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ORIGINAL

Analysis of Memory and Alzheimer's Disease in the Contemporary Context

Análisis de la Memoria y la Enfermedad de Alzheimer en el Contexto Contemporáneo

Emilio Sagredo Lillo[1], Ignacio Salamanca-Garay[2], Javier Espinoza[3], Alejandro Soto[4], Agustín Sagredo[5]

[1]Universidad San Sebastián, Facultad de Psicología y Humanidades. Concepción, Chile.
[2]Universidad UNIACC, Universidad Bernardo O'Higgins, Dirección de investigación. Santiago, Chile.
[3]Universidad Católica de la Santísima Concepción, Facultad de Educación. Concepción, Chile.
[4]Universidad San Sebastián, Facultad de Educación. Concepción, Chile.
[5]Universidad San Sebastián, Facultad de Medicina. Concepción, Chile.

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Corresponding author: Emilio Sagredo Lillo

ABSTRACT

Introduction: in modern times, it is increasingly common to encounter people suffering from the well-known Alzheimer's disease. Specialists mention that this progressive and degenerative disease is becoming more visible due to the increase in life expectancy rather than something specifically attributable to contemporary times. This paper aims to analyze memory as a cognitive process and its importance, linking it to Alzheimer's as the most well-known disease associated with memory. Attention is focused primarily on the memory impairment it causes, seeking to enhance understanding among readers and professionals in training. Understanding symptoms, processes, and support alternatives are key to successfully addressing Alzheimer's disease, which is currently on the rise, particularly among older adults.
Method: the methodology used is videographic analysis and theoretical and documentary analysis, supported by the comprehension through a clinical case analysis using a commonly employed and easily accessible technique. This technique involves analyzing a relevant-themed film.
Results: the results and discussion demonstrate the common symptomatology in Alzheimer's, the progressive deterioration of memory and cognitive functions, as well as the importance of social and emotional support in achieving adaptability and coping with the different stages of this complex disease for the patients, within clinical possibilities.
Conclusions: this knowledge is useful for psychology professionals to assist both the patients and their families.

Keywords: Memory; Alzheimer's Disease; Cognition; Aged People.

RESUMEN

Introducción: en los tiempos actuales, es cada vez más común encontrarse con personas que padecen la conocida enfermedad de Alzheimer. Los especialistas mencionan que esta enfermedad progresiva y degenerativa se ha vuelto más visible debido al aumento en la esperanza de vida más que a una causa atribuible directamente a la modernidad. Este trabajo tiene por objetivo analizar la memoria como proceso cognitivo y su importancia, vinculándola con el Alzheimer como la enfermedad más reconocida asociada a la memoria. Se centra principalmente en el deterioro de la memoria que esta provoca, buscando facilitar la comprensión en lectores y profesionales en formación. Comprender los síntomas, procesos y alternativas de apoyo es clave para abordar exitosamente esta enfermedad que hoy va en aumento, particularmente en

personas mayores.
Método: la metodología empleada es análisis videográfico y análisis teórico y documental, complementado con la comprensión mediante el análisis de caso clínico a través de una técnica común y fácilmente accesible: el análisis de una película de temática relevante.
Resultados: los resultados y la discusión permiten evidenciar la sintomatología común del Alzheimer, el deterioro progresivo de la memoria y funciones cognitivas, así como la importancia del apoyo social y emocional para lograr adaptación y afrontamiento en las distintas etapas de esta compleja enfermedad, dentro de las posibilidades clínicas.
Conclusiones: este conocimiento es útil para profesionales de la psicología a fin de asistir tanto a los pacientes como a sus familias.

Palabras clave: Memoria; Enfermedad de Alzheimer; Cognición; Personas Mayores.

INTRODUCTION

The objective of this paper is to analyze Alzheimer's disease and memory from a theoretical perspective, focusing on the coping mechanisms individuals may employ upon learning that they may be suffering from this condition. It also aims to understand how memory deteriorates over time and how loved ones can be a support. For this purpose, we will use the Spanish film "Vivir dos Veces" (Live Twice)[1] as a case study. This technique is widely used by researchers in the field of health, particularly mental health. It allows us to understand conditions, behaviors, and illnesses, supported by a serious and specialized theoretical conceptualization. Another advantage is that readers can easily access the data used without requiring explicit authorization. This is useful for demonstrating or refuting the information presented, as well as for making contributions and improving understanding for possible replication and progressive knowledge construction. One author who has successfully and frequently used case analysis supported by films is [2,3,4,5].

Initially, we will approach a general conceptualization of memory by considering the perspectives and positions of different authors. We will then focus on Alzheimer's disease and its relationship with memory. We will consider some scientific research that allows us to better understand our object of analysis. Subsequently, two scenes from the film "Vivir dos Veces" will be analyzed. This film explores the theme of Alzheimer's from the perspective of a retired university math professor who begins to forget things and must confront the diagnosis without initially accepting his situation. He then involves his family in an adventure that aims to connect him with his past before he completely forgets it.

The development of this work will consider two scenes from the film. The first scene depicts an initial session with a therapist who investigates his forgetfulness and considers a possible diagnosis of Alzheimer's, which a doctor later confirms. The second scene depicts a new session with the therapist years later when the disease has advanced. This scene portrays the disease when significant memory deterioration and executive function impairment are evident.

Memory allows us to maintain our essence and the ability to recognize and remember our past experiences and stored learning to access and utilize information when needed. Without the cognitive process of memory, we would not be able to know who we are, who forms part of our social interactions, or which patterns or learned strategies to rely on to solve various vital or daily problems. Memory is defined as "the capacity to remember the things we have experienced, imagined, and learned".[6] The aforementioned authors also refer to the basic aspects of memory, which include encoding, storage, and retrieval. It is common nowadays in psychology to find professionals who compare memory to a computer due to the information processing task performed by both humans and computers.[7]

The main theorists who have contributed approaches to memory are:

[8] proposed a separation of memory into primary (current working memory, WM) and secondary (current long-term memory, LTM).

[9] was one of the first to seek scientific answers regarding memory. He presented subjects with nonsense words and discovered that the longer the list, the more trials were needed to remember, and the more repetitions, the less forgetting occurred.

[10] proposed the selective filter theory of processed information. The nervous system is seen as a limited channel, and there is a filter that prevents the passage of any information. This filter is preceded by a temporary buffer that stores information until the channel becomes available.

[11] They proposed a structural model of memory that divides memory into sensory register, short-term memory, and long-term memory.

[12] proposed a hierarchical model of memory processing involving different stages.

[13] made a significant contribution to understanding memory by introducing the working memory model. They conceptualized short-term memory as a working memory divided into three systems. The central executive has control and is assisted by the senses through a phonological loop (audition and language) and a visuospatial sketchpad. Long-term memory is linked to an episodic buffer associated with experiences and memories. A criticism of this theory is the lack of explanation regarding the interaction between working memory and long-term memory.

Memory disorders are referred to as amnesia. The most common types of amnesia are anterograde and retrograde. Anterograde amnesia relates to memories that arise after the event that caused the amnesia, while retrograde amnesia relates to memories before this event. Psychogenic amnesia is another well-known type of amnesia, primarily associated with the denial of remembering past events due to traumatic experiences.[14,15,16] Dissociation or simulation can cause this type of amnesia. It is important to consider that empirical evidence also shows that individuals with post-traumatic stress disorder may experience total or partial amnesia of the event without being consciously or intentionally aware of it.

Amnesia is also a prominent and significant complication in some degenerative and progressive diseases of the nervous system. These diseases can initially affect working memory (not amnesia), such as Pick's disease, or initially impair recent memories (amnesia), as is the case with Alzheimer's disease. As the disease progresses, working memory and retrograde amnesia also deteriorate, leading to a general impairment of cognitive functions. Alzheimer's disease exhibits both retrograde and anterograde amnesias. The disease is most commonly associated with the elderly, typically affecting individuals aged 65 and older, although there is evidence of cases in much younger individuals. Its prominent symptoms include social irritability, forgetfulness, and even aphasia. In Alzheimer's, there is a degenerative amnesia process that eventually erases all episodic memories and affects working memory and executive functions, such as speech. As the disease advances, motor problems also arise, gradually turning patients into completely dependent individuals. Virtually all lobes of the brain are affected.

The causes of Alzheimer's disease have traditionally been linked to physiological factors and are frequently associated with age. However, recent research has also associated it with the autoimmune system. Therapies have been developed with promising results considering these new findings. [17] have stated "It has been assumed that Alzheimer's disease is merely a response to pathophysiological events. However, new data from preclinical and clinical studies have established that immune system-mediated actions contribute to and drive the pathogenesis of the disease".

It is believed that cognitive training can delay the onset of the disease and prolong the period of lucidity after diagnosis. However, the exact reason or precise motive for the appearance of Alzheimer's in some individuals remains largely unknown.[17] The only clear aspect is its association with age and a higher frequency in men than in women. No direct causality with genetic inheritance has been found, as is the case with other diseases of the nervous system. However, there are studies with a significant effect size linking Alzheimer's to certain genes,[18,19] suggesting a potential genetic predisposition, although further confirmatory research is still needed.

Some articles indicate that Alzheimer's has become more common in recent times.[20] However, this could also be attributed to the increased life expectancy, as in the past, most individuals did not reach the age at which Alzheimer's typically develops. Another challenge in studying Alzheimer's and generating empirical evidence to understand it better is the inability to make a definitive diagnosis during a person's lifetime. A conclusive diagnosis can only be made post-mortem, making it challenging to conduct comprehensive studies on the disease.[21]

There is an interesting hypothesis among the current scientific community that links Alzheimer's disease to the accumulation and elimination problems of toxins in the brain. This could potentially be related to the increase in cases in contemporary times. This is supported by various research studies, one of which is published in one of the most prestigious journals in the field: The hypothesis suggests that the accumulation of toxic proteins is the result of an imbalance between their production and elimination. The elimination of toxins seems to be affected in both early and late forms of Alzheimer's disease. To develop efficient strategies to slow down or stop the disease, it is essential to understand how the accumulation of toxic proteins in the brain is eliminated.[21]

The new evidence follows a trend that promotes viewing Alzheimer's not only as a random disease that comes with age but also emphasizes the importance of cognitive training. Furthermore, recent findings highlight the need to pay special attention to the evidence linking Alzheimer's with the accumulation of difficult-to-eliminate toxic proteins in the brain. The association with the immune system and the potential relevance of genetic factors are also significant findings.

METHOD

The methodology employed is a case analysis using videographic analysis, a particularly useful technique for

examining specific situations and cases. In this article, the analysis centers on a film that portrays the life of a person with Alzheimer's disease. This approach is complemented by a documentary analysis that delves deeper into the topic addressed.[22,23]

RESULTS

For the analysis of an Alzheimer's case, we will use two excerpts from the Spanish film "Vivir dos veces" (Live Twice). For this purpose, we will focus primarily on memory since it is the chosen cognitive process for the study's development.

The protagonist is Emilio, a retired university mathematics professor who begins to experience difficulties with his lifelong companion, mathematics. He cannot solve certain exercises, and he also starts noticing forgetfulness and moments when he doesn't know where he is or why he ended up there. He decides to undergo a routine medical evaluation, thinking that he might have some temporary memory problems. Nonetheless, he believes that he needs to solve this difficulty for his life to continue as usual. He goes to the doctor alone because he doesn't have daily contact with his family. The only family he has is his daughter, son-in-law, and granddaughter, but he lives alone in his house.

In the first scene, which can be found between minutes 03:15 and 05:30, the protagonist is in front of a professional who performs some tests on him. He starts feeling uncomfortable, thinking that he is being belittled. He appears somewhat irritable and uneasy.

In the first session with the therapist, Emilio seemed to have no memory problems, but he has been at the clinic all day because previous tests have suggested that he probably has Alzheimer's disease. This is confirmed by the doctor, who asks him to inform a family member. Emilio responds that he has no one, intentionally omitting his daughter because he doesn't have a good relationship with her.

The daughter looks for him at the hospital, but socializing with him is quite challenging because his character has become very difficult lately.

In this first scene, we can observe what has been mentioned in the theoretical review: Alzheimer's is primarily related to an age close to 65 years.[3,6] It has a mild, barely perceptible onset accompanied by significant irritability exacerbated by the patient's lack of understanding and logical discomfort caused by this disease that deprives them of their cognitive tools and functions.

The second scene is related to a new session with the same therapist when the disease is already well advanced. The time frame of this scene in the movie is between 1 hour 30 minutes and 1 hour 31 minutes 30 seconds. In this case, we can see the evident deterioration of the patient who can hardly remember anything. His daughter is helpless in her attempts to help him but with no results. That man with whom he had recently been at odds but whom he deeply admired had already passed away. Emilio's working memory and long-term memory are severely impaired, and he speaks with difficulty and moves slowly. This is a typical manifestation of advanced stages of Alzheimer's disease.[6]

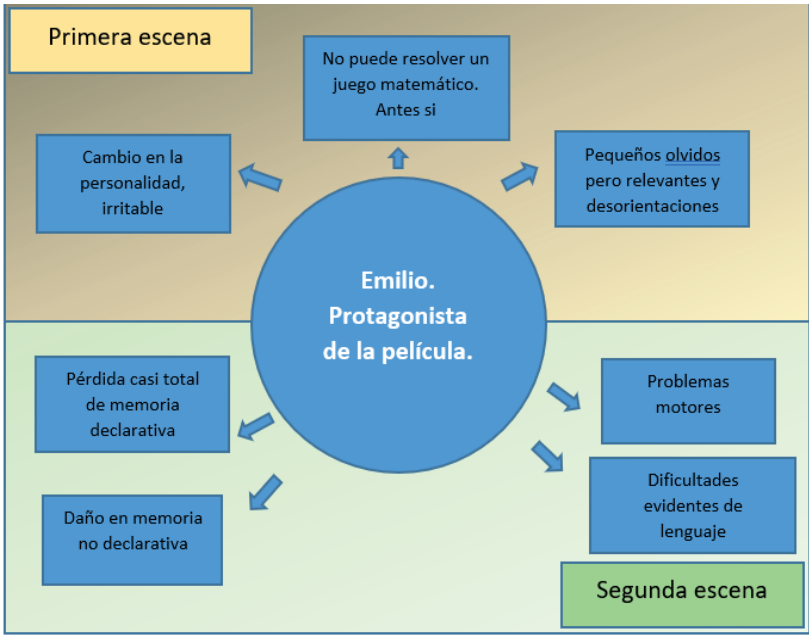

Figure 1. Symptoms presented by the protagonist at the onset of the disease and when it was already advanced

In summary, figure 1 presents a differentiation between the main symptoms presented by the protagonist in both scenes. In the first part, it can be seen that his problems do not appear to be so complex, but they undoubtedly cause him discomfort and are starting to hinder him from leading a normal life. Some symptoms are particularly noticeable in this patient due to his typical abilities, such as the inability to solve mathematical puzzles, which would likely be irrelevant in any other patient. However, in his case, it is the main reason for seeking medical attention (The context and life history are crucial).

In the second scene, we can observe how the subject's nervous system has deteriorated. His declarative and explicit memory is severely damaged because he practically does not perform actions or consciously retrieve memories. He no longer accesses his episodic memory and uses his semantic memory with very little autonomy. His non-declarative or implicit memory is still relatively active, allowing him to execute some movement patterns that enable him to move precariously. He manages to utter a few words and perform vital actions almost unconsciously. Nevertheless, there is evident damage primarily observed in language and motor actions. His working memory or short-term memory is significantly impaired.

DISCUSSION

Alzheimer's disease is directly related to memory impairment and, according to [24] and [21] among others, it causes both anterograde and retrograde amnesia. In the case we observed, the protagonist begins to forget things that he supposedly had stored, and he also experiences problems that directly affect his working memory, attention, and ability to generate new memories.

Emilio undergoes a clear change in his social interaction; he becomes irritable, and withdrawn, and has been reluctant to share with his daughter for some time. Perhaps, without realizing it, that previous distancing was an early sign of the onset of the disease. This aligns with the findings of researchers in the field. Alzheimer's is not just a memory problem; it also manifests with personality changes.[21]

All the authors reviewed for this study agree that Alzheimer's causes a severe progressive deterioration in cognitive and executive functions. Patients with this disease, in advanced stages, become individuals who are unable to care for themselves, with an average life expectancy of eight to ten years. Therefore, this degenerative disease ultimately leads to death, often due to starvation, malnutrition, and pneumonia.[6] This significant deterioration can be observed in the selected second scene, where the patient's change is evident, with a catastrophic progression of memory loss.

Family and emotional support are crucial in facing this disease, making it more adaptive or delaying the deterioration as much as possible. This does not imply that individuals with Alzheimer's cannot be supported by other institutions or access their legitimate right to assisted living. It rather refers to the closeness and emotional empathy that can be provided in any physical space.

Another aspect that seems relevant in coping with Alzheimer's is prior and ongoing cognitive training. According to evidence, individuals who receive cognitive training have higher survival rates. Alzheimer's appears to be a modern disease, as its prevalence has exponentially increased over time. However, despite the aforementioned observation being correct, the trend indicates that its increase is more attributable to the current life expectancy and the growing number of older adults. This is a statistically more conclusive data point, as the disease is significantly more prevalent in the elderly. Nevertheless, during this work, it was interesting to discover other trends from updated research published in prestigious journals that aim to establish the link between Alzheimer's and genetics, toxins, and the immune system. However, it should be noted that conclusive data and further research replications are needed to affirm these connections robustly.

CONCLUSIONS

Alzheimer's disease is increasingly recognized as a modern health challenge, emphasizing the urgent need to explore new avenues for understanding and intervention. This neurodegenerative disorder is directly linked to impairments in memory, with studies such as those by and highlighting its role in causing both anterograde and retrograde amnesia. In the observed case, the individual begins to forget previously stored information, illustrating difficulties with working memory, attention, and the ability to create new memories. Changes in social behavior, including irritability, withdrawal, and distancing, may serve as early indicators of the disease's onset, reinforcing that Alzheimer's is not merely a memory issue but also involves personality and behavioral shifts.

Moreover, extensive research indicates that Alzheimer's leads to a severe and progressive decline across cognitive and executive functions, ultimately impairing the individual's capacity for self-care in later stages. The disease typically progresses over eight to ten years, often resulting in death due to complications such as malnutrition and pneumonia. The progression of symptoms, as seen in the analyzed scene, underscores the catastrophic impact of the disease.

Given the modern context of Alzheimer's, it is crucial to extend research into emerging areas—such as the role of genetics, environmental toxins, and immune system interactions—and the significance of familial and

social bonds. Strengthening family connections and fostering emotional support are fundamental components in managing the disease, potentially delaying its progression and improving quality of life. Additionally, adopting an inclusive perspective that recognizes neurodiversity and emphasizes the importance of social and familial ties can lead to more compassionate and effective care strategies. Ultimately, built on a holistic understanding, these approaches can significantly contribute to better care systems and support networks for those affected by Alzheimer's.

From a neurodiversity and inclusion perspective, it is essential to recognize that although Alzheimer's presents neurocognitive challenges, accepting and valuing diverse brain functioning contributes to a more inclusive and understanding approach to these conditions. Recent research by Castro and Sagredo-Lillo,[25,26,27] along with Sagredo et al.[27,28], emphasize that educational and social inclusion must encompass neurodiversity, fostering collaborative and co-educational environments that respect and support various ways of processing and experiencing the world. These perspectives reinforce the idea that, beyond biomedical aspects, it is crucial to incorporate approaches that recognize the skills and potentials associated with all forms of neurodiversity, creating spaces where differences are seen as enriching rather than obstructive.

Moreover, evidence suggests that prior and ongoing cognitive training can improve survival and quality of life for individuals with Alzheimer's, and that the integration of inclusive technologies and methodologies in care and education enhances not only autonomy but also respect for cognitive diversity. These concepts align with strategies of collaborative work, co-teaching, and inclusive management in educational and social contexts, advocating for fairer and more respectful environments for those facing diverse neurological and cognitive challenges.[27,28]

REFERENCES

1. Ripoll M. Vivir dos veces [Película]. Dirigida por María Ripoll. Protagonizada por Oscar Martínez, Inma Cuesta, Mafalda Carbonell, Nacho López. España: 2020.

2. Bonet J. Cerebro, emociones y estrés. Buenos Aires: Penguin Random House Grupo Editorial Argentina; 2017.

3. Llanos E. ¿A quién ama Gilbert Grape?. Gac Psiquiatr Univ. 2016;6(3):351–63.

4. Llanos E. Niños del cielo. Análisis socioeducativo de un filme iraní. Rev Polis. 2017;3:385–406.

5. Llanos E. Los Coristas. Análisis psicoestético y socioeducativo de un filme francés. Rev Latinoam Educ Inclusiva. 2019;13(2):227–42.

6. Morris C, Maisto A. Psicología general. 13a ed. México: Pearson Educación; 2009.

7. Massaro DW, Cowan N. Information processing models: microscopes of the mind. Annu Rev Psychol. 1993;44:384–425.

8. James W. Principles of psychology. New York: Holt; 1890.

9. Ebbinghaus H. Memory: A contribution to experimental psychology. New York: Dover; 1913. Originally published in 1885.

10. Broadbent DE. Perception and communication. New York: Pergamon Press; 1958.

11. Atkinson RC, Shiffrin RM. Human memory: a proposed system and its control processes. In: Spence KW, Spence JT, editors. The psychology of learning and motivation: advances in research and theory. Vol. 2. New York: Academic Press; 1968.

12. Restle F. The psychology of judgment and choice: a theoretical essay. New York: Wiley; 1961.

13. Baddeley A, Hitch G. Working memory. In: Bower GA, editor. The psychology of learning and motivation. New York: Academic Press; 1974. p. 47–89.

14. Echeburúa E, Amor PJ, Sarasua B, Zubizarreta I, Holgado-Tello FP, Muñoz J. Escala de Gravedad de Síntomas Revisada (EGS-R) del Trastorno de Estrés Postraumático según el DSM-5: propiedades psicométricas. Terap Psicol. 2016;34(2):111–28.

15. Gil M. The complexity of human emotional experience: animal emotion, biology and culture in Martha Nussbaum's theory of emotion. Dilemata. 2016;21:207–25.

16. Valero Z, Muñoz S, Berra E, Nava C, Gómez G. Identificación de emociones desde el modelo de Lazarus y Folkman: propuesta del cuestionario de estrés, emociones y afrontamiento (CEEA). Rev Electr Psicol Iztacala. 2012;15(3):1051–73.

17. Heppner FL, Ransohoff RM, Becher B. Immune attack: the role of inflammation in Alzheimer's disease. Nat Rev Neurosci. 2015;16:358–72.

18. Del-Aguila JL, Koboldt DC, Black K, Chasse R, Norton J, Wilson RK, et al. Alzheimer's disease: rare variants with large effect sizes. Curr Opin Genet Dev. 2015;33:49–55.

19. Desikan RS, Fan CC, Wang Y, Schork AJ, Cabral HJ, Cupples LA, et al. Genetic assessment of age-associated Alzheimer disease risk: development and validation of a polygenic hazard score. PLoS Med. 2017;14(3):e1002258.

20. James OG, Doraiswamy PM, Borges-Neto S. PET imaging of tau pathology in Alzheimer's disease and tauopathies. Front Neurol. 2015;6:38.

21. Tirapu J. Neuropsicología de las funciones ejecutivas. En: Manual de neuropsicología. Barcelona: Viguera; 2011.

22. Brown D, Cox AJ. Usos innovadores del análisis de video. Phys Teach. 2009;47(3):145–50.

23. Stake RE. Qualitative case studies. In: Denzin NK, Lincoln YS, editors. The Sage handbook of qualitative research. 3rd ed. Thousand Oaks: Sage Publications; 2005. p. 443–66.

24. Tarasoff-Conway JM, Carare RO, Osorio RS. Clearance systems in the brain—implications for Alzheimer's disease. Nat Rev Neurol. 2015;11:457–70.

25. Castro-Cáceres R, Sagredo-Lillo E. Co-teaching and collaborative work in inclusive educational contexts. Salud, Ciencia y Tecnología. 2025;5:1089. https://doi.org/10.56294/saludcyt20251089

26. Sagredo E, Salamanca-Garay I, Sagredo-Concha I, Espinoza J, Soto-Fuentes A. Work Collaboration for Educational Inclusion during COVID-19 Pandemic via ICT. Revista Ibérica de Sistemas e Tecnologias de Informação. 2023;(E63):120-133.

27. Sagredo E, Salamanca I. Managing the inclusion of students with high cognitive performance and/or dual exceptionality, from virtual and face-to-face collaborative spaces. Smart Innovation, Systems and Technologies. 2023;2190-3018.

28. Castro R, Sagredo E. Work collaboration and co-teaching: Understandings provided by classroom teams. Revista Colombiana de Educación. 2024; (0120-3916).

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Conceptualization: Emilio Sagredo-Lillo.
Data curation: Emilio Sagredo Lillo, Ignacio Salamanca-Garay, Javier Espinoza, Agustín Sagredo.
Formal analysis: Emilio Sagredo-Lillo.
Research: Emilio Sagredo Lillo, Ignacio Salamanca-Garay, Javier Espinoza, Alejandro Soto-Fuentes, Agustín Sagredo.
Methodology: Emilio Sagredo-Lillo.
Project management: Emilio Sagredo-Lillo.

Resources: Emilio Sagredo Lillo, Ignacio Salamanca-Garay, Javier Espinoza, Agustín Sagredo.
Software: Emilio Sagredo-Lillo.
Supervision: Emilio Sagredo-Lillo.
Validation: Emilio Sagredo-Lillo.
Display: Emilio Sagredo-Lillo.
Drafting - original draft: Emilio Sagredo Lillo, Ignacio Salamanca-Garay, Javier Espinoza, Alejandro Soto-Fuentes, Agustín Sagredo.
Writing - proofreading and editing: Emilio Sagredo Lillo, Ignacio Salamanca-Garay, Javier Espinoza, Agustín Sagredo.