

GAMIFICATION IN PUBLIC HEALTH: INNOVATIVE STRATEGIES FOR HEALTH EDUCATION, COMMUNITY ENGAGEMENT, HEALTH PROMOTION, AND THE STRENGTHENING OF ACTIONS WITHIN THE BRAZILIAN UNIFIED HEALTH SYSTEM (SUS)

 <https://doi.org/10.63330/aurumpub.058-012>

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Abstract

Gamification has become established as an innovative strategy for enhancing health education initiatives, promoting community engagement, and strengthening health promotion within the field of Public Health. This study aimed to analyze the contributions of gamification to health education, community engagement, health promotion, and the strengthening of actions undertaken within the Brazilian Unified Health System (SUS) through an integrative literature review. The search was conducted in the PubMed, SciELO, and Latindex databases and in Open Journal Systems repositories, covering studies published between 2021 and 2026 in Portuguese and English. After the inclusion and exclusion criteria were applied, 16 articles were selected for analysis. The results showed that gamification fosters greater user participation, increases motivation to learn, strengthens the adoption of healthy behaviors, encourages self-care, and enhances health education strategies in different contexts. Benefits related to strengthening social participation, health communication, and the humanization of care were also observed. It is concluded that gamification represents a promising tool for enhancing health promotion initiatives and strengthening practices implemented within the SUS.

Keywords: Community Engagement, Gamification, Health Education, Health Promotion, Unified Health System.

INTRODUCTION

The incorporation of educational technologies and active methodologies has brought about significant transformations in health education practices and health promotion strategies developed within the field of Public Health. Among these approaches, gamification stands out for its use of characteristic game elements, such as challenges, rewards, levels, immediate feedback, and progressive objectives, to stimulate individuals' engagement, motivation, and active participation in different learning contexts (King et al., 2013; Sardi, Idri & Fernández-Alemán, 2017).

Within the context of the Brazilian Unified Health System (SUS), health education is one of the primary tools for promoting user autonomy, strengthening self-care, and developing comprehensive care practices. The National Primary Care Policy recognizes health education as an essential responsibility of multidisciplinary teams and encourages the development of innovative methodologies capable of bringing health services closer to the population and strengthening the relationship between professionals and the community (Brazil, 2017). Additionally, the National Policy for Popular Education in Health emphasizes the value of dialogue, social participation, and the collective construction of knowledge as fundamental principles of educational initiatives within the SUS (Brazil, 2013).

The digital transformation observed in recent decades has significantly expanded the possibilities for using interactive technologies in healthcare. In this context, gamification has assumed a prominent position because it facilitates more dynamic, accessible, and engaging educational processes, employing both digital and nondigital resources to stimulate learning, behavioral change, and individual participation in initiatives related to disease prevention and the promotion of quality of life (Wang et al., 2022; Vaidya, 2025).

Scientific studies demonstrate that gamified interventions have the potential to increase motivation, promote knowledge retention, stimulate meaningful learning, and improve participants' adherence to educational initiatives. These benefits arise from the use of mechanisms capable of sustaining users' interest, making the learning process more participatory and contributing to the development of competencies related to self-care and health-related decision-making (King et al., 2013; Sardi, Idri & Fernández-Alemán, 2017).

In addition to clinical applications, gamification has been incorporated into community education programs, schools, and public health campaigns, expanding the reach of educational initiatives and helping to strengthen health literacy. Game-based interventions enable greater interaction among participants, promote the development of critical thinking, and encourage individuals to assume a leading role in addressing issues related to public health (Dadaczynski et al., 2021).

In Brazil, the use of gamification in health communication and education initiatives has grown progressively. Research demonstrates that digital games and virtual environments can expand the dissemination of public health information, making content more accessible and encouraging greater public participation in initiatives conducted by health services. At the same time, specific methodologies for developing educational games have been proposed as tools capable of enhancing health education programs intended for different audiences (Vasconcellos & Araujo, 2011; Dias et al., 2014).

Despite the many potential benefits identified, the implementation of gamification in health services continues to face significant challenges. Issues related to the design of evidence-based interventions, adaptation to different sociocultural contexts, technological accessibility, professional training, and the evaluation of outcomes constitute limitations that must be considered to ensure the greater effectiveness of these strategies (Glass & Galati, 2025).

In this context, the use of gamification emerges as a promising alternative for strengthening initiatives developed within the SUS, particularly in Primary Health Care, where health promotion, disease prevention, community participation, and continuing education are fundamental pillars of care. In addition to supporting the shared construction of knowledge, this strategy helps bring professionals and users closer together, thereby strengthening the principles of comprehensiveness, equity, social participation, and social oversight established in Brazilian public policies (Brazil, 2023; Brazil, 2013).

The conceptual model of gamification applied to Public Health demonstrates that integrating game mechanics, motivation, active learning, social interaction, and behavioral change facilitates the development of more effective and participatory educational interventions. Understanding the components that structure this process is therefore essential to support its application at different levels of healthcare.

Recent experiences reinforce the effectiveness of this approach in different healthcare contexts. The development of educational games aimed at preventing burns among young Brazilians resulted in a significant improvement in participants' knowledge and a high level of acceptance of the strategy,

demonstrating the potential of gamification as a health education tool (Gonçalves et al., 2026; Wang et al., 2022).

Against this backdrop, there is a clear need to deepen knowledge of the contributions of gamification to Public Health, considering its potential to expand community engagement, improve health education processes, strengthen health promotion, and contribute to the effective implementation of the principles and guidelines of the Brazilian Unified Health System.

Accordingly, this study aims to analyze the contributions of gamification to Public Health, emphasizing its potential as an innovative strategy for health education, community engagement, health promotion, and the strengthening of initiatives implemented within the SUS.

METHODOLOGY

This study is characterized as an integrative literature review, a method that makes it possible to collect, evaluate, and critically synthesize the available scientific evidence on a given topic, thereby enabling a broad understanding of the knowledge produced. This approach facilitates the identification of scientific gaps, research trends, and relevant contributions to professional practice, constituting an important tool for supporting evidence-based decision-making in the field of Public Health.

The following guiding question was established as the central focus of the investigation: What are the contributions of gamification to health education, community engagement, health promotion, and the strengthening of initiatives developed within the Brazilian Unified Health System? The formulation of this question guided every stage of the study, from the development of the search strategy to the analysis and interpretation of the findings.

The studies were identified between July and August 2026 by searching PubMed, SciELO, and Latindex, as well as scientific repositories available through the Open Journal Systems (OJS) platform. These sources were selected because of their relevance to the dissemination of national and international

research in Public Health, Health Education, and Health Technologies, ensuring broader coverage in the retrieval of publications.

The search strategies were developed using the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH), combined with the Boolean operators AND and OR in accordance with the specific requirements of each database. The Portuguese descriptors used were “Gamificação,” “Educação em Saúde,” “Promoção da Saúde,” “Saúde Coletiva,” “Sistema Único de Saúde,” “Engajamento Comunitário,” and “Tecnologia Educacional.” The English terms used were “Gamification,” “Health Education,” “Health Promotion,” “Public Health,” “Community Engagement,” “Primary Health Care,” and “Unified Health System.”

Regarding the inclusion criteria, scientific articles published between 2021 and 2026, available in full text in Portuguese or English, were considered if they addressed the use of gamification, serious games, or strategies based on game elements applied to health education, health promotion, community participation, Primary Health Care, Public Health, or initiatives developed within the Brazilian Unified Health System. Original studies, literature reviews, and quantitative, qualitative, and mixed-methods studies related to the subject of the investigation were also included.

Conversely, duplicate publications, abstracts from scientific events, editorials, letters to the editor, dissertations, theses, book chapters, studies without full-text availability, articles published in languages other than Portuguese and English, and research focused exclusively on the technological development of games without a direct relationship to health education or health promotion were excluded.

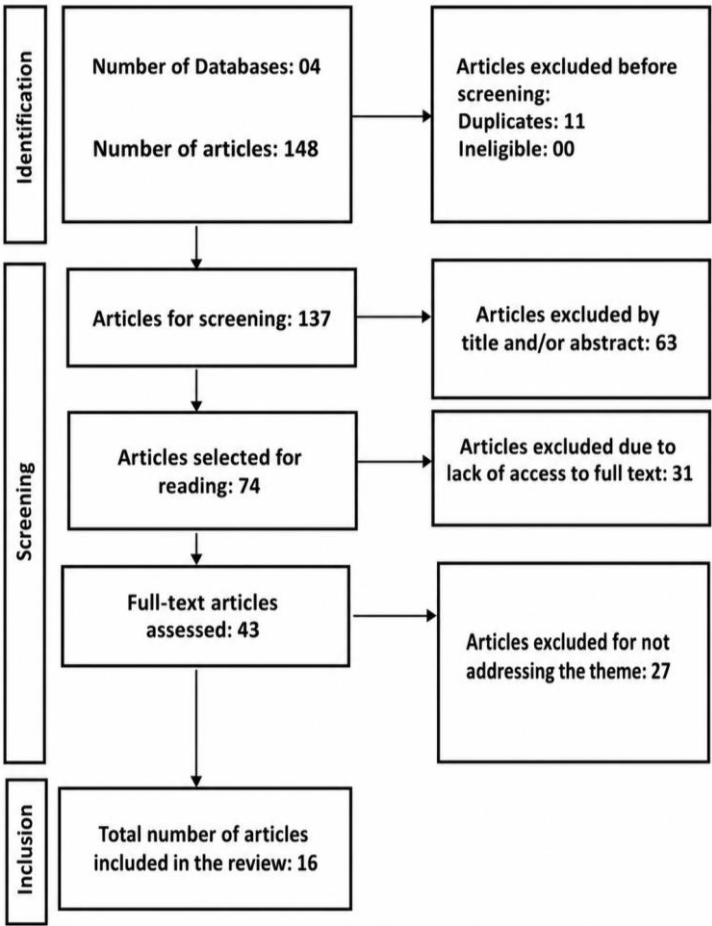
During the selection stage, the publications retrieved from the databases were initially identified, after which duplicate records were removed. Titles and abstracts were then read to assess their thematic relevance. Studies considered potentially eligible underwent full-text review, and only those that fully met the previously established criteria were included in the review.

After the final sample had been determined, information was extracted using an instrument developed by the researchers that covered authorship, year of publication, country in which the study was

conducted, objective, methodological design, population investigated, type of gamified intervention, main findings, limitations, and contributions to health education, community engagement, health promotion, and the strengthening of initiatives developed within the SUS. The data were subsequently organized into synoptic tables and subjected to descriptive and interpretive analysis.

The sequence of methodological stages employed in this integrative review is summarized in Figure 1, which presents the process of identification, screening, eligibility assessment, and inclusion of the studies selected for the final research sample.

Figure 1
Flowchart of the stages of the integrative literature review.



Source: Authors (2026).

Because this study exclusively uses previously published scientific evidence available in publicly accessible databases, without any direct involvement of human participants or access to individual information, it does not require review by a Research Ethics Committee, as established by Resolutions No. 466/2012 and No. 510/2016 of the Brazilian National Health Council.

RESULTS AND DISCUSSION

The application of the search strategy in the selected databases, followed by the screening, eligibility assessment, and full-text review stages, resulted in the selection of 16 studies that met the inclusion criteria established for this integrative review. The publications analyzed, produced between 2021 and 2026, encompass different methodological approaches and demonstrate the use of gamification in various Public Health settings, including initiatives focused on health education, health promotion, strengthening community engagement, encouraging the adoption of healthy behaviors, and improving actions implemented within the Brazilian Unified Health System.

The characteristics of the selected studies, considering authorship, year of publication, objective, study focus, and main findings, are presented in Table 1.

Table 1
Characteristics of the studies included in the integrative review

Author/Year	Study objective	Study focus	Main findings
Souza, Rolim, and Longhi (2026)	To analyze the contributions of gamification to the humanization of care within the SUS.	Humanization of care.	The study showed that gamification promotes greater user participation in health initiatives, strengthens the relationship between professionals and the community, and increases adherence to educational practices. The authors emphasize that gamified strategies enhance the humanization of care by promoting communication, welcoming care, and shared responsibility among individuals in the care process.
Damaševičius, Maskeliūnas, and Blažauskas (2023)	To synthesize evidence on serious games and gamification in healthcare.	Evidence review.	The study demonstrated benefits for learning, treatment adherence, prevention, and rehabilitation, although

			it emphasized the need for more methodologically robust studies.
Yıldız, Yıldız, and Kayacik (2024)	To evaluate scientific output on gamification in health education.	Health education.	The study identified substantial growth in research related to gamification in recent years, demonstrating the international expansion of the topic. The authors observed a predominance of studies focusing on health education, pedagogical innovation, and the development of professional competencies, indicating the consolidation of gamification as an emerging educational strategy.
Santos <i>et al.</i> (2026)	To evaluate gamification in teaching the National Health Promotion Policy.	Health workforce education.	The study found greater student involvement during the learning process, facilitating an understanding of the principles of the National Health Promotion Policy. The use of game-based elements promoted meaningful learning, active participation, and the development of critical thinking regarding professional practice within the SUS.
Upadhyay, Bhatnagar, and Goel (2026)	To integrate gamification into traditional teaching in health leadership programs.	Professional training.	The study observed increased motivation, interaction among participants, knowledge retention, and the development of managerial competencies.
Timbo <i>et al.</i> (2025)	To evaluate board games for adolescent training and education.	Primary Health Care.	The games promoted active learning, strengthened the relationship with the healthcare team, and increased adolescent engagement in educational initiatives.
Santos <i>et al.</i> (2023)	To describe a review protocol on gamification in adolescent health education.	School health.	The protocol reinforces the potential of gamification to encourage healthy habits, student participation, and health promotion in the school environment.
Toun (2024)	To discuss gamification as a communication strategy.	Health communication.	The study showed that gamified elements strengthen interactions between users and institutions, increasing engagement and the effectiveness of communication strategies. The use of challenges, rewards, and continuous feedback proved relevant to stimulating active participation and facilitating health learning processes.
Mazéas <i>et al.</i> (2022)	To evaluate the effectiveness of gamification in promoting physical activity.	Health promotion.	The meta-analysis demonstrated that gamified interventions significantly increased physical activity levels, improving adherence to physical activities and the long-term maintenance

			of healthy behaviors. The authors emphasize that elements such as challenges, rewards, and continuous monitoring enhance participant engagement and motivation.
Tesi <i>et al.</i> (2023)	To investigate gamification as a primary prevention tool in public health.	Public health prevention.	The study identified the potential to encourage preventive behaviors, expand knowledge, and strengthen educational initiatives aimed at disease prevention. The approach proved promising for enhancing health education programs and strengthening preventive interventions in different community contexts.
Gkintoni <i>et al.</i> (2024)	To review the use of gamification to promote the physical and mental health of children and adolescents.	Child and adolescent health.	The study demonstrated improvements in well-being, physical activity, mental health, and young people's involvement in health promotion initiatives.
Cheng and Ebrahimi (2023)	To analyze gamification as a mental health promotion strategy.	Mental health.	The authors identified benefits related to engagement, stigma reduction, strengthened self-care, and expanded access to mental health interventions.
Nowbuth <i>et al.</i> (2023)	To review the use of gamification in education on antimicrobial resistance.	Health education.	The study demonstrated significant improvements in knowledge regarding the rational use of antimicrobials, greater awareness of bacterial resistance, and the strengthening of prevention-oriented educational initiatives. Gamification showed potential to make complex content more accessible and encourage meaningful learning among different audiences.
Bas-Sarmiento <i>et al.</i> (2025)	To evaluate gamified digital interventions for health promotion and disease prevention.	eHealth and health promotion.	Gamified digital interventions promote positive changes in health-related behaviors, encourage healthy habits, and increase participants' involvement in educational activities. The results also demonstrated high acceptability and the potential to expand the reach of preventive initiatives in school and community settings.
Naderizadeh <i>et al.</i> (2026)	To investigate the impact of gamification on changes in preventive behaviors.	Public health education.	The results demonstrated improved adherence to preventive practices, greater motivation, and the strengthening of Public Health education initiatives.
Matkovic (2026)	To review gamification-based engagement strategies in health education for smartphone users.	Mobile health technologies.	The study concluded that gamified applications increase participation, facilitate continuous learning, and strengthen health education and promotion interventions. They also stand out as accessible tools for

			strengthening health education, self-care, and health promotion programs across different age groups.
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Source: Authors (2026).

The studies analyzed demonstrate that gamification has become established as an innovative strategy capable of strengthening different dimensions of Public Health, particularly those related to health education, community engagement, health promotion, and the improvement of initiatives developed within the Brazilian Unified Health System. Overall, the evidence indicates that the use of game elements promotes greater individual participation, increases motivation to learn, encourages behavioral change, and strengthens educational processes centered on users’ active involvement.

Furthermore, the studies converge regarding the potential of gamification to bring professionals and communities closer together, making educational practices more engaging, participatory, and effective. In this context, the discussion of the findings was organized into two thematic areas.

GAMIFICATION AS A STRATEGY FOR HEALTH EDUCATION AND STRENGTHENING LEARNING

Health education is one of the pillars of health promotion and represents an important means of developing individual and community autonomy. In this context, the incorporation of gamification has significantly changed how educational content is developed and shared, fostering more participatory, dynamic, and user-centered learning processes. The studies analyzed converge in demonstrating that the use of game mechanics promotes greater participant involvement and enhances the effectiveness of educational initiatives.

In this regard, Yıldız, Yıldız, and Kayacık (2024) demonstrate that scientific research on gamification applied to health education has grown substantially in recent years, reflecting recognition of this methodology as an innovative strategy for teaching and training healthcare professionals. The authors emphasize that the increase in publications accompanies the need to develop methodologies capable of

responding to technological transformations and the emerging educational demands within health systems.

Supporting this perspective, Damaševičius, Maskeliūnas, and Blažauskas (2023) state that serious games and gamified strategies produce consistent improvements in knowledge acquisition, skill development, and participants' adherence to educational processes. According to the authors, challenge- and reward-based learning promotes greater knowledge retention than traditional teaching methods, making the educational process more meaningful and stimulating.

This understanding is also reinforced by Matkovic (2026), who emphasizes that the widespread use of mobile devices represents an important opportunity to expand the reach of health education initiatives. The author argues that gamified applications enable continuous learning, facilitate access to information, and promote active user participation, thereby supporting the development of self-care and shared responsibility for one's own health.

Similarly, Upadhyay, Bhatnagar, and Goel (2026) demonstrate that integrating gamification into traditional teaching produces substantial improvements in participant performance, increasing motivation, interest in the content, and interaction during educational activities. According to the authors, elements such as progressive challenges, immediate feedback, and rewards help consolidate knowledge and encourage competencies related to leadership, communication, and problem-solving.

The findings presented by Santos et al. (2026) also reinforce the effectiveness of this approach by demonstrating that the use of gamification in teaching the National Health Promotion Policy led to a better understanding of the principles that guide initiatives developed within the SUS. The authors observed that learning became more meaningful when students actively participated in constructing knowledge, demonstrating that participatory methodologies strengthen the critical education of future professionals.

Similarly, Timbo et al. (2025) found that board games used in Primary Health Care supported both professional training and adolescent participation in educational initiatives. The authors emphasize that

the interaction facilitated by the games strengthened the relationship between the healthcare team and the community, making the learning process more accessible, collaborative, and responsive to local needs.

In the school environment, Santos et al. (2023) emphasize that gamification has considerable potential to promote health-related knowledge among adolescents, encouraging the adoption of healthy habits from the early stages of life. The authors note that gamified interventions stimulate greater student participation, increase interest in the content, and strengthen the development of autonomy in making health-related choices.

From another perspective, Nowbuth et al. (2023) demonstrate that gamification also produces relevant results in education concerning the rational use of antimicrobials. The authors observed a significant increase in participants' knowledge of antimicrobial resistance, demonstrating that game-based resources facilitate an understanding of complex content and strengthen educational initiatives aimed at disease prevention.

Complementing this evidence, Toun (2024) emphasizes that communication is essential to the success of gamified strategies. According to the author, interactive resources help bring institutions and users closer together, increasing engagement and strengthening the circulation of health information. This perspective aligns with the other studies in indicating that more participatory educational processes tend to produce better learning and behavioral outcomes.

Overall, there is broad agreement among the authors regarding the potential of gamification to enhance health education. Regardless of the target audience or setting in which it is applied, the evidence indicates that gamified methodologies promote greater motivation, meaningful learning, the development of critical thinking, and strengthened participant agency. Gamification has therefore become established as an important pedagogical resource for increasing the effectiveness of educational initiatives developed in Public Health, contributing to education that is more participatory, critical, and aligned with health promotion principles.

GAMIFICATION, COMMUNITY ENGAGEMENT, AND THE STRENGTHENING OF HEALTH PROMOTION INITIATIVES WITHIN THE BRAZILIAN UNIFIED HEALTH SYSTEM

Health promotion requires the development of strategies capable of stimulating the population's active participation in identifying problems, making decisions, and adopting practices conducive to improving living conditions. From this perspective, gamification has gained prominence by transforming users into active participants in the educational process and promoting greater interaction among professionals, health services, and communities. The studies analyzed demonstrate consensus regarding the potential of this approach to expand community engagement, strengthen preventive initiatives, and enhance health promotion efforts in different care settings.

In discussing the incorporation of gamification within the Brazilian Unified Health System, Souza, Rolim, and Longhi (2026) emphasize that this strategy extends beyond its exclusively technological dimension and constitutes a tool capable of strengthening the humanization of care. According to the authors, the use of game-based elements promotes more horizontal relationships between professionals and users, enhances supportive reception, and encourages individuals to share responsibility for their own healthcare. This perspective reinforces the principle that health innovation should be associated with strengthening the principles of the SUS, particularly social participation, comprehensiveness, and person-centered care.

This understanding is supported by the meta-review conducted by Damaševičius, Maskeliūnas, and Blažauskas (2023), whose results demonstrate that gamification produces positive effects not only on learning but also on adherence to health interventions, self-care, and the maintenance of healthy behaviors. The authors emphasize that active user participation increases the effectiveness of interventions, making health promotion initiatives more sustainable and capable of producing lasting behavioral changes.

Similarly, Mazéas et al. (2022) found that gamified interventions focused on physical activity significantly increased participant adherence and improved physical activity levels. The authors observed

that mechanisms such as progressive challenges, symbolic rewards, individualized goals, and continuous monitoring encouraged greater user commitment, demonstrating that motivation is one of the principal factors underlying the success of gamified health promotion strategies.

The results presented by Bas-Sarmiento et al. (2025) support this interpretation by demonstrating that gamified digital interventions promote consistent changes in the lifestyle habits of children and adolescents. According to the authors, combining technological resources with game elements enhances user participation, increases interest in educational initiatives, and strengthens programs aimed at disease prevention and the promotion of quality of life, particularly in school and community settings.

From another perspective, Gkintoni et al. (2024) demonstrate that children and adolescents are highly receptive to gamified methodologies, facilitating the simultaneous development of physical health, mental health, and socioemotional competencies. The authors emphasize that a game-based environment helps reduce barriers to learning, increase interest in the proposed activities, and encourage healthy behaviors that can be sustained throughout life, thereby strengthening preventive initiatives from the earliest stages of human development.

Mental health promotion also emerges as an important field for the application of gamification. In this regard, Cheng and Ebrahimi (2023) state that gamified resources expand access to mental health interventions, promoting participant engagement and reducing stigma-related barriers. According to the authors, the use of interactive strategies strengthens self-care, encourages adherence to therapeutic practices, and contributes to the development of emotional skills that are fundamental to maintaining psychological well-being.

In the field of disease prevention, Tesi et al. (2023) demonstrate that gamification is a relevant tool for enhancing primary prevention programs in Public Health. The authors observed that interventions based on challenges, rewards, and collaborative participation increase public awareness of risk factors, facilitate behavioral change, and strengthen educational campaigns aimed at disease prevention.

Similar results were identified by Naderizadeh et al. (2026), who demonstrated the positive impact of gamification on the adoption of preventive behaviors in public health education programs. According to the authors, gamified strategies increase individuals' motivation to incorporate preventive practices into their daily lives, promote greater participation in educational activities, and contribute to the consolidation of healthier lifestyles. These findings demonstrate that strengthening health promotion depends primarily on the population's active participation in the proposed interventions.

In addition to the benefits observed among health service users, the literature also demonstrates positive effects on professional education and practice. Yıldız, Yıldız, and Kayacik (2024) emphasize that the growth of research on gamification accompanies the need to develop innovative practices capable of integrating education, care, and health promotion. Likewise, Upadhyay, Bhatnagar, and Goel (2026) note that gamified methodologies facilitate the development of competencies related to leadership, teamwork, and decision-making, which are fundamental to improving professional practice within the context of Public Health.

The studies conducted by Santos et al. (2026) and Timbo et al. (2025) complement this discussion by demonstrating that gamified strategies bring professionals, students, and communities closer together. While the first study demonstrates significant gains in learning about public health promotion policies, the second reveals that educational games strengthen the relationship between adolescents and Primary Health Care teams, increasing participation in initiatives conducted by the services. Consistently, Santos et al. (2023) reinforce the conclusion that adopting gamification in schools contributes to consolidating healthy habits from adolescence onward, thereby expanding the reach of health promotion strategies.

Another relevant aspect concerns the use of gamification as a health communication tool. Toun (2024) states that gamified elements make communication processes more engaging and encourage greater interaction between institutions and the population. This perspective aligns with the findings of Nowbuth et al. (2023), who demonstrated a substantial improvement in knowledge about antimicrobial

resistance following gamified educational interventions, indicating that game-based resources facilitate the understanding of complex content and strengthen health education campaigns.

Matkovic (2026), in turn, emphasizes that the widespread use of smartphones significantly expands the potential reach of gamified interventions, allowing educational initiatives to move beyond the physical boundaries of health services. According to the author, mobile platforms enable continuous monitoring, real-time feedback, and greater user autonomy, characteristics that help maintain engagement and consolidate healthy behaviors.

In summary, there is a high degree of agreement among all the studies analyzed regarding the potential of gamification to strengthen health promotion, expand community engagement, and enhance initiatives developed within the Brazilian Unified Health System. The evidence indicates that this strategy promotes greater social participation, strengthens the relationship between users and professionals, encourages sustainable behavioral changes, and increases the effectiveness of educational initiatives.

Gamification therefore constitutes an important methodological innovation for Public Health, contributing to the strengthening of health promotion and disease prevention practices and to the consolidation of the principles underpinning the SUS.

CONCLUSION

This integrative review made it possible to analyze the contributions of gamification to Public Health, demonstrating its potential as an innovative strategy for health education, community engagement, health promotion, and the strengthening of initiatives developed within the Brazilian Unified Health System. Based on the synthesis of scientific evidence published between 2021 and 2026, it was found that incorporating game elements facilitates educational processes that are more dynamic, participatory, and centered on users' needs, increasing the effectiveness of interventions in different care settings.

Regarding the guiding question of this study, gamification was found to contribute significantly to strengthening health education, expanding community engagement, promoting healthy behaviors, and improving initiatives developed within the SUS. The evidence demonstrated that gamified strategies promote greater motivation, active participation, knowledge retention, and the development of individual autonomy, all of which are essential to consolidating health promotion practices grounded in shared responsibility, social participation, and the collective construction of care.

The results also demonstrated that gamification has broad applicability in different Public Health settings, including Primary Health Care, schools, professional education, mental health promotion, disease prevention, encouragement of physical activity, rational antimicrobial use, and education intended for children, adolescents, and other population groups. In all these contexts, the studies agreed on this strategy's capacity to strengthen educational processes, stimulate behavioral changes, and bring users closer to health services, facilitating interventions that are more humanized and aligned with the principles of the Brazilian Unified Health System.

Another relevant aspect identified concerns the strengthening of user participation in health initiatives. By transforming individuals into active agents in the learning process, gamification strengthens the relationship between professionals and communities, improves health communication, and encourages the development of self-care. Furthermore, the use of digital technologies, mobile applications, serious games, and other interactive tools expands the reach of educational initiatives, helping make health promotion strategies more accessible, engaging, and effective across different sociocultural contexts.

Despite the promising results, the literature analyzed indicates the need to expand scientific research on the long-term effectiveness of gamified interventions, particularly in the context of Public Health and Brazilian public policies. It is therefore recommended that experimental research, multicenter studies, and longitudinal evaluations be conducted to investigate the effects of gamification on health

promotion indicators, adherence to interventions, behavioral change, and quality of care, thereby strengthening the evidence needed to support its incorporation into health services.

It is therefore concluded that gamification represents an innovative and effective strategy compatible with the principles of health promotion and the Brazilian Unified Health System, contributing to the enhancement of educational practices, the strengthening of community engagement, and the development of care models that are more participatory, humanized, and centered on the population's needs. In light of the evidence presented, incorporating gamification into Public Health initiatives constitutes an important alternative for enhancing health education, expanding social participation, and strengthening the effectiveness of public policies aimed at improving the population's health conditions.

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