS AND METHODS

Characterization of the extension activity

The extension action consisted of a course titled "Dissemination and information campaign on Avian Influenza," characterized as a university extension event within the thematic area of Health. The activity was conducted on October 24, 2025, with a total workload of four hours, during the National Science and Technology Week (SNCT), an institutional event aimed at popularizing science and fostering closer ties between academia and society, in accordance with national scientific dissemination guidelines (MCTI, 2024).

Project execution site

The event took place on the premises of the Universidade Federal Rural do Rio de Janeiro (UFRRJ), in an academic environment equipped with adequate infrastructure for educational activities, including audiovisual resources and space for collective interaction.

Target audience

The target audience comprised undergraduate students, students involved in extension projects, faculty members, and members of the external community, encompassing individuals interested in animal production, poultry health, public health, and sanitary safety.

Developed extension activities

The execution team consisted of UFRRJ faculty members and students, acting in an integrated manner from the planning phase to activity execution, in line with university extension principles that advocate for the inseparability of teaching, research, and extension (FORPROEX, 2012). Action planning involved preliminary meetings to define objectives, course structure, selection of priority topics, and language adaptation to suit the heterogeneous profile of the audience.

During the preparatory phase, didactic and informative materials were developed in the form of an educational pamphlet (Figure 1), using accessible language and an educational approach. The material contained information on the definition of Avian Influenza, etiologic agents, major viral subtypes, transmission routes, clinical signs in domestic and wild birds, sanitary and economic impacts, prevention and biosecurity measures, as well as the importance of health surveillance and early reporting of suspected cases.



Figure 1. Informative flyer distributed to the participants

These pamphlets were distributed to participants during the activity to reinforce the presented content and enable information dissemination within the broader community. Topic selection was based on recommendations from national and international animal and public health organizations, such as the Ministry of Agriculture and Livestock (MAPA) and the World Organisation for Animal Health (WOAH), respectively, which recognize health education as an essential tool for Avian Influenza prevention and control (Figure 2).

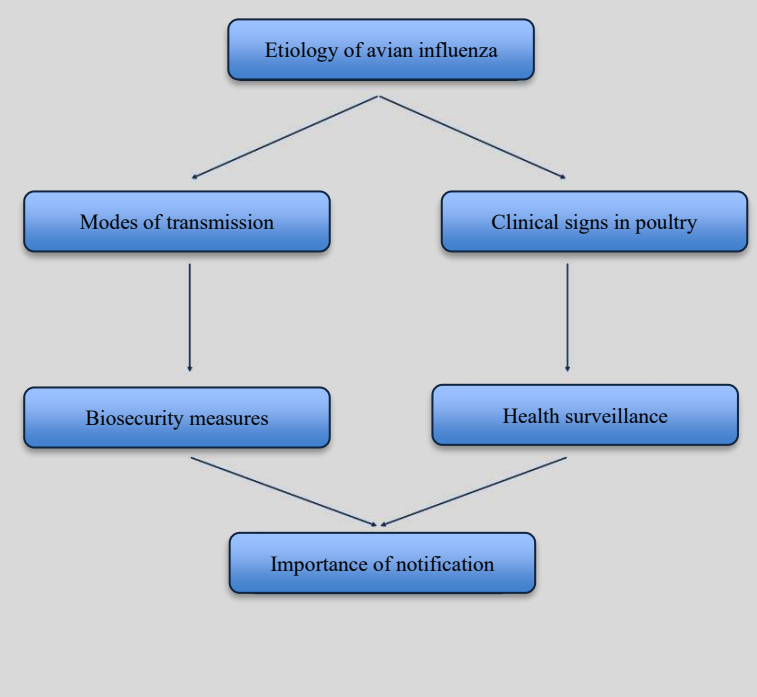

Figure 2. Main topics covered in the extension campaign on AI

Activity execution took place through interactive lectures interleaved with moments for audience interaction, intended for clarifying doubts, discussing practical scenarios, and sharing experiences. This methodological approach is grounded in health education principles, which emphasize active participation, dialogue, and contextualization of technical knowledge within the social reality of the participants.

As a complementary playful-pedagogical strategy, an interactive quiz was developed in a bingo game format, featuring questions directly linked to the content presented in the educational pamphlet and oral presentation. The dynamics involved drawing numbers using a roulette wheel, followed by participants pressing a button; the individual who pressed the device first earned the opportunity to answer the question corresponding to the drawn number.

Upon providing a correct answer, the participant received a prize—a strategy used to incentivize participation, enhance audience engagement, and provide positive reinforcement for the learning process. Questions focused on the previously covered topics, allowing the consolidation of the conveyed knowledge in an interactive and accessible manner.

Action evaluation

Evaluation was performed qualitatively, considering the level of audience participation, interaction during activities, and questions raised—a strategy commonly employed in extension experience reports.

RESULTS AND DISCUSSION

The extension action successfully met its proposed objectives of technical information dissemination and public awareness regarding Avian Influenza. Although the initial estimated audience was 100 participants, the activity had the effective participation of 50 individuals, a figure compatible with educational and participatory extension actions (FORPROEX, 2012). The active participation of attendees—evidenced by their engagement during presentations, frequent questioning, and discussions established throughout the course—demonstrated the interest in and relevance of the topic, particularly regarding disease prevention, biosecurity measures, and the importance of health surveillance.

The transfer of technical information in an accessible and contextualized manner enabled the expansion of participants' knowledge regarding Avian Influenza, especially concerning early notification of suspected cases, an aspect considered fundamental for the effectiveness of disease control strategies. International organizations emphasize that prompt identification and immediate reporting to official animal health services are decisive in reducing viral spread and minimizing sanitary and economic impacts (Duan et al., 2023).

During the activity, it was observed that many participants held doubts regarding disease transmission routes, human health risks, and practical daily prevention measures. The approach adopted contributed to demystifying misconceptions frequently associated with Avian Influenza, strengthening the understanding that prevention relies on collective action and the adoption of proper biosecurity practices, as described by Santana et al. (2023).

From an extension perspective, the action highlighted the potential of educational activities as instruments for promoting animal and public health by bridging scientific knowledge and the social reality of participants. Sanitary education initiatives are essential to reduce information gaps, increase risk perception, and foster adherence to technical recommendations, particularly for diseases of collective impact such as Avian Influenza.

From an academic perspective, the activity provided significant integration among teaching, research, and extension, with active student involvement in developing educational materials, organizing the course, and interacting with the public. This extension experience contributes to the critical, ethical, and civic development of students, in addition to building skills in scientific communication and social responsibility—aspects widely discussed in the university extension literature.

Among the main difficulties observed during execution were operational aspects related to logistics and the time available for further detailing certain topics. However, such limitations did not compromise the outcomes achieved and were overcome through prior organization and collaborative teamwork by the execution team. Similar reports on extension actions indicate that operational challenges are common, particularly in large-scale events, but do not undermine the educational impact of activities when proper planning is implemented (Jung & Song, 2025).

The data, perceptions, and experiences obtained from the extension action served as input for drafting technical and scientific materials, reinforcing the role of university extension as a generator of applied and socially relevant knowledge.

Literature on university extension has reported educational actions in health that promote clarification on topics relevant to the community. Studies describe extension experiences focused on health education across different contexts, such as teenage pregnancy (Melo et al., 2021) and confronting the COVID-19 pandemic (Souza et al., 2022), demonstrating the formative and social role of these activities.

Overall, the observed results indicate that educational campaigns developed within the academic framework constitute effective strategies for promoting sanitary awareness, strengthening health surveillance, and bridging the gap between academia and society.

CONCLUSION

This study described and analyzed a sanitary health education campaign on Avian Influenza developed within the scope of university extension. The action demonstrated its potential as a strategy for disseminating technical information, promoting health awareness, and bridging the gap between academia and society through participatory educational activities, informative materials, and direct interaction with the public.

The campaign showed that extension approaches grounded in accessible language, playful strategies, and community dialogue are suitable for dispersing knowledge related to prevention, biosecurity, and health surveillance. Thus, this experience confirms university extension as an effective instrument for health education and reinforces the relevance of similar initiatives in strengthening animal health and public health.

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