

Pathological Processes of Content Creators on Social Media: A Scoping Review

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Pathological Processes of Content Creators on Social Media: A Scoping Review

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Abstract

Background: Content creators (CC), like any other worker, are exposed to various occupational hazards that can affect their physical, mental, and social well-being, with psychosocial and ergonomic risks being particularly relevant.

Objective: To review the scientific literature to identify the potential pathological processes of CC on social media.

Methods: Systematic review method. Data were obtained from the following bibliographic databases: MEDLINE (via PubMed), Embase, Cochrane Library, PsycINFO, Scopus, Web of Science, and Virtual Health Library. The terms used as descriptors and in the title and abstract fields were “Content Creator” and “Pathologic Processes.” The search was conducted in May 2024. The documentary quality of the articles was assessed using the STROBE questionnaire, and the level of evidence and recommendation grade were determined according to SIGN recommendations. Bias presence was evaluated using the ROBINS-E tool.

Results: Of the 1,522 references retrieved, 6 articles were selected based on the inclusion and exclusion criteria. The STROBE scores ranged from a minimum of 81.3% to a maximum of 96.8%, with a median of 14.9%. According to SIGN criteria, this review provided evidence level 2++ with a recommendation grade of B. ROBINS-E highlighted a higher number of biases in Domains 5, 6, and 7. All interventions were based on interviews, either conducted online or via email. The health impact included anxiety, exhaustion, burnout, pressure, and video game use disorders.

Conclusions: It was found that the most affected area was mental health, as observed in nearly all of the reviewed studies. Despite the extensive documentation of mental health impact, it is necessary to identify the risk factors associated with the pathological processes of CC to prevent the signs and symptoms identified in this literature review.

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Original Manuscript

Pathological Processes of Content Creators on Social Media: A Scoping Review

ABSTRACT

Background: Content creators (CC), like any other worker, are exposed to various occupational hazards that can affect their physical, mental, and social well-being, with psychosocial and ergonomic risks being particularly relevant.

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Conclusion: It was found that the most affected area was mental health, as observed in nearly all of the reviewed studies. Despite the extensive documentation of mental health impact, it is necessary to identify the risk factors associated with the pathological processes of CC to prevent the signs and symptoms identified in this literature review.

Keywords: Pathological Processes; Social Media; Content Creator; Psychological Phenomena; Postural Balance.

INTRODUCTION

The rise of social media is primarily supported by the creation of content that appeals to the general public. These social media platforms have become not only a means of social entertainment but

also a commercial medium where brands offer their products and services through individuals with a significant ability to influence a broad audience.

In this framework, the role of content creation (CC) stands out as a new form of employment. The emergence of this labor role, popularly known as the "influencer," led the European Union to enact the Digital Services Act, which introduced regulations for digital platforms and CCs to combat illegal content and misinformation [1]. This regulation prompted the Spanish government to introduce specific legislation that established the rights and obligations for those engaging in this profession [2].

Thus, the exercise of this activity, as indicated by a study from the University of Valencia [3], is based on the economic performance derived from the advertising impact it has on social media. In other words, it connects commercial brands with their target audience through their ability to influence a community. Collaboration with CCs is now part of the global strategy of brands [4]. To achieve this, CCs must devote much of their day not only to content creation but also to promoting their work and engaging with sponsoring companies.

In the context of their professional activity, like any other worker, CCs are exposed to various occupational risks that can affect their physical, mental, and social well-being [5]. Particularly relevant are psychosocial and ergonomic risks. Psychosocial risks are related to factors arising from the interaction between work, individuals, and the social context: stress, pressure to maintain a constant presence on digital platforms, or public exposure can lead to anxiety or emotional disorders. Regarding ergonomic risks, these relate to the organization and conditions of the work environment: the use of data display screens, forced postures, or repetitive movements. Identifying, evaluating, and preventing these risks must be the foundation of this labor sector to avoid future health problems in CCs.

Thus, this cocktail of marathon workdays, sedentary behavior, public overexposure, and, in many cases, job insecurity and uncertainty (being constantly connected and awaiting tasks without predictability) results in health problems, ranging from mild to severe [6].

There is no doubt that work through digital platforms is growing in importance; however, it also presents significant challenges for the health and safety of its workers. Specifically, all the risks involved in the activities will be present (transport, cleaning, workplace adaptation, home-based work, etc.), but these are exacerbated by the unique characteristics of work on platforms [7,8].

CCs are often expected to produce quality work while managing their own stress. The pressure of the creative process, combined with the challenge of meeting deadlines, can lead to burnout. One of the main forms of digital content creation is the live-streaming of video games. The study noted that video game players and those engaged in electronic sports (eSports) were at a higher risk of suffering from numerous chronic diseases and an increase in mortality, highlighting a concerning reality in this research [9].

At the same time, participation on this Web 2.0 platform, with prolonged exposure as an idealized image, was correlated with depressive symptoms, self-esteem problems, anxiety, and body dissatisfaction [10]. Furthermore, this overexposure can sometimes lead to experiences of hate speech. For a CC, exposure to any form of hate speech is painful. The feeling of being attacked affects their value and self-esteem and, consequently, their well-being. In this line, Fung et al. [13], conducted a systematic review that highlighted the importance of social media in public health issues. They emphasized how the generated content influenced both the well-being of creators and viewers.

It is clear that content creation has become an emerging labor activity, which is not free from associated health problems. Consequently, the aim of this study was to review the scientific

literature to explore the potential pathological processes of CCs on social media.

METHODS

- Design

This is a descriptive cross-sectional study and a critical analysis of the studies retrieved through a systematic technique. The structure of this review followed the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [14] and the methodological framework proposed by Arksey & O'Malley for scoping reviews [15].

- Data Collection Source

Data were obtained from direct consultation and access, via the internet, to the following bibliographic databases in the field of health sciences: MEDLINE (via PubMed), Embase, Cochrane Library, PsycINFO, Scopus, Web of Science, and Virtual Health Library (VHL).

- Information Processing

To define the search terms, the Thesaurus of Descriptores de Ciencias de la Salud (DeCS) developed by the Latin American and Caribbean Center on Health Sciences Information (BIREME) was consulted, along with its equivalence to the Medical Subject Headings (MeSH) established by the U.S. National Library of Medicine.

From the hierarchical study of both Thesauri and their indexing sheets (Entry Terms), the following search equations were deemed appropriate:

Equation 1: Content creators on social media (Web 2.0)

“Content Creator”[Title/Abstract] OR “Influencer”[Title/Abstract] OR “Streamer”[Title/Abstract] OR “Gamer”[Title/Abstract] OR “Youtuber”[Title/Abstract] OR “TikToker”[Title/Abstract] OR “Instagramer”[Title/Abstract] OR “Twitcher”[Title/Abstract] OR “Blogger”[Title/Abstract] OR “Vloggers”[Title/Abstract] OR “Podcaster”[Title/Abstract] OR “Content Strategist”[Title/Abstract]

Equation 2: Pathological processes - Abnormal forms and mechanisms involved in dysfunctions of tissues and organs.

“Pathologic Processes”[Mesh] OR “Pathologic Processes”[Title/Abstract] OR “Pathological Process”[Title/Abstract] OR “Disease”[Title/Abstract] OR “Syndrome”[Title/Abstract] OR “Symptom”[Title/Abstract] OR “Illness”[Title/Abstract]

The final search equation was developed for use in MEDLINE (via PubMed) by combining the two proposed equations using Boolean logic (Equation 1 AND Equation 2).

This strategy was then adapted to the characteristics of each of the other consulted databases, and the search was conducted from the earliest available date in each of the selected databases up to May 2024. Additionally, a complementary search strategy was implemented to minimize the possibility of publication bias, by manually searching the bibliographies of the articles selected for the review. Furthermore, experts in the study topic were contacted to determine the potential existence of grey literature (materials and research produced by organizations outside of traditional commercial or academic publications and disseminated through alternative channels).

- Final selection of articles

For the review and critical analysis, articles that met the following criteria were selected:

- Inclusion: Original articles published in a peer-reviewed journal, written in English, Spanish, or Portuguese, with access to the full text of the selected article.
- Exclusion: Studies not focused on the review’s objective (CC and pathological processes) or studies conducted on individuals under 13 years of age (the minimum age established by law for engaging in the activity) [2]).

The selection of relevant articles was performed by two authors of this review (S.M.-A. and J.S.-V.). To validate the inclusion of articles, the agreement rating between the authors had to be above 0.60 [16]. Any disagreements were resolved through consensus among all authors of the review.

- Document quality, evidence level and recommendation grade

The structural validity of the articles was evaluated using the Strengthening the Reporting of OBservational Studies in Epidemiology (STROBE) guidelines [17], which contains a list of 22 essential aspects that must be described in each article. For each selected article, one point was assigned for each item present. If an item contained several subcategories, these were independently evaluated, with the same value given to each subcategory, and then an average was calculated (this average was the result for that item), ensuring that the total score for each item did not exceed one point.

To determine the level of evidence and its recommendation grade, the recommendations of the Scottish Intercollegiate Guidelines Network Grading Review Group (SIGN) [18] were used.

- Bias study

The risk of bias in exposure effect studies was assessed using the ROBINS-E tool [19]. This tool classifies biases into 7 dimensions, rating each one on 4 possible interpretations: Low risk (little or no concern about bias); some concerns (there is some concern about bias in this domain, though it is unclear whether a risk exists); high (the study has some significant issues in this domain, leading to a

high risk of bias); very high (the study is highly problematic in this domain. The study's characteristics lead to a very high risk of bias).

- Data extraction

Data accuracy control was performed using double-entry tables that allowed for the detection of deviations and their correction through re-consulting the original data.

Duplicate records were excluded using the cross-platform ZOTERO program, a reference management tool developed by the Center for History and New Media at George Mason University.

- Variables under study

The articles were grouped based on the variables under study to systematize and facilitate the understanding of the results. The following data were extracted: first author, year of publication, CC activity, age, platform used, intervention conducted, and type of disease or symptoms.

- Data Analysis

The data related to information retrieval were presented in terms of frequency and percentage. The agreement for article selection by the two authors was measured using Cohen's kappa coefficient, with an agreement considered adequate when the value was above 60% (good or very good agreement strength).

To determine the currency/obsolescence of the selected articles, the Burton-Kebler (BK) semi-period was calculated: the median age based on the temporal range analyzed, and the Price Index (IP): the percentage of articles less than 5 years old.

STROBE questionnaire scores were analyzed using the median, maximum, and minimum. The evolution of these scores, in relation to the years of publication, was obtained through regression analysis (R^2).

- Ethical aspects

All data were obtained from articles accepted for review. Therefore, in accordance with the Law 14/2007 on biomedical research, ethical committee approval was not required due to the use of secondary data [20].



RESULTS

By applying the search criteria, a total of 1,522 references were retrieved: 200 (13.1%) from MEDLINE (via PubMed), 61 (4.0%) from Embase, 148 (9.7%) from Cochrane Library, 95 (6.2%) from PsycINFO, 519 (34.1%) from Scopus, 344 (22.6%) from Web of Science, and 155 (10.2%) from VHL. The consultation of bibliographic listings from the selected articles and expert consultations did not yield any new documents. The entire article selection process can be consulted at DOI: 10.6084/m9.figshare.26557762.

After eliminating 385 duplicate records and applying the inclusion and exclusion criteria (**Figure 1**), it was possible to select 6 documents [21–26] for review and critical analysis; see **Table 1**.

Table 1. Selected articles for the review

Author / year	Population	Platform	Instrument	Health issue
Zsila et al. [21] 2023	Activity: Influencer Study 1: N = 1544 M/W = 1375/169 Age = 14 a 53 years Studies 2 y 3: N = 525 M/W = 427/98 Age = 18 a 56 years	Twitch	1st study: Online questionnaire: to assess issues related to Gaming Disorder (DSM 5-S4). 2nd study: 10-item Need for Belonging Scale. The participants' need for group dependency was evaluated. 3rd study: Following the same approach as the second study, but the focus was on aspirational identification and parasocial relationships.	1st study: Internet gaming disorder: inadequate sleep and symptoms of depression and anxiety. 2nd study: High scores were obtained, indicating the need for belonging. 3rd study: Investigates the type of contact with the streamer, parasocial relationship bonds, identification of desires, and the need for belonging as predictors of financial support to a favorite streamer.
Niederauer et al. [22] 2022	Activity: Youtuber N = 6 M/W = 6/0 Age = 18 a 40 years	YouTube	Semi-structured interview addressing subjective questions about the digital influencer on the YouTube platform.	Exhaustion, discomfort, pressure, distress/anxiety, burnout.
Gandhi et al. [23] 2021	Activity: Streamer N = 25 M/W/O = 16/8/1 Age = 18 a 39 years	Twitch	Interviews with a semi-structured protocol, with an average duration of 59 minutes (SD = 25.5); \$20 per interview.	Mental health (no specific symptoms are outlined). The study focuses on how streamers, viewers, or both address these issues during live streams.

Tran et al. [24] 2020	Activity: Influencer N = 9 M/W = 0/9 Age = 21 a 40 years	YouTube	20-question interview distributed via email. (Jacobsen Framework, theoretical model for the study of aesthetics psychology).	Burnout (feelings of guilt related to inconsistent work, delayed video posts, creative blocks, and failure to keep social media platforms updated). Mood regulation and self-esteem. Anxiety.
Yeshua-Katz et al. [25] 2013	Activity: Blogger N = 33 M/W = 0/33 Age = 15 a 33 Years	Blog	Semi-structured interview with three sections of questions. 1st section: Bloggers' experiences with their eating disorder (ED). 2nd section: Focused on their reasons for blogging about their disorder. 3rd section: Questions about the perceived benefits and disadvantages of pro-ana blogging.	Eating disorders: anorexia nervosa; anxiety.
Ressler et al. [26] 2012	Activity: Blogger N = 230 M/W = 172/39 Age =18 a 75 years	Blog	Online open-ended survey with 34 items.	Chronic pain diseases. Therapeutic potential of blogging (The act of posting about the pathology they suffer from, in this case, chronic pain diseases, allows them to alleviate the emotional burden associated with it).
M/W/O = Man/Woman/Other (Non-binary)				



The agreement on the relevance of the selected studies between the evaluators, calculated using the Kappa index, was 84.9% ($p < 0.01$).

The total retrieved articles showed an obsolescence rate, according to the Burton-Kebler semi-period, of 3 years, with a Price Index of 71.40% (7 out of 10 articles were published in the last 4 years). Meanwhile, the articles selected for review showed a Burton-Kebler semi-period of 3.5 years, with a Price Index of 66.7%.

When evaluating the document correction of the reviewed articles using the STROBE questionnaire, the scores ranged from a minimum of 13.0 (81.3% compliance) to a maximum of 15.5 (96.8% compliance), with a median of 14.9 (Table 2). A very low non-significant direct linear trend over time was observed ($R^2 = 0.02$; $p = 0.80$).

According to SIGN criteria, this review presented evidence level 2++ (systematic reviews with a high probability of causal relationship) with a recommendation grade B (a body of evidence including studies directly applicable to the target population and showing overall consistency of results).

The risk of bias in the analyzed studies and the evaluation of the domains included in the ROBINS-E tool are summarized in Table 3, where a higher number of biases can be seen in older articles, particularly in Domains 5, 6, and 7. This indicates that these studies have difficulty appropriately measuring the results.

The study population ranged from a minimum of 6 participants [22] to a maximum of 1,544 participants [21], three of the 6 studies focused on a single gender: Niederauer et al. [22], included only men, while Tran et al [24] and Yeshua-Katz et al. [25] included only women. Gandhi et al. [23] was the only study that identified gender differences. Two studies noted that the population initially presented eating disorders [25] and chronic pain [26], while the other studies did not report any specific pathology in the studied population.

The activities performed by the individuals included in the various studies were: Influencers [21,24], Youtubers [22], Streamers [23] and Bloggers [25,26].

Although this review focused on adults, as it investigated CC as a professional activity, two studies included minors: the studies by Zsila et al. [21] y Yeshua-Katz et al. [25]. Only the study by Ressler et al. [26] included individuals over 65 years of age.

Tools used

All tools were shared either online or via email.

The study by Zsila et al. [21], was mixed (qualitative-quantitative). It analyzed qualitative aspects and established quantitative scales or values through three sections. It examined the problematic gaming behavior pattern, characterized by an increasing priority given to gaming over other activities, to the point where gaming takes precedence over daily interests and activities (Gaming Disorder). It also assessed the sense of trust, intimacy, and acceptance within a group, whether family, friends, or work (Need for Belonging Scale), and considered the potential financial support based on the second point.

Niederauer et al. [22], conducted an exploratory qualitative study using semi-structured interviews. The methodology involved content analysis of participants' responses to identify patterns and generate thematic categories.

Ghandi et al. [23], employed a qualitative methodology with semi-structured interviews to explore how CCs address mental health topics.

Tran et al. [24], conducted a qualitative study using an ad hoc interview to analyze guilt

feelings related to potential inconsistent work, using the Jacobsen Framework (theoretical model for studying aesthetics psychology) to understand the effects of intrinsic and extrinsic motivation on CC self-esteem.

Yeshua-Katz et al. [25], also used a qualitative methodology with a focus on personal narratives and the meanings individuals assign to their experiences with illness. Additionally, content analysis based on grounded theory was used to identify emerging themes.

Ressler et al. [26]: performed a mixed-methods study. They conducted a quantitative part with closed-ended questions to collect data on participants' characteristics, using descriptive statistics. They also conducted a qualitative portion with open-ended questions to explore bloggers' personal experiences, motivations, and perceptions of blogging's impact on their emotional and social well-being, using grounded theory to identify recurring themes and patterns.

Main Results

The study by Zsila et al. [21], revealed results indicating that the lack of group belonging, along with certain types of video games, led to the development of mental health symptoms, such as anxiety and depression, as well as disturbances in sleep.

Niederauer et al. [22], highlighted how the lack of satisfaction in content creation could lead to signs and symptoms of burnout. They observed that unsatisfactory content creation on YouTube led to various health problems, including exhaustion, discomfort, pressure, distress, anxiety, and burnout.

In the study conducted by Ghandi et al. [23], it was described that the type of video game influenced how mental health was addressed for both content creators and their audiences, without specifying concrete symptoms.

The results of the study by Tran et al. [24], indicated signs/symptoms of burnout in the studied population. Feelings of guilt related to unconscious work, delayed video posts, artistic blocks, and failure to keep social media platforms up to date were observed. Additionally, mood regulation, self-esteem, and anxiety were reflected.

Yeshua-Katz et al. [25], highlighted the presence of bloggers with health concerns related to eating disorders (ED), manifesting issues such as anorexia nervosa and anxiety.

Ressler et al. [26], showed that content creation for bloggers dealing with chronic pain and/or illness helped reduce the feeling of isolation through online communication, presenting a therapeutic potential in the act of blogging.

Thus, both, Yeshua-Katz et al. [25] and Ressler et al. [26], suggested that blogging could serve as an effective means to express a patient's clinical situation, and even be considered a therapeutic activity.

All studies agreed on the need for further research into the potential pathological processes of content creators engaged in social media activities.

Table 2. Analysis of the methodological quality of the studies through the 22 evaluation points of the STROBE guidelines.

Article	Score of the points in the questionnaire ^a																						Total	% ^b
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
Zsila et al. [21]	1	1	1	1	1	1	1	1	NA	1	NA	NA	1	0.5	NA	NA	NA	1	1	1	1	0.5	15.0	93.8%
Niederauer et al. [22]	0.5	1	1	1	1	1	1	0	NA	1	NA	NA	1	1	NA	NA	NA	1	1	1	1	1	14.5	90.6%
Gandhi et al. [23]	1	1	1	1	1	1	1	1	NA	1	NA	NA	1	1	NA	NA	NA	1	1	1	1	0.5	15.5	96.8%
Tran et al. [24]	0.5	1	1	1	1	1	1	1	NA	1	NA	NA	0.3	1	NA	NA	NA	1	1	1	1	1	14.8	92.5%
Yeshua-Katz et al. [25]	0.5	1	1	0	1	1	1	1	NA	1	NA	NA	0.5	1	NA	NA	NA	1	1	1	1	0	13.0	81.3%
Ressler et al. [26]	0.5	1	1	1	1	1	1	1	NA	1	NA	NA	1	1	NA	NA	NA	1	1	1	1	1	15.5	96.8%

^a 0 = Does not meet the item or any of its parts; 1 = fully meets the item; 0 to 1 = partially meets the item; NA = does not apply.
^b Percentage of compliance for the total items, excluding those that do not apply (NA).

Table 3. Evaluation of the reviewed articles according to the bias domains included in the ROBINS-E tool.

Domain	Zsila et al.	Niederauer et al.	Gandhi et al.	Tran et al.	Yeshua-Katz et al.	Ressler et al.
Domain 1	Something	Low	Low	Low	Low	Low
Domain 2	Low	Low	Something	Something	Bajo	Something
Domain 3	Low	Low	Low	Low	Algo	Low
Domain 4	NA	NA	NA	NA	NA	NA
Domain 5	Something	Very High	High	Very High	High	Something
Domain 6	High	High	High	Very High	High	High
Domain 7	High	High	High	High	High	High

Domain 1: due to confusion; Domain 2: arising from exposure measurement; Domain 3: participant selection in the study; Domain 4: due to interventions after exposure; Domain 5: due to missing data; Domain 6: arising from outcome measurement; Domain 7: due to the selection of the reported outcome.

DISCUSSION

Considering the recommendations for the objectives of a systematic review [27], this review summarized relevant information related to the occupational health of content creators (CCs) working on social media. In fact, there is a wide range of research on the effects of social media use on health, particularly in young people. However, very little is known about the health of social media CCs, who also tend to be quite young.

The reviewed articles presented low obsolescence, indicating that the topic is novel. This is further confirmed by the high percentage of articles included in this study that were published in the last 5 years, ensuring confidence in the findings being up to date.

The evaluation of the document accuracy of the studies included in this review, using STROBE, did not reveal any temporal evolution. Usually, the more recent articles show better results and are linked to the progressive implementation of quality questionnaires. In fact, older studies often did not follow these quality guidelines; for example, the first documents in STROBE date back to 2004, and their usage was gradual [28]. In light of the recent publication of the reviewed studies, it was anticipated that this circumstance would not arise and that the obtained results would be satisfactory.

The level of evidence and recommendation grade for this work, according to SIGN criteria, were in line with expectations for reviewing observational studies. Despite aiming for a consistent relationship between intervention and outcome, it is important to remember the study designs from which the evidence is derived, acknowledging that some are more susceptible to biases than others and, therefore, justify decisions less strongly. It is well known that many health and occupational safety studies still do not rely on the highest possible level of evidence [29]. This could be due to the limitations of certain primary study designs, such as clinical trials, which are considered robust but may not be suitable for evaluating occupational health interventions, as they generally have long-term effects [30]. In this review, the pathological processes of CCs may not yet be well-studied causes.

The evaluation of the domains included in the ROBINS-E tool showed the main expected biases in the observational studies, but it should be noted that no studies with appropriate cause-effect relationships were available, as already indicated [19]. In fact, studies on occupational health, particularly those analyzing data from social media, have shown an uncontrolled process that leads to a bias focal point [31].

On the other hand, the population size was very small, except for the studies by Zsila et al. [21] and Ressler et al. [26], which could establish results directly derived from the intervention and, consequently, generalize their conclusions. This issue was mentioned in all studies, where they unanimously agreed on the need for further research into the possible pathological processes of CCs engaged in social media activities.

Regarding the activity developed, it was observed over the years that there has been an evolution from blogging to the use of platforms that allow live streaming, such as YouTube or Twitch, as streamers can broadcast in real time and interact with their audience. Despite the differences each platform may present, there is a unique characteristic: the effort of CCs to attract audiences and establish parasocial relationships (emotional connection with someone they do not know personally) [32]. Furthermore, people aged 15 to 24 years (the most active on social media) are precisely those who use platforms like YouTube and Twitch the most [33]. These two platforms have contributed to the so-called "democratization of content generation," allowing the audience to have a proactive role in the process. The "Twitch Generation" values, above all, authenticity and interactivity, genuine, unfiltered content, and

direct interactions with their favorite streamers [34].

The presence of minors as content creators (CCs) in the study by Yeshua-Katz et al. [25], should not come as a surprise, as most platforms allow content creation starting at the age of 13. However, we must not forget that these minors are performing adult-level work, with all the associated risks, particularly from a psychological perspective. Therefore, it is crucial to raise awareness among parents and guardians while also keeping in mind the responsibility of digital platforms in safeguarding minors' rights.

In this regard, the study by Fernández-Gómez et al. [35], examined how "kidfluencers" (minor CCs) created content and integrated "branded content" (content linked to a brand that connects the brand with the consumer) into their creations. Martínez Pastor et al. [36], demonstrated that, despite the existence of advertising regulations in all the countries studied, compliance was minimal when it came to identifying advertising content as such. In this vein, Tur-Viñes et al. [37], assumed that content creation by minor CCs is carried out with the support of parents, and, in some cases, parents even open their own channels to support the transmedia strategy initiated by their children.

While the study by Ressler et al. [26], included a population up to 75 years old, no specific results were found for the 65–75 age range. However, other studies showed that the content production of senior CCs was characterized by a pronounced digital marketing strategy, highlighting professional routines such as regularity in posting frequency, post quality and creativity, and a close relationship with followers [38].

Traditionally associated with a more passive role as content consumers, some older adults have been developing their digital skills and are now active CCs on social media. In some cases, they have even created a vast audience and a wide range of engaged, interested, and committed followers [39]. However, there is little evidence concerning these older digital content creators, and even less regarding the pathologies associated with this activity, as these individuals are often considered excluded from the labor market.

Conducting interviews online or via email are methods commonly used for data collection, as they are extremely cost-effective and can be sent to a large audience simultaneously. However, the reliability of the data can sometimes be questioned, as the responses received may not always be authentic. Therefore, a method should be established to support the results that might be obtained. Nevertheless, there are studies that have considered online or email interviews as an effective and convenient method [40].

In studies with quantitative methodology [21,26] a validated tool should have been used, or the homogeneity, reliability, internal consistency, and validity should have been reported [41]. Additionally, in studies with qualitative techniques, the trustworthiness—credibility, transferability, dependability, and confirmability—should have been discussed [42].

The need for validation of results is fundamental in web-based studies. It is evident that collecting high-quality datasets from social media users is problematic, not only due to the biases associated with data collection methods but also with respect to consent management and the selection of appropriate analytical techniques [43].

As observed in this review, the impact on mental health was one of the primary issues resulting from the activities of content creators (CCs). This is due to the constant pressure, whether imposed externally or self-imposed, that these workers face in their daily activities to meet targets.

At the same time, they must contend with the need to please their viewers, often unable to fully express their emotions or feelings, either to their audience or, even less so, to their sponsors. This situation leads to the manifestation of symptoms that affect the mental health

of CCs, such as disturbances in sleep, anxiety, emotional lability, excessive worry, irritability, loss of interest, obsessions, and fatigue. This set of symptoms creates the ideal breeding ground for the development of psychiatric illnesses such as generalized anxiety disorder, dysthymia, or depressive episodes. In the most extreme cases, these can even lead to the suicide of a CC [44,45].

In addition to the extreme burnout associated with these conditions, CCs may also experience physical exhaustion and a sense of depersonalization, resulting in burnout syndrome, as indicated in the studies by Niederauer et al. [22] and Tran et al. [24].

However, as demonstrated in this review, it would be a mistake to think that the health consequences for CCs are limited solely to mental health disorders. The prolonged use of data display screens, visual fatigue, persistent forced postures, repetitive upper limb movements, and a sedentary lifestyle can lead to musculoskeletal disorders and systemic issues. These risks associated with the occupational activity of CCs are critical to understanding the various impacts that this professional activity can have on the health of these workers.

It is essential, therefore, to address these consequences at their source through preventive actions to prevent the manifestation of the aforementioned health problems. To prevent these health issues, content creators should be educated and informed about the potential consequences of their work activity, emphasizing the importance of a balance between work and rest. Promoting periodic digital disconnection and avoiding marathon workdays that hinder recovery or rest is key. In this regard, it is important to identify whether CCs, or certain profiles within this group, are exposed to shift work in their activities and, if so, to apply the corresponding preventive measures. To ensure the health of workers, periodic evaluations of their well-being are essential and should be conducted regularly to identify and prevent potential health issues.

Regarding the consequences of sedentary behavior in CCs' activities, workers must be made aware of the importance of taking breaks during their workday, alternating periods of sitting with standing, to reduce the negative effects of prolonged sedentary behavior.

To mitigate the risks associated with the use of data display screens, persistent forced postures, and repetitive upper limb movements, it is crucial for CCs to have adequate ergonomic conditions in their work environment that promote a healthy and appropriate setting for carrying out their activities.

Critical reflection by authors

It is essential to consider the importance of conducting research that analyzes the impact on the health of content creators (CCs) from multiple perspectives, including age, the type of Web 2.0 platform used for content creation, the target audience, the social impact generated, and the consequences for health in each of these areas. This multidimensional approach would allow for a comprehensive and detailed understanding of the occupational risks associated with this activity for the health of those engaged in it. The foundation of occupational risk prevention lies in addressing the problem at its origin. Furthermore, appropriate corrective preventive measures must be established to minimize the risk. In this regard, there is a noticeable gap in proposals related to such measures. As long as the active population continues their work without regular medical supervision and appropriate follow-up, health problems will persist or develop, which, if left uncorrected, could lead to severe and irreversible damage to the CCs.

Limitations

A primary limitation of this review could be the low number of studies selected, as it concerns an emerging area of knowledge. It has been stated that systematic reviews should be based on studies with designs and selections that ensure greater scientific rigor. However, this analysis included all relevant studies retrieved on the topic under investigation.

The significant difference between the articles retrieved and the final selection is primarily due to the bibliographic databases Scopus and Web of Science. Although some studies were retrieved from other databases, the majority were irrelevant, which could be attributed to their lack of proper indexing (the search was conducted in text format, consulting titles, abstracts, and keywords) and the inability to limit the search by article type. This high "documentary noise" has been previously observed in other reviews.

According to the United States Agency for Health Research and Quality, the epidemiological designs of the studies selected in this review do not guarantee the full validity and reliability of the observations obtained [46]. However, the available evidence is likely the best given the difficulties of studying this area of research and based on the observations obtained in the various interventions.

Although the real limitations are due to the characteristics of each study, important lessons can be drawn from them to formulate appropriate actions for the development, implementation, and evaluation of future Web 2.0 applications. As Drucker et al. [47], rightly stated, understanding these sources of bias is crucial for both authors and consumers of scientific literature as they conduct and read systematic reviews and incorporate their findings into clinical practice and policy formulation.

Conclusions

The studies revealed that the most observed area was mental health. Although the impact on mental health has been extensively documented, it is evident that there is a need to address other aspects of this occupational activity, such as physical health and its social impact, in future studies.

Content creation, therefore, is an emerging activity that is not without health issues, especially in the realm of mental health. It is crucial to continue conducting research that addresses these problems at their origin and determines preventive measures to mitigate their effects. Thus, more detailed studies from an occupational health perspective are necessary.

Data Availability

Data sharing is not applicable to this paper as no datasets were generated or analyzed during this study.

Authors' Contributions

SMA and JSV were responsible for conceptualization, methodology, formal analysis, supervision, project administration, writing (original draft), and writing (review and editing). ERP was responsible for methodology, formal analysis, data curation, and writing (review and editing).

Conflicts of Interest

The authors declare the absence of any conflict of interest.

Abbreviations

CC = Content creator

DeCS = Descriptores de Ciencias de la Salud

MeSH = Medical Subject Headings

ROBINS-E = Risk Of Bias In Non-randomized Studies of Exposures

SIGN = Scottish Intercollegiate Guidelines Network

STROBE = Strengthening the Reporting of OBservational Studies in Epidemiology

VHL = Virtual Health Library



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Supplementary Files

Figures

Identification and selection of studies according to the PRISMA statement.

