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# How did the pandemic lockdown affect the media's outlook on gaming? A case study of Türkiye as an emerging market

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In this work, we aim to research whether and how the perceptions of mainstream news media (specifically print-based news outlets) toward videogames, gamers, and gaming industry changed during the Covid-19 pandemic lockdown. During the lockdown, many individuals and families explored different options for home entertainment and distractions, and digital gaming proved to be one of the biggest outlets. Even sources like World Health Organization (WHO) recommended videogames as an effective way to keep people at home and prevent virus spread. Accordingly, mainstream news outlets' approach to videogames coverage that was characterized as vilifying, biased, and portraying games as threat became more positive. We collect 3,566 news articles about videogames, gamers, and gaming industry from various Turkish news outlets over a period of 4 years and analyze them to capture this shift in an emerging market and industry. Our sentiment analysis reveals that although the negative coverage around games decreased post-pandemic, the positive coverage did not increase accordingly. The thematic coding revealed that games were less discussed regarding health risks and safety concerns post-pandemic, and more with their business potential. However, we still report a lack of nuance and depth.

### KEYWORDS

COVID-19, digital games, media coverage, pandemic lockdown, videogames

## 1 Introduction

When it comes to games, some commentators, especially voices from the mainstream media, find it easier to focus on the vilifying aspects of gaming (Williams, 2003; McKernan, 2013; Bigl and Schlegelmilch, 2021). However, Granic et al. (2014) note that games increased diversity, complexity, and sociality in the 21st century. They claim that scholars from other fields (such as psychology, clinical fields, etc.) may be disregarding this complexity and focus on possible negative aspects such as addiction, loss of attention, and violent behaviors.

Although individuals (especially kids and teenagers) and play remain inseparable in many aspects—such as educational, developmental, social, health, and wellbeing—videogames have always been a contested outlet of play, typically seen as inferior to traditional toys and ways to play. While more traditional definitions consider playing as first and foremost something fun, the latter definitions consider playing a game as something that the participants can take pleasure in within various contexts wherein “[p]lay can be pleasurable when it hurts, offends,

challenges us and teases us, and even when we are not playing” (Sicart, 2014, p. 3). This wider definition also includes play and games employing negatively perceived emotions (Lazzaro, 2009).

We examine whether media focus and coverage of videogames have also become more diverse and positive, specifically post-pandemic. We approach this objective through the lens of Turkish media as a case study of an emerging games market and industry. The overarching goal of this study is to examine whether and how Turkish mainstream print media’s coverage of videogames, gamers, and the gaming industry changed between the pre-pandemic and post-pandemic periods. From this goal, two research questions are derived:

*RQ1: How did the sentiment of mainstream Turkish print media coverage of videogames change between the pre-pandemic (2018–2019) and post-pandemic (2020–2022) periods?*

*RQ2: How did the thematic distribution of Turkish print media coverage of videogames differ between the pre-pandemic and post-pandemic periods?*

From these research questions, we derive the following hypotheses:

*H1: Post-pandemic coverage will have more positive sentiments.*

*H2: The thematic distribution of the news pieces will show major categorical changes between pre- and post-pandemic.*

To the best of our knowledge, no prior English-language studies exist in this framing, though Sengun (2014) and Celik (2017) provide partial analysis.

## 2 Background review

This section covers existing research around (1) media’s portrayal of videogames; (2) Türkiye’s press structure; and (3) Turkish game industry research.

News media’s outlook on videogames is like how media portrays different new technologies, swaying between utopian and dystopian ends. Williams (2003) found US media shifted from vilifying to partially redeeming games as user bases aged. Kirkpatrick (2013, p. 7, cited in Perreault and Vos, 2020, p. 162) notes media frames games as ‘pleasurable’ yet lashed for addiction and aggression. The same contradictory framing applies to children and videogaming, albeit it is possible to find even more dichotomic representations of young gamers as “either delinquent and violent, or naturally adept ‘cyberchildren’ with bright futures as information workers” (Narine and Grimes, 2009, p. 319). Recent studies concentrating on the West suggest that biased and/or polarizing reporting is still present (Bigl and Schlegelmilch, 2021; Parrott et al., 2020).

Türkiye’s media faces structural issues tied to political economy (Yesil, 2016). Lack of media regulation allows owners to secure government contracts in energy and construction (Sözeri and Kurban, 2014). Weak journalist unions make journalism precarious (Asik, 2017) and affects contributions to a functioning democracy. Declining readership due to internet use and political division led to reliance on advertorials and paid content that may be difficult to discern from

genuine articles. The structural issues in Turkish media have worsened over the course of the last 20 years, under the rise of Justice and Development Party (AKP) to political power where previously established power hierarchies in the media were shaken if not altogether destroyed (Inceoğlu et al., 2021). Media convergence eroded news diversity (Över, 2021). Even though journalists use alternative and social media to surpass repressed media atmosphere (Akser and Baybars, 2022), the press in Türkiye is mired with issues of freedom of expression, media independence, and journalistic integrity.

Türkiye’s game industry grew rapidly in the 2010s, with over 10 universities establishing development departments (Şengün, 2018) as well as interest from the media, state agencies, and investors. Previously, fewer than 25 games were produced in Türkiye between 1980 and 2005 with total sales figures of less than 10 thousand (Tuker et al., 2015). Since 2015, Türkiye attracted \$2.4 billion in game-related investment (Demirçin, 2022). In fact, Turkish publishers account for 2% of Android games (42matters, 2022).

## 3 Methodology

We collect data from Türkiye’s national media through a systematic search in a commercial print media monitoring service<sup>1</sup> database that monitors around 4,000 local and national outlets that are published in Turkish language. The translated rules we used to make the scans are as follows:

*game/play AND (computer OR video OR console OR digital OR company OR pandemic OR corona OR covid OR covid-19 OR epidemic)*

The data is collected within pre- and post-pandemic timeframes covering 2 years before the official declaration of the novel coronavirus outbreak as a global pandemic (April 1, 2020) and the post-pandemic period that lasts until April 2022. The latter date corresponds to the canceling of general mask requirements in Türkiye (except in health institutions).

We then analyze this data to (1) determine the sentiments of the news pieces as positive, negative, or neutral; and (2) categorize their coverage in themes. To determine the sentiment approach, two researchers read through the news pieces separately and establish interrater reliability. To categorize their coverage, we create a codebook (MacQueen et al., 1998) through a critical discourse analysis that concentrates on the media’s discourse regarding the given phenomena, characteristics, arguments, perspectives, and overtly articulated utterances (Wodak, 2001). A previously established Turkish codebook (Sengun, 2014) exists and our discourse analysis both validates and extends it.

As a case study for an emerging market, we take a special interest in unearthing media’s potential change of coverage after a string of high-profile buyouts in the expanding game development market

<sup>1</sup> MTM Media Monitoring and Analysis, <https://medyatakup.com.tr/en/sd/print-media-monitoring.html>. Access to the MTM Media Monitoring and Analysis database was obtained through a research subscription agreement with the service provider. Data were exported under a standard academic research license. The authors had no editorial involvement in the database’s content collection process.

setting. In section 4.4, we provide more details on these events and use the announcement dates of these high-profile buyouts as historical data turning points.

## 4 Results

This section outlines data collection and processing results, followed by sentiment and thematic coding outcomes. Finally, we analyze major Turkish industry acquisitions during our time-period and their effects.

### 4.1 Data collection and processing

The media scan rule resulted in  $N = 47,532$  entries (see Table 1). However, the resulting data set was extensively messy due to both technical (OCR and web crawler problems) and contextual (the ambiguity of the Turkish word for play/game) reasons. Accordingly, we scanned through all the entries and manually eliminated those that were irrelevant. We further eliminated the entries that come from gaming news media<sup>2</sup> since this content was already expected to be more informed and positive and would not capture the change in media toward games. This brought the final total number of news pieces down to  $N = 3,566$  entries. The final dataset of entries consists of roughly 1.4 million words (10 million characters).

The substantial reduction in entries from  $N = 47,532$  to  $N = 3,566$ , representing a 92.5% exclusion rate, reflects two distinct filtering challenges. First, OCR and web-crawler artifacts produced a large volume of malformed or duplicate entries in the commercial database. Second, the Turkish word for 'play/game' (oyun) carries meaning across unrelated domains including theater, political strategy, and financial speculation, making keyword-based retrieval inherently imprecise. Systematic manual review was therefore necessary to establish a corpus of relevance-verified articles. We excluded all entries from dedicated gaming outlets (Level, Oyungezer, Esports Life) to isolate mainstream media shifts, as coverage from specialist outlets was expected to be uniformly positive and would have masked the phenomenon of interest.

We categorized each news outlet (see Table 2) in our dataset based on their publication frequency and content and explored the distribution of the entries (see Figures 1, 2).

### 4.2 Coding

In analyzing the content, we followed the thematic analysis methodology (Spradley, 1979) wherein we approach each news piece as an ethnographic text to discover patterns and themes. One researcher created a codebook (Patton, 1980) by using a small sample of the dataset, and then, the whole data was coded separately between two researchers and interrater reliability was established. In addition, each entry was rated as whether they were using positive, neutral, or negative language. It should be noted that a three-category scheme (positive, neutral, negative) imposes limits on analytical sensitivity, and finer-grained distinctions within each valence category would have

TABLE 1 Results of media scan.

Timeframe	Raw entries	Final entries
2018 (April 1 onward)	$n = 8,805$	$n = 1,047$ (29.4%)
2019	$n = 10,879$	$n = 912$ (25.6%)
2020	$n = 11,019$	$n = 729$ (20.4%)
2021	$n = 12,508$	$n = 712$ (20%)
2022 (until April 1)	$n = 4,371$	$n = 166$ (4.6%)
Total	$N = 47,532$	$N = 3,566$

TABLE 2 News outlet categories.

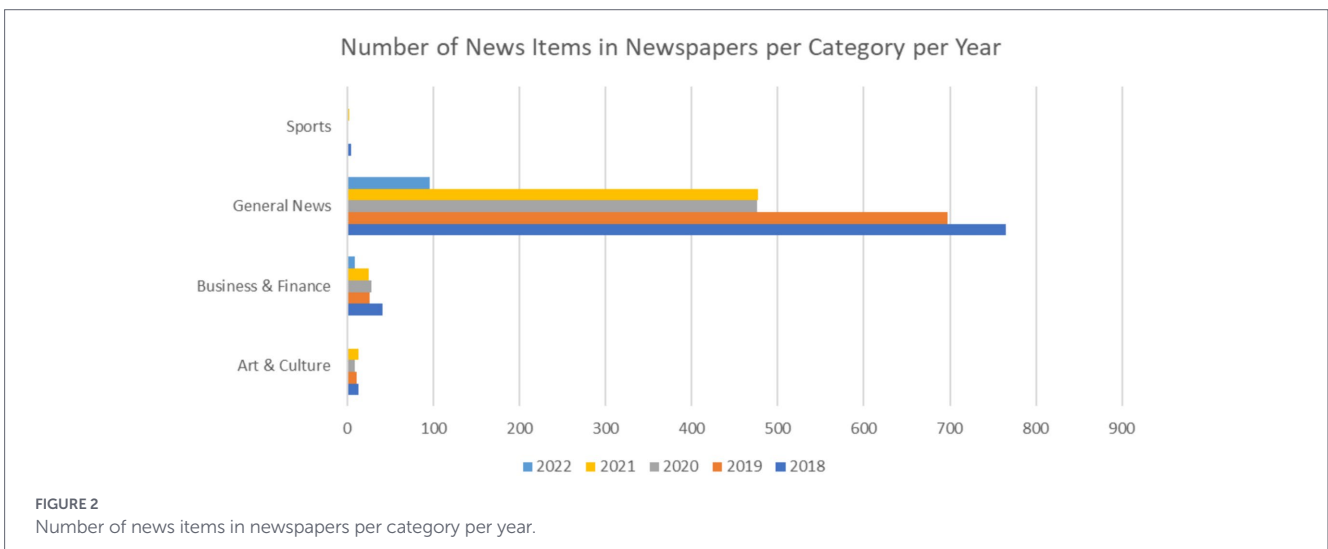
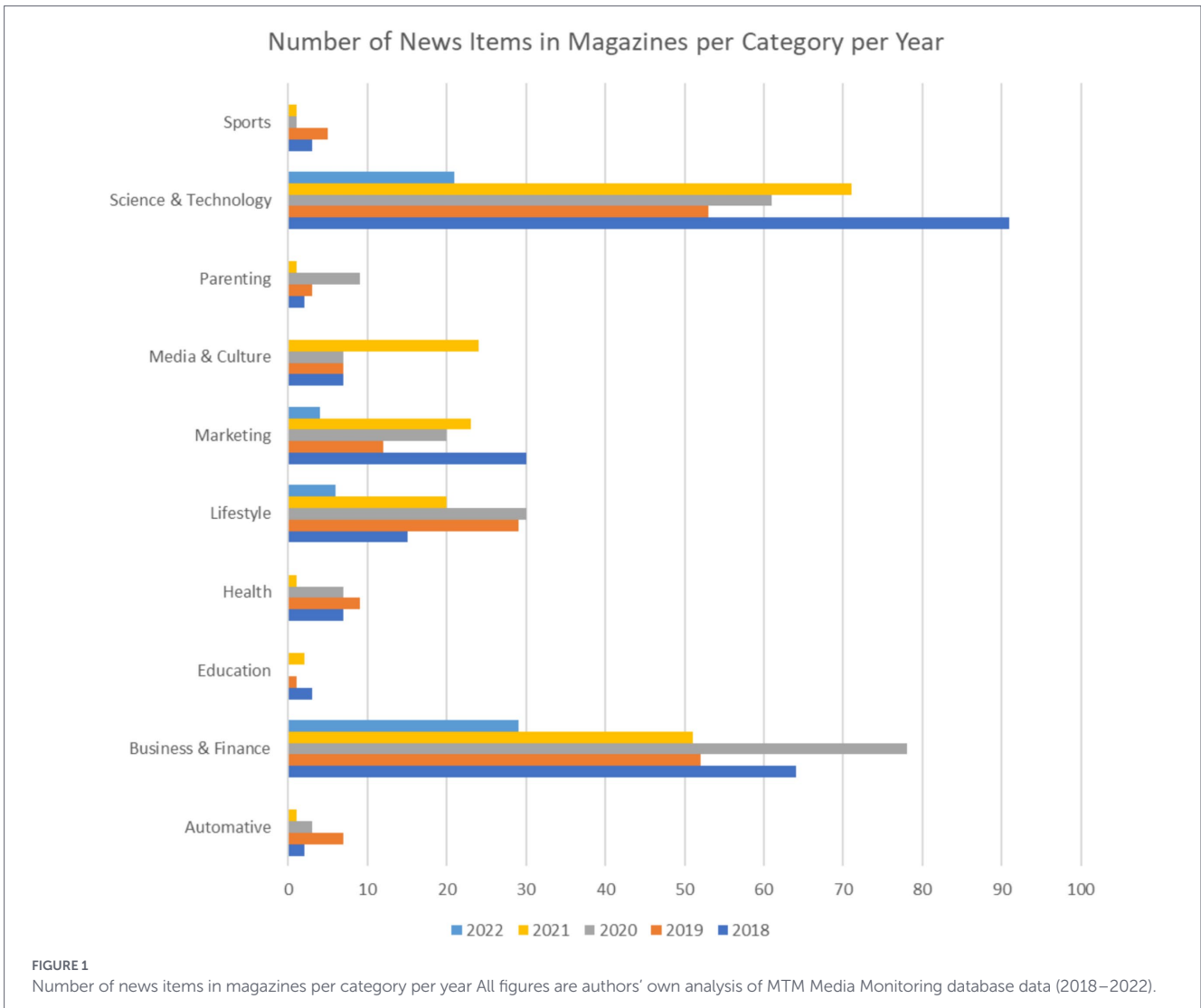
Main category	Subcategory	Examples
Newspaper (Daily, weekly or bi-weekly)	Art & Culture	Milliyet Express
	Business & Finance	Sanayi Gazetesi
	General News	Hürriyet, Milliyet
	Sports	Fanatik, Fotomaç
Magazine (Monthly, seasonal, or longer-term)	Automotive	Otohaber, Automobile Magazine
	Business & Finance	Bloomberg Business, Economist
	Education	Artı Eğitim
	Health	Medikal Plus, Yeşilay
	Lifestyle	Time Out Istanbul, Women's Style
	Marketing	Media Cat, Campaign Türkiye
	Media & Culture	Altyazı, Postkolik
	Parenting	Anne Bebek, Parent
	Science & Technology	Bilim ve Teknoloji, Chip
Sports	Galatasaray Dergisi, Spor Arena Plus	

yielded richer data. A continuous sentiment score (for example, a weighted polarity index on a  $-1$  to  $+1$  scale) would allow finer-grained trend detection. Future work should explore such approaches, particularly as NLP tooling for Turkish continues to mature.

To establish interrater reliability for sentiment coding, we calculated Cohen's Kappa (Cohen, 1960). There was never a case wherein one coder rated a news article positive while the other rated it negative (or vice versa), however, there were cases where one coder rated an article neutral, and the other rated it negative or positive.<sup>3</sup> We use a weighted Kappa of 0.689 to report "substantial agreement" (Landis and Koch, 1977). Although percent agreement (81.7%) is less conservative than chance-corrected statistics, we note that with 21 sub-categories the probability of chance

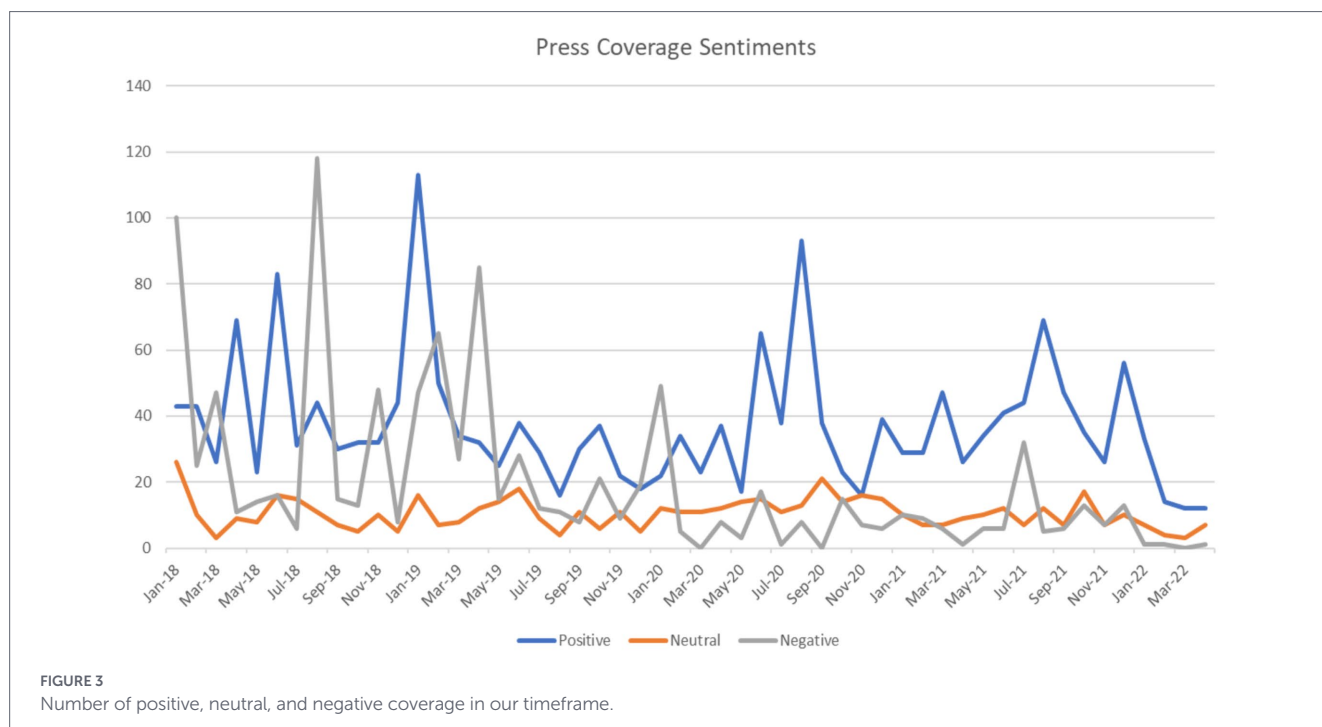
<sup>2</sup> These were the gaming magazines *Level* and *Oyungezer*, as well as the esports magazine *Esports Life*.

<sup>3</sup> Reported as Rater#1/Rater#2 wherein P is positive, O is neutral, and N is negative rating:  $P/p = 69.1\%$ ;  $O/p = 10.1\%$ ;  $N/p = 0$ ;  $P/O = 3.3\%$ ;  $O/O = 1.5\%$ ;  $N/O = 4.7\%$ ;  $P/N = 0$ ;  $O/N = 0.6\%$ ; and  $N/N = 10.7\%$ .



agreement is mathematically low (baseline chance per category  $\approx$  4.8%). Nonetheless, we recommend that future replications report category-specific reliability, particularly for the most populous categories (Health & Safety; Business Potential).

Looking at the data (see Figure 3), it is possible to see that (1) the positive coverage did not increase substantially despite spiking during summer 2020, but stayed at similar levels before and after the pandemic; (2) the negative coverage decreased substantially starting from



the beginning of 2020 which coincides with the beginning of pandemic lockdown—in fact, in the first quarter of 2022, negative coverage was almost negligible; (3) the neutral coverage did not show any substantial change despite some small spikes and pits. Even though these shifts coincide with pandemic and lockdown timelines, we cannot rule out the concurrent influence of events like the release of ICD-11, GameStop market manipulation, and national acquisition events, all of which will be explained in this section.

Accordingly, our first hypothesis was partially supported. There was not a significant change in the positive coverage between pre- and post-pandemic. Yet, there was a significant drop in negative news post-pandemic, which raised the positivity of videogames coverage in average.

To establish an interrater agreement for context coding, we simply use joint probability of agreement due to the large number of coding categories. Since the number of raters is small (2) and of sub/categories is large (21), the cases of chance agreements would be small. We calculated the percent agreement as 81.7% as an “absolute agreement” category (Chaturvedi et al., 2015). After both interrater values were established, the two researchers discussed the cases of disagreements and agreed on common results.

The thematic coding resulted in five main categories with subcategories of their own (see Table 3). The sentiment coding did not produce divisive results as most categories already emerged as sentimentally biased toward either positivity or negativity.

Our results (see Figure 4) show that the coverage on health and safety around games (which was a dominantly negative category) dropped significantly during the pandemic lockdown and did not climb back up. The news pieces around the unsafety and detrimental health effects of games have been very dense in 2018, all the way up to January 2020. However, there is a very visible sharp drop during and after 2020. In its place, the discourse around the business potential has replaced the health and safety content. This begins with a peak at the beginning of 2019 (unrelated to Covid-19) and continues with

multiple peaks during and after 2020. An unexpected result was the drop in the cultural and social coverage post-pandemic. An explanation could be the decline in face-to-face events. The categories of Esports and PR did not reflect a major change.

Accordingly, our second hypothesis is also partially supported. There were categorical changes in the news coverage around games, gaming, and gamers pre- and post-pandemic. The health and safety category (which was mainly negative) declined substantially while the business potential category (which was mainly positive) increased. The cultural and social, PR and esports categories did not show a substantial change. As a result, we confirm the change but not as “major” as we worded in our hypothesis.

#### 4.2.1 Health & Safety

On the one hand, videogames have historically been presented as detrimental in terms of their effects on the physical (Gao et al., 2015), psychological (Anderson and Bushman, 2001), and social (Strasburger et al., 2010) wellbeing of the players. On the other hand, games have also been offered as learning, behavioral adjustment, and healthcare tools for positive change (Granic et al., 2014). In our data, the former viewpoint had a dominant focus with most news coverage being negative and very few being positive (3.5% of positive coverage versus 96.5% negative). We further code this category into the following subcategories:

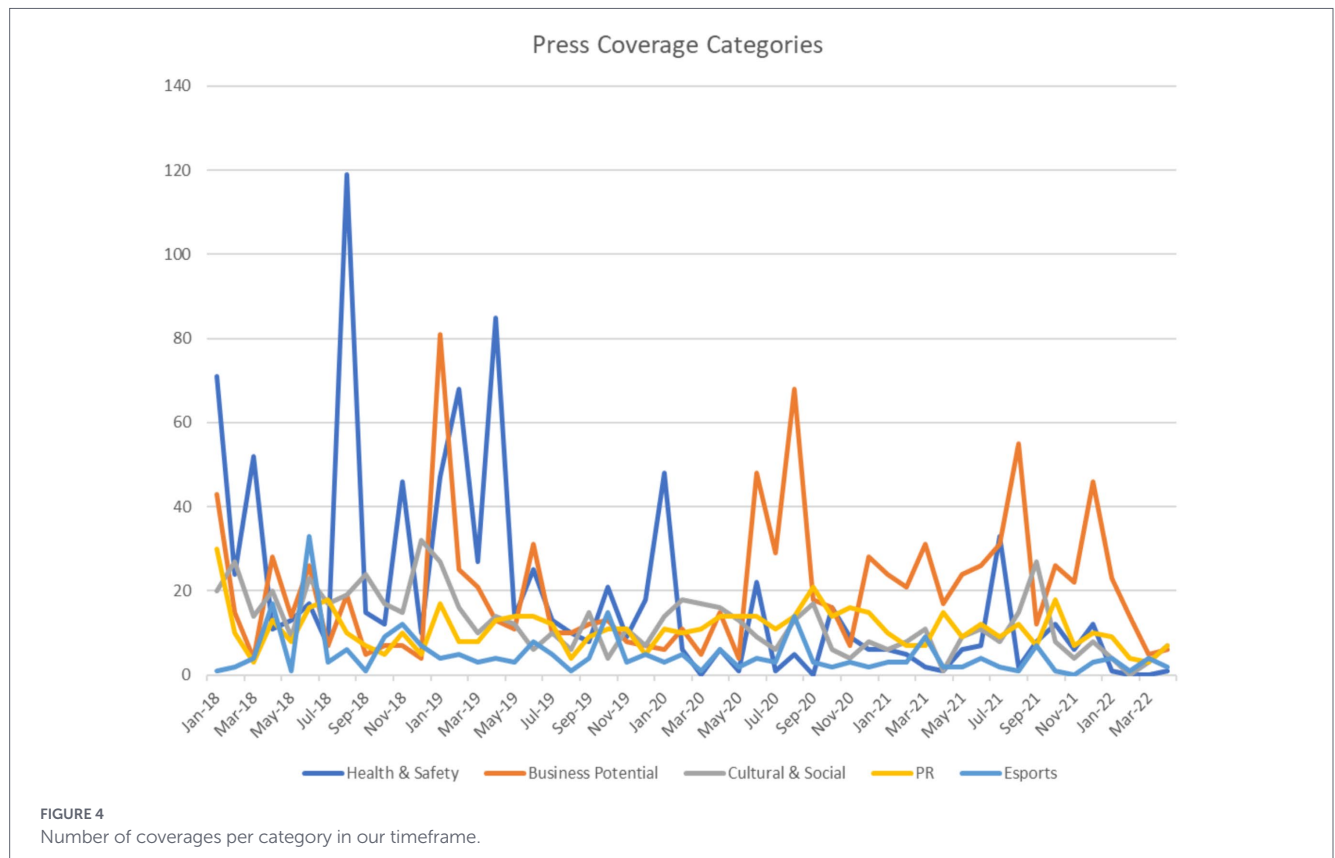
*General:* This category serves as a catch-all for all news pieces that do not fall into other subcategories. Major themes in this category were the effects of videogames on vision (“Disease of the age: Digital eyestrain”),<sup>4</sup> kyphosis, and obesity. The few positive codes came from

<sup>4</sup> All headlines in this text have been translated from Turkish to English by the authors.

TABLE 3 Coding categories and the total number of positive, neutral, or negative entries under them.

Main category	Subcategory	Positive	Neutral	Negative	Total
Health & Safety <i>n</i> = 972; 27.3%	General	17	0	<b>43</b>	<i>n</i> = 60; 6.2%
	Kids & Teens	14	0	<b>285</b>	<i>n</i> = 299; 30.8%
	Blue Whale & Momo	0	0	<b>235</b>	<i>n</i> = 235; 24.2%
	Crime & Scams	3	0	<b>83</b>	<i>n</i> = 86; 8.8%
	Addiction	0	0	<b>190</b>	<i>n</i> = 190; 19.5%
	Internet Cafes	0	0	<b>26</b>	<i>n</i> = 26; 2.7%
	Ciftlik Bank	0	0	<b>76</b>	<i>n</i> = 76; 7.8%
Business Potential <i>n</i> = 1,088; 30.5%	Global	<b>183</b>	1	5	<i>n</i> = 189; 17.4%
	National	<b>497</b>	10	0	<i>n</i> = 507; 46.6%
	Local Support	<b>161</b>	0	0	<i>n</i> = 161; 14.8%
	Increase During Covid	<b>116</b>	0	1	<i>n</i> = 117; 10.8%
	Hardware Sales	38	1	<b>64</b>	<i>n</i> = 103; 9.4%
	GameStop	0	0	<b>11</b>	<i>n</i> = 11; 1%
Cultural & Social <i>n</i> = 664; 18.6%	General	<b>185</b>	2	1	<i>n</i> = 188; 28.3%
	Increase During Covid	<b>83</b>	1	0	<i>n</i> = 84; 12.7%
	Social Values	<b>53</b>	0	14	<i>n</i> = 67; 10.1%
	Education	<b>324</b>	1	0	<i>n</i> = 325; 48.9%
PR <i>n</i> = 587; 16.5%	Product Review	0	<b>447</b>	0	<i>n</i> = 447; 76.1%
	Press Release	0	<b>140</b>	0	<i>n</i> = 140; 23.9%
Esports <i>n</i> = 255; 7.1%	General	<b>180</b>	0	0	<i>n</i> = 180; 70.6%
	Growth	<b>75</b>	0	0	<i>n</i> = 75; 29.4%
Total					<i>N</i> = 3,566

The highest count in the subcategory is presented in bold text.



a bunch of articles about the possible positive effects of games on Alzheimer's disease ("Digital games could be a hope for Alzheimer's").

**Kids & Teens:** This category does not include news pieces on addiction since those were congregated under a different subcategory even if they mentioned kids and teenagers. The main themes in this subcategory were screentime, starting age for online interactions for children, and smartphone use. The few positive codes came from some news articles on how playing games can affect the perception, reasoning, and decision-making skills of kids.

**Blue Whale & Momo:** Although they are not videogames (or even games as we understand them), these two supposedly viral online/social media challenges were branded as "games" and "digital games" in news media and strongly contributed to the mainstream discourse of games detrimentally. Some branding of such sensationalist news as hoax or "moral panic" (*Dijital Medya ve Çocuk*, 2019) did not gain any national traction. In fact, despite the lack of valid evidence, major news outlets (as in *Yurdakul*, 2019) reported that the suicide of 150 kids and teenagers in Türkiye alone may have been linked to these online challenges. The media did not make it easy for the public to understand the exact nature of these phenomena. We discuss these phenomena more in section 4.3.1.

**Crime & Scams:** Although some of these cases (see *Figure 5*) were legitimate criminal activities (such as e-commerce fraud for gaming consoles, online and in-game cyberbullying incidents, and phishing attempts in mobile gaming apps, etc.), there were also cases of moral panics reminiscent of those in the US (*Waldron*, 2005; *Burns and Crawford*, 1999; *Markey and Ferguson*, 2017). For example, in Summer 2018, a series of articles were published in Turkish media with the titles like "Smartphones incite crime" and presented a potpourri of moral panics ranging from easy access to social media use to 'violent' gaming through smartphones.

Similarly, at the beginning of 2020, there was a rise in coverage, this time related to malware and phishing incidents related to mobile games. However, this trend shows a visible drop ranging from 2018 to 2022.

**Addiction:** Gaming, internet, and smartphone addiction are issues that have frequently merged in mainstream news media in Türkiye. The coverage was increased in January 2022 when the World Health Organization's "gaming disorder" category became official (see details

in section 4.3.1). These all are real forms of addictions with high stakes (see *Shaw and Black*, 2008 for internet addiction; *Kwon et al.*, 2013 for smartphone addiction; and section 4.3.1 for gaming disorder), yet their portrayals in the mainstream news are frequently prone to sensational approaches.

**Internet Cafes:** Although this subcategory has few codes, we decided to separate it from other codes of the same category due to its locality. Internet cafes or cybercafes are commercial places that were popular in the early 90's where the public can buy PC- and internet-use time. Although with the rise of smartphones, internet cafes seem to be dwindling in numbers globally (*Purnell*, 2013), they still stay relevant for travelers (*O'Regan*, 2008), gamers (*Huhh*, 2009), and other types of users from developing countries such as Türkiye (*Gürol and Sevindik*, 2007). A new law in Türkiye brought internet cafes to the headlines at the beginning of 2020, and although it is not directly connected to games and gaming, it has contributed to the local videogames discourse. We discuss it in detail in section 4.3.2.

**Çiftlik Bank:** Initially coded as a part of Crime & Scams subcategory, we decided to keep news articles related to the "Çiftlik Bank" fraud incident separate due to its local importance and specificity. Although not directly related to games and gaming, this incident contributed to the public's understanding of videogames in a detrimental fashion by associating games with online fraud. We discuss it in detail in section 4.3.2.

Looking at the data (see *Figure 6*), it is possible to see that the coverage around health and safety issues (that were mainly negative) declined starting from the beginning of 2020. This coincides with the pandemic and lockdown period. Throughout 2021 and the beginning of 2022, the negative coverage around videogames as being detrimental to health and safety weakened remarkably, almost to the point of being negligible.

## 4.2.2 Business potential

Videogames created a strong and growing entertainment industry (*Van Dreunen*, 2020). Business models of videogames (including mobile games) have evolved within the past decade, demonstrating versatility. Accordingly, in our data set, this form of coverage was dominantly positive (7.4% negative, 1.1% neutral, and 91.5% positive)

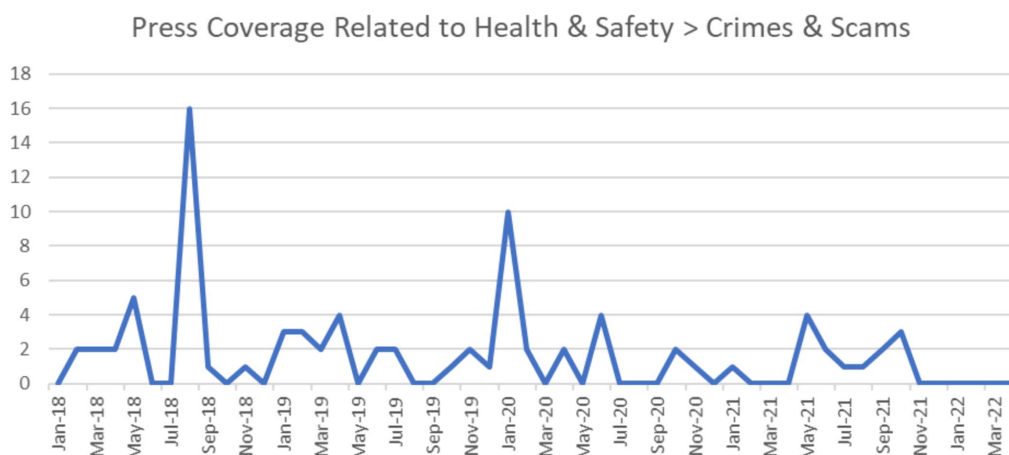
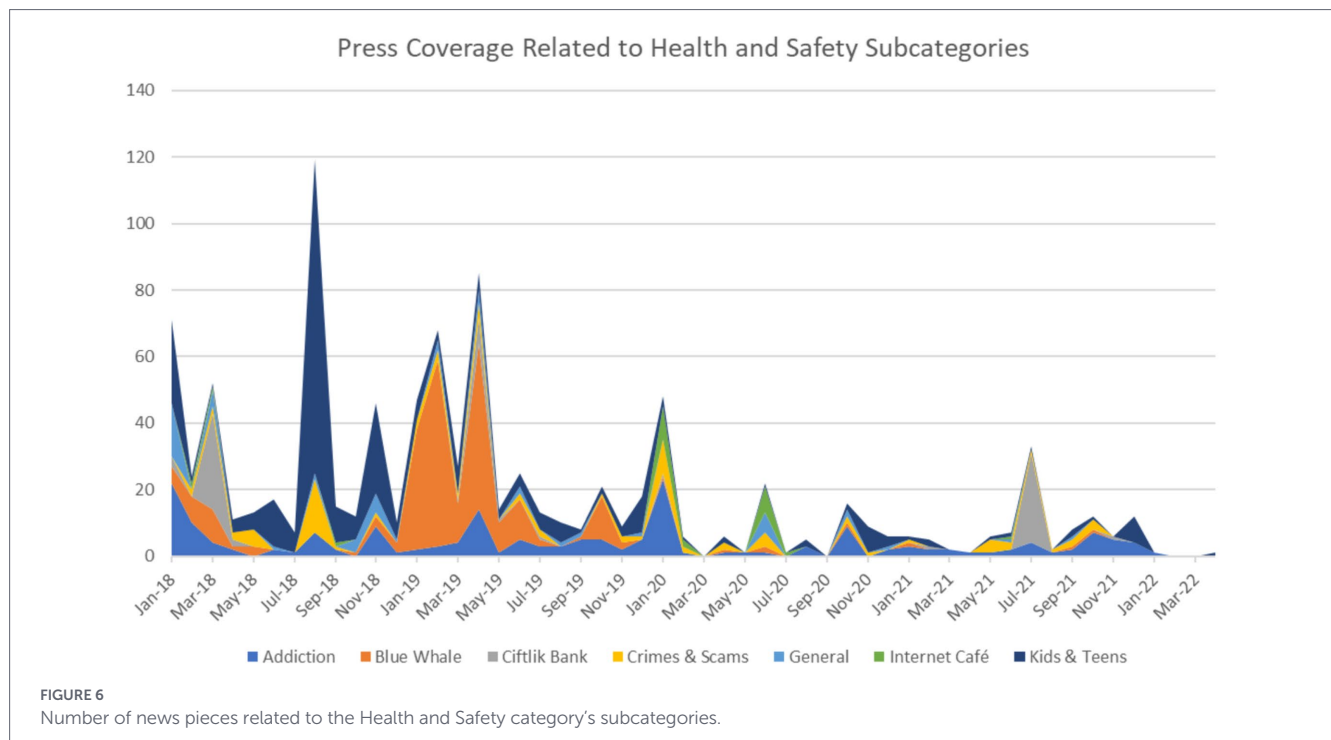


FIGURE 5

Number of news pieces related to the Health & Safety category's Crimes and Scams subcategory.



except for two subcategories that generated the negativity. Subcategories include:

**Global:** This subcategory marks the news pieces that investigate the business potential of games through global brands and companies, and their performance in countries other than Türkiye. The category has frequent mentions of mobile gaming, Fortnite, and PubG. This was a dominantly positive category with a few negative news pieces (2.6%).

**National:** Almost entirely a positive category except for a few neutral articles (2%), National subcategory encapsulates the news coverage on Turkish videogame companies, their products, and the growth of games and gaming locally. We discussed the frequently mentioned companies in section 4.4.

**Local support:** In this category, we code coverage on financial support for national games industry such as from government, private investors, and professional organizations. In a sense, it acts as a complementary subcategory to the national, however, is separated from it based on its focus on grants, export support packages, tax allowances, and other investments.

**Increase during Covid:** 10.8% of the main category is news pieces that talk about the industry in association with the pandemic specifically. The sentiments in these news articles can be summarized by this title that is repeated over time and publications: “Is the game industry experiencing a golden age?” The Turkish media echoed the global outlook that the pandemic lockdown resulted in more gameplay time and players using gaming as an outlet of supporting wellbeing (Barr and Copeland-Stewart, 2022).

**Hardware sales:** Although they sometimes mention videogames only passing, the reports on the sales of PCs, smartphones, and gaming consoles affect the perceptions of the business potential of the industry. This subcategory was also surprisingly negative (62.1%) wherein most of the negativity came from comparing the sales of different platforms (e.g., “Demand for Computers Decreases in Türkiye”

articles which report that the sales of smartphones are overpowering the sales of personal computers). While some mention games briefly, some underline them exclusively (e.g., “Gaming PCs have stopped growing;” and “A decline is expected in game consoles [sales]”).

**GameStop:** We decided to code news articles about the GameStop market manipulation incident as a separate subcategory (see section 4.3.1. for details on this incident). This market manipulation event does not have any relationship with games or gaming, however, there were cases where it was reported in a way that can reduce trust in the industry.

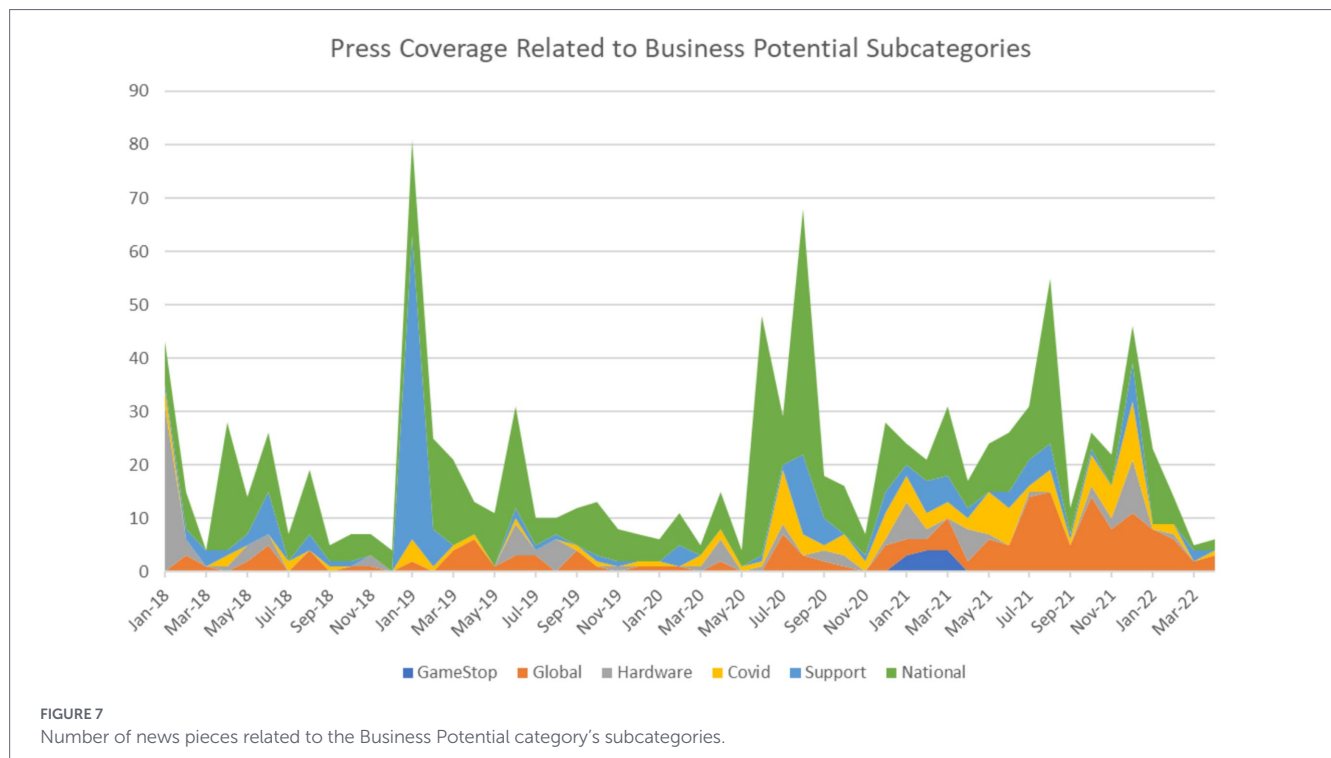
Looking at the data (see Figure 7), it is possible to see that interest in the national subcategory remains high over 4 years but shows more peaks during and after 2020 which coincides with the pandemic timeframe. The global category follows a similar pattern and peak structure yet falls behind the national in terms of the number of articles. There is a peak in the local support category at the beginning of 2019, yet the category achieves consistent (but smaller) coverage from mid-2020 to mid-2021. An interest in hardware sales seems to be consistent across the timeframe both before and after the pandemic. Finally, the GameStop category is confined to a single peak in a specific timeframe.

#### 4.2.3 Cultural & Social

Scholars have offered videogames as cultural artifacts (Bogost, 2008) that require to be investigated through cultural studies (Shaw, 2010) and a form of contemporary cultural phenomenon in modern societies (Berger, 2017). Subcategories include:

**General:** This subcategory includes social and cultural events (e.g., Gaming Istanbul Convention), videogames in art/social life, historical artifacts, and creativity. This subcategory dominantly had positive sentiments (98.4%).

**Increase during Covid:** Pandemic-related articles focusing on games' cultural/social role during lockdowns were coded separately. This category was dominantly positive (98.8%) with articles on gaming becoming



a major source of entertainment during pandemic or how parents have also started to enjoy gaming with their kids.

**Social values:** A small number of articles (10.1% of the main category) focused on “Turkish social values” in relation to videogames in a generally positive fashion (79.1%). The negative articles were primarily focused on islamophobia (which was offered to be a problematic issue by previous research like Şisler, 2013; Mirrless and Taha, 2021). However, some media outlets exaggerated this issue for anti-western narratives. Additionally, there were mentions of traditional versus digital games as cultural erosion claims. On the positive side, the articles focused on the rising accessibility, fundraisers, and cultural heritage (e.g., the replication of Notre Dame Cathedral or Ephesus Heritage Site in games).

**Education:** In addition to the educational potential of games, this subcategory contains news about coding camps, educational game jams, game development workshops for teenagers, etc. These articles were all positive, except for one neutral. Also see section 4.3.2.

Overall data (Figure 8) shows pre-pandemic interest in cultural and social implications driven by education. Post-pandemic coverage dropped due to lockdowns limiting educational events, though pandemic-related cultural and social discussions emerged. This result was contrary to our hypothesis as we expected games, gamers, and gaming to attract more coverage.

#### 4.2.4 PR

This form of coverage focuses on the achievements or products of companies, such as product reviews, events, and other company news. Although these articles mention games, they have very little to add to the discourse. Şengün (2018) noted developers avoided PR agencies due to perceived lack of industry experience. A 2019 study found 53% of Turkish IT companies maintained above-average digital PR (Sezgin and Cesur, 2019). Subcategories include:

**Product reviews:** Product review articles focus on one product or compare multiple products based on their selected features. In our data,

the reviews centered on gamer equipment like monitors, mice, keyboards, etc. Few disclosed product sponsorships.

**Press releases:** It may be challenging for the public to differentiate between press and news release publicity (Nelson and Park, 2015). We identified press releases via: (1) explicit release info; (2) text replication across publications; (3) contact details (emails, phone numbers, URLs); (4) sales/discount announcements.

Data (Figure 9) shows that the pandemic had some impact on these types of content. Fall drops in 2018/2019 were absent in 2020 which was the height of the pandemic and lockdown. Türkiye does not observe holidays and events like Halloween or Thanksgiving throughout these months. Also, March 2018/2022 declines were less severe than 2019/2020 which can be explained by another slow sales season picking up due to the pandemic and lockdown.

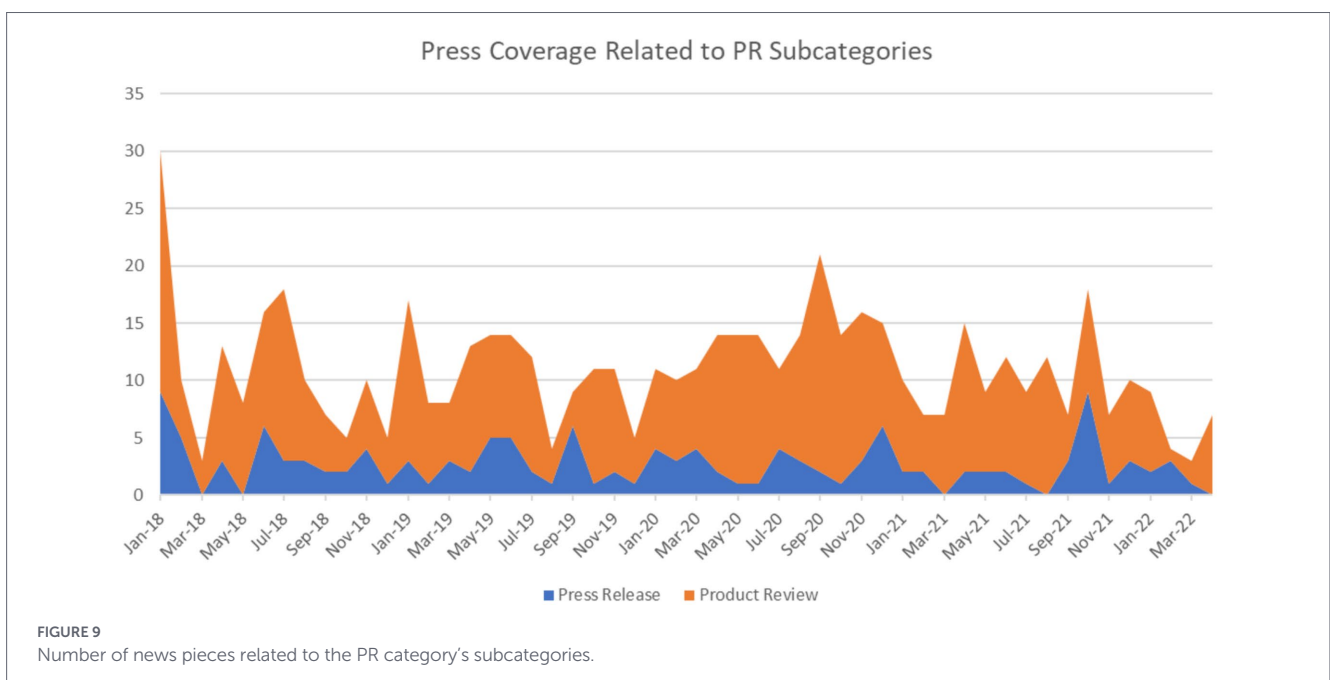
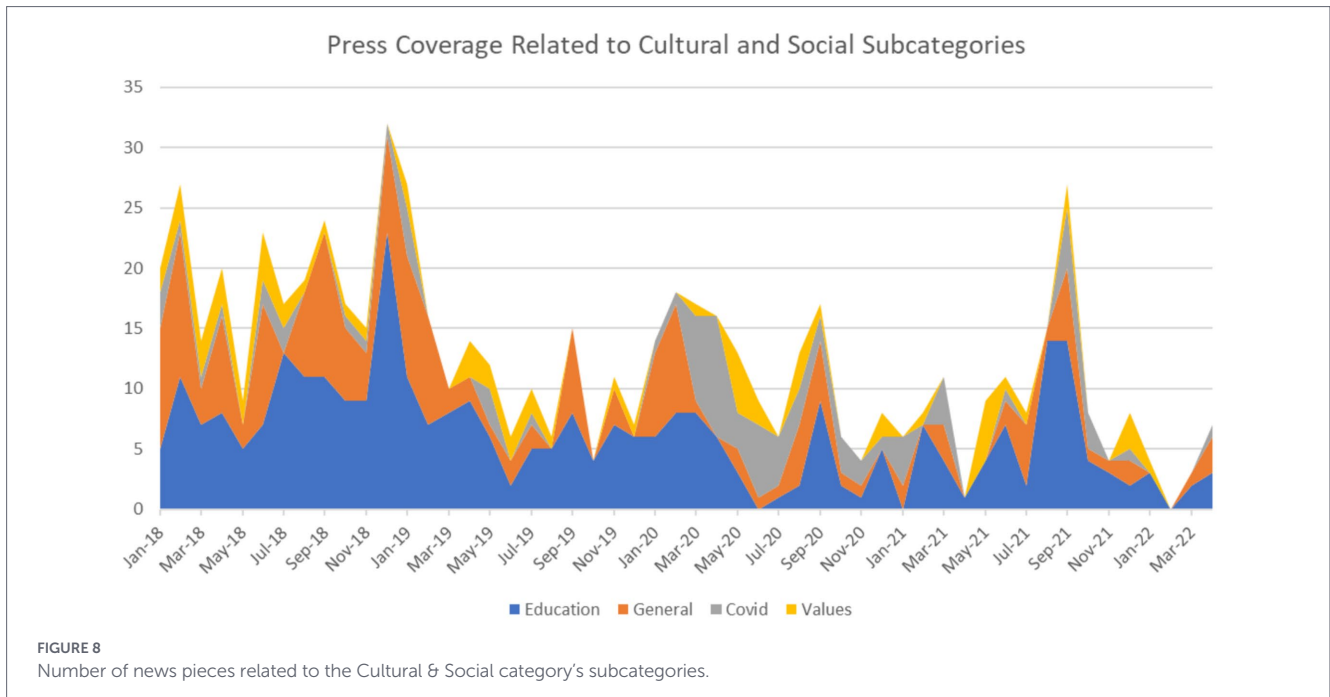
#### 4.2.5 Esports

Esports is a widespread phenomenon for players, gamers, audiences, and industries like sports and broadcasting (Hamari and Sjöblom, 2017). Our data (see Figure 10) shows that the phenomenon was positively received in Türkiye. This was a surprising result due to many negative coverages focusing on videogames and health. Sports is very important in Türkiye which might have created an affinity and facilitated easy adoption from the public.

**General:** These news articles focus on definitions and history of esports, events, teams, organizations, outcomes of matches, specific games, educational opportunities related to esports, and global news.

**Growth:** Articles that focused on the growth of e-sports were coded separately. Some examples of content in this category are the rising number of ticket sales for events, growing audience numbers, rising company investments, etc.

In June 2018, Turkish Ministry of Youth and Sports released a report on esports (Hurriyet, 2018) that had a very positive language and found substantial coverage in media. Onward, the interest in



esports was maintained throughout the pandemic and lockdown period with some drop afterward.

### 4.3 Details on major events in the timeframe

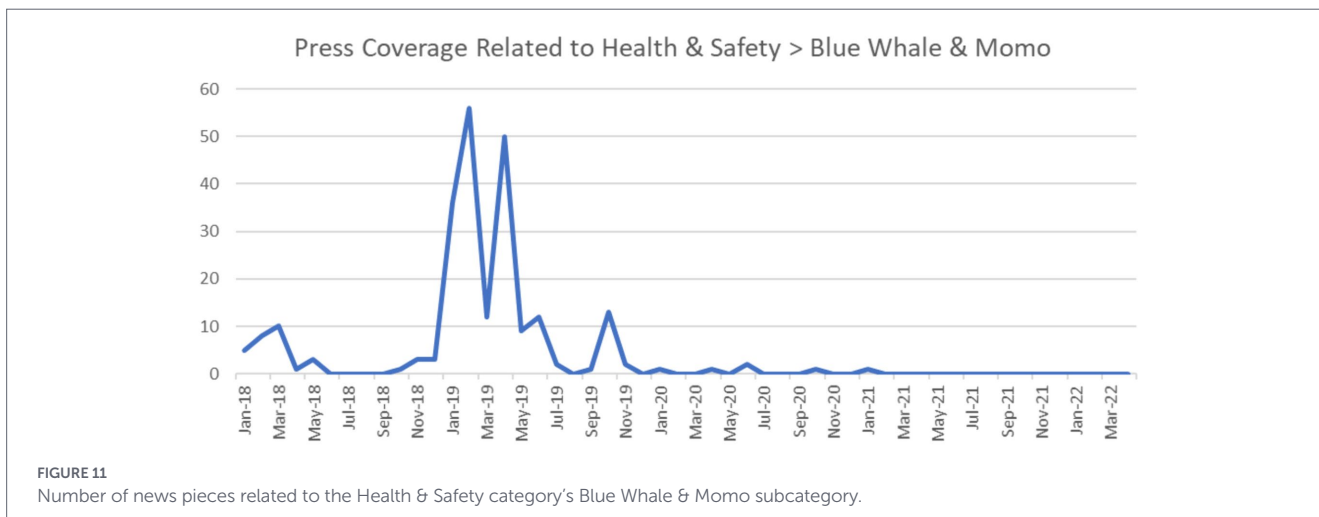
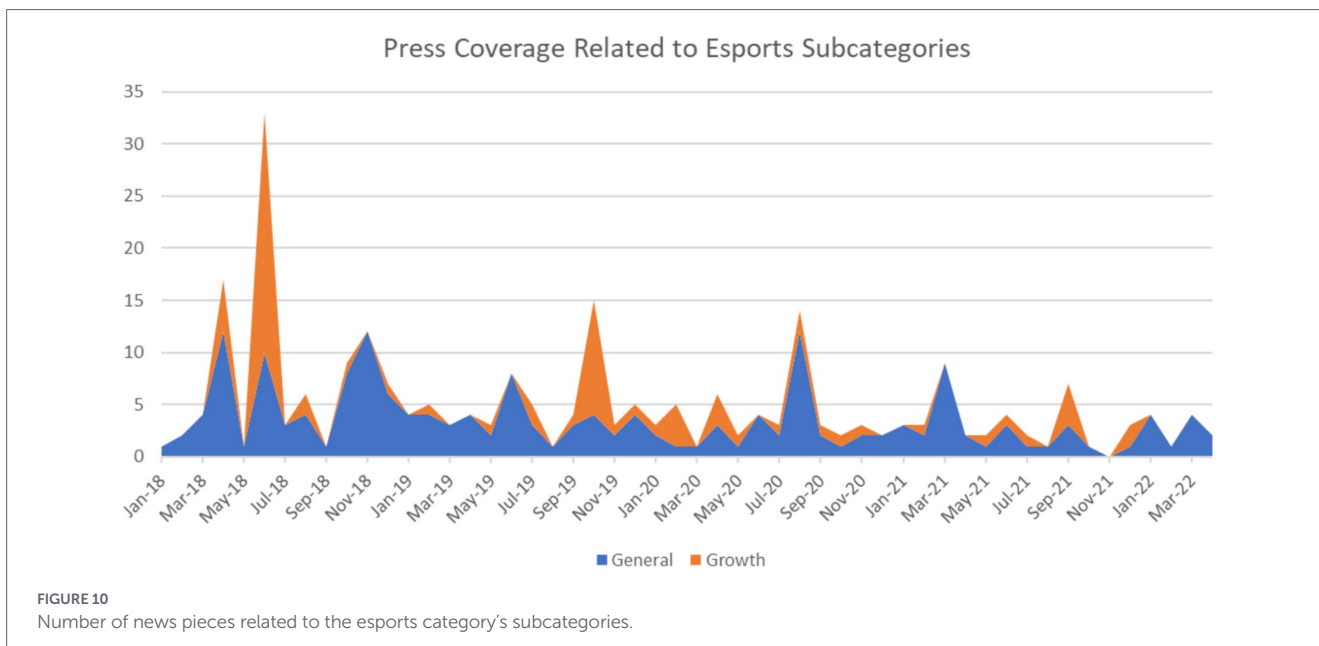
#### 4.3.1 Global events

Among our timeframe, there were global events other than the pandemic that affected how videogames were featured in the media such as:

*The coverage around “Blue Whale” and “Momo”:* Mukhra et al. (2019) describe The Blue Whale Challenge as “neither an application nor internet-based game” originating from the Vkontakte (VK.com)

website. Blue Whale encapsulates a series of escalating dangerous self-harm directives, tasks, challenges, and interactions. The challenge has sparked copycats, the most famous of which is the Momo Challenge (Kobilke and Markiewitz, 2021). The coverage around these challenges (see Figure 11) peaked in Türkiye in early 2019 after a 13-year-old girl’s death. This is followed by statements and protection guides from government and public institutions.

Investigating the English-language news media reports around the Blue Whale, Roth et al. (2020) found the reporting to be heavily sensationalized and report evidence of potential misinformation. We also report similar poor coverage in Turkish media. Both challenges were frequently misclassified as videogames, complicating family precautions and stigmatizing games, gamers, and gaming.



*Gaming disorder in the 11th Revision of the International Classification of Diseases (ICD-11):* World Health Organization's ICD-11 came into effect globally on January 1, 2022. Yet, gaming disorder within it was being debated much earlier than that (Aarseth et al., 2017). We see two main jump periods in press coverage: January 2018 and January 2020 (see Figure 12). The first is when the vice president of Yeşilay, a state supported non-profit organization that fights all forms of addiction, announced WHO's decision ("Gaming addiction to be considered a 'mental illness'"), and the second is when a private health institution provided an update on the situation ("Gaming disorder threatens teens").

Parrott et al. (2020) asserts that the English news sources are more likely to cover symptoms and consequences and less likely to cover conflicting opinions from health experts and stories from gamers themselves. This is consistent with Turkish media coverage.

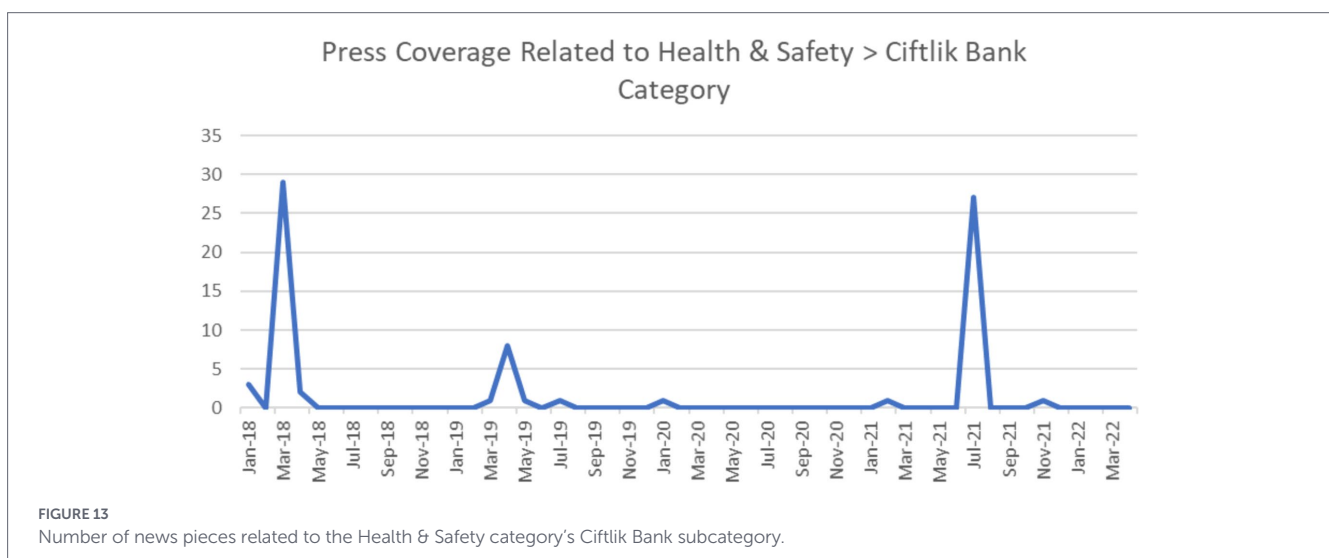
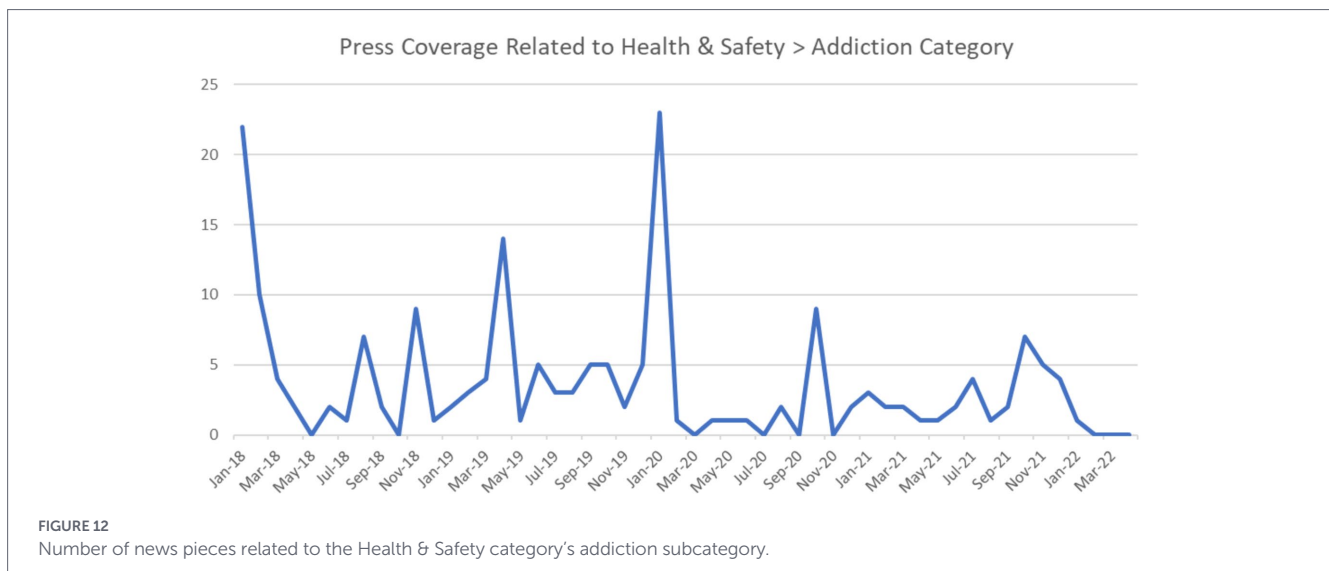
*The controversy around GameStop shares:* GameStop short squeeze is an online-driven market manipulation that took place

during January–February 2021 (Malz, 2021). This issue was coded separately due to its impact on public perception of the gaming industry, reported as "GameStop movement shaped the world and changed the game!" We found 11 negative news items in the first quarter of 2021.

### 4.3.2 Local events

*The case of Çiftlik Bank:* Çiftlik (Farm) Bank, a Ponzi scheme (Frankel, 2012), drew national attention 2016–2021 (Daily Sabah, 2018; Harrison and Akyol, 2018). Since the fraud scheme is associated with a mobile game where users can invest in virtual livestock and products, the coverage of the whole process was integrated with videogame discourse ("35 million lira lost in virtual game fraud"). Data (see Figure 13) shows two peaks: 2018 (the fraud exposure and alleged ringleaders flee), and 2021 (ringleaders surrender and are returned).

*The effect of local news agencies:* Elmas and Kurban (2011) report that there are 23 news agencies in Türkiye and identify five as the biggest. News agencies dominate content supply for local and regional



media. Our dataset reflects mixed impacts of centralized news sources. For example:

- “Smartphones incite crime,” distributed by IHA, appeared in 15 newspapers, August 2018.
- “Disease of the age: Digital eyestrain,” DHA, 12 newspapers, 2018.
- “Beware of internet addiction in children,” AA, 31 publications, 2019.
- “E-sports ticket revenue increased by \$32 million,” AP, 24 newspapers, June 2018.
- “101 billion dollars spent on mobile games and applications,” AP, 52 newspapers and 2 magazines, mid-2021.

*The internet cafe proximity law:* At the beginning of 2020, a new law was proposed by the Turkish government to prevent internet cafes from operating within 100 meters of schools, dormitories, and places of worship (Hurriyet, 2020). The law went into effect mid-2020. In our data, the coverage has two peaks (see Figure 14): when announced and when it went into effect. Although this is a contained incident, it contributed detrimentally to videogames discourse in Türkiye, further

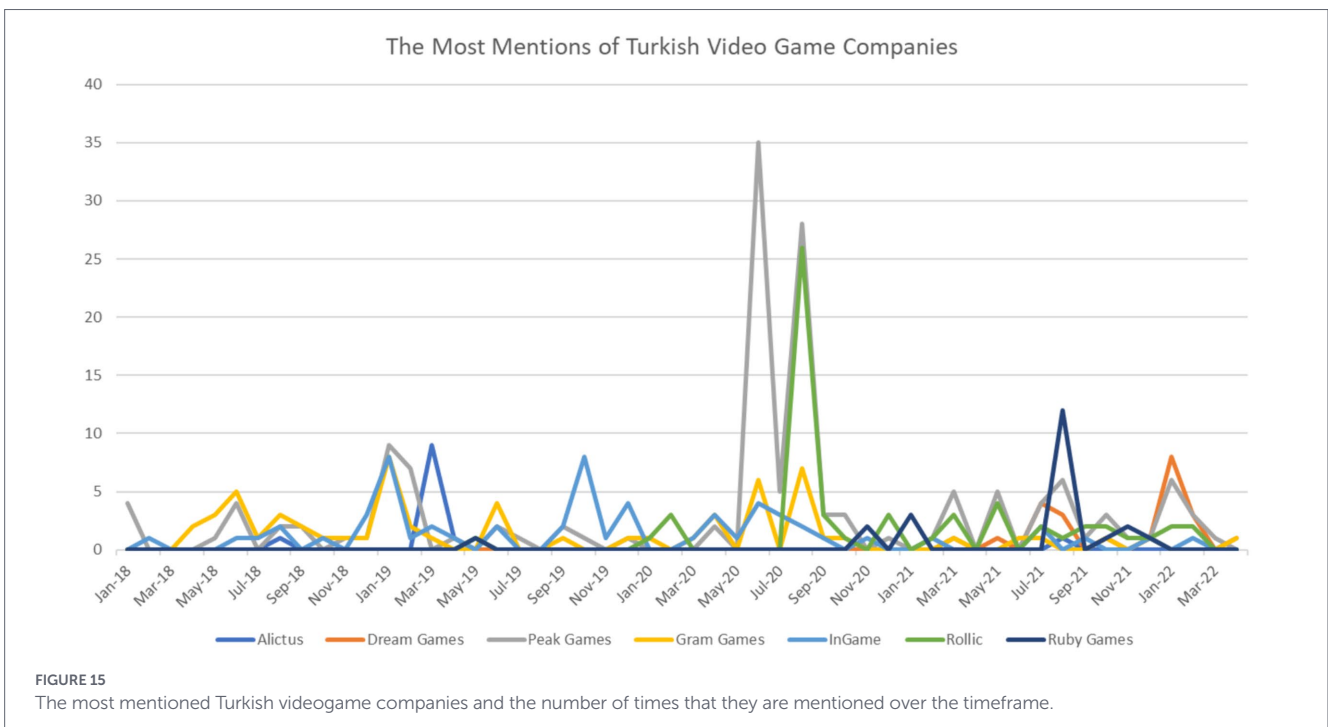
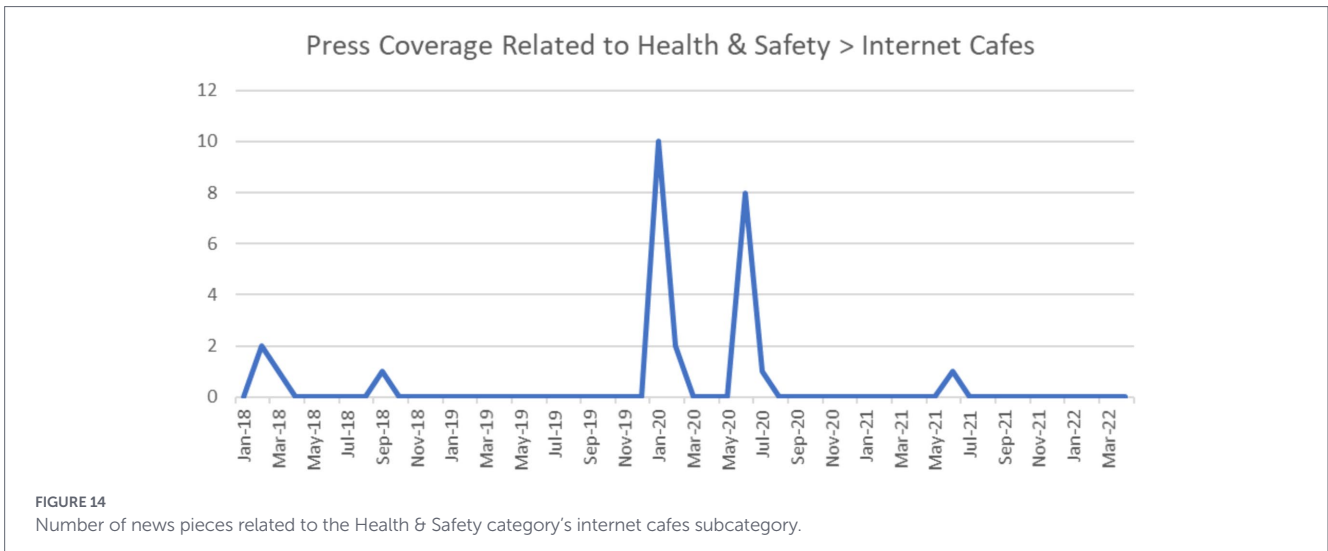
marking games and gaming as phenomena that need to be separated from kids and teenagers.

*Educational coding events:* Throughout our timeframe, several companies, brands, and institutions have sponsored or organized coding or game development workshops and training for users of various ages. Some examples were: (1) Vodafone Foundation and Habitat Association’s “Yarını Kodlayanlar” (“Those Who Code Tomorrow”);<sup>5</sup> The Educational Volunteers Foundation of Türkiye (TEGV)’s “Algo”; Turkish Ministry of Industry and Technology’s “E-sports Academy”; and Turkcell’s “Digital Game Development Trainings.”

#### 4.4 The effects of major purchases

Of 507 coded articles in the national subcategory, 285 of them (56.2%) were covering the seven most mentioned Turkish videogame

<sup>5</sup> <https://habitatderneği.org/en/digital-transformation/coding-tomorrow-2/>



companies<sup>6</sup> with overlaps (see Figure 15). Peak Games has 155 mentions, Gram Games 63, Rollic 61, InGame 60, Dream Games and Ruby Games 23 each, and Alictus 12.

- In March 2019, AA published a piece about Alictus Games and their success in the global market (Yıldırım, 2019) which was carried over to other sources.
- In January 2022, AA published a news story about Dream Games receiving \$255 million of investment and reaching a worth of \$2.75 billion (Gençoğlu, 2022).

- In June 2020, many national and international news sources announced the sales of Peak Games to Zynga for \$1.8 billion (BBC, 2020). The company sparked additional coverage at the beginning of 2019 and summer of 2021 with the success of its games.
- Zynga previously acquired another Turkish game development company, Gram Games, in May 2018 for \$250 million (Batchelor, 2018). The purchase of Gram Games did not create as big of a buzz as Peak's; however, came up again in news covering the purchase of Peak.
- In August 2020 Zynga announced that it was purchasing a 3rd Turkish game company, Rollic Games, for \$168 million (Takahashi, 2020). The coverage of this purchase brought the names of all three companies together.
- In August 2021 Rovio acquired Turkish developer Ruby Games (Dealessandri, 2021). Ruby Games' acquisition generated buzz close to Gram's, but not as big as Peak or Rollic's.

<sup>6</sup> Peak Games (<https://peak.com/>), Gram Games (<https://gram.gs/>), Rollic Games (<https://rollicgames.com/>), InGame (<https://www.ingamegroup.com/>), Dream Games (<https://dreamgames.com/>), Ruby Games (<https://rubygamestudio.com/>), Alictus (<https://www.alictus.com/>).

- Although InGame was not a part of any purchase, their team had a series of interviews in the media about the company successful online game “Zula”<sup>7</sup> throughout the second part of 2019 and first part of 2020.

Comparing these timelines to category coverage shows trend alignment. Comparing Figures 4, 15, and Figures 8, 15, we see that the purchases influenced the discourse around both the business potential and the social and cultural aspects of games. Comparing Figures 6, 15, we see that the discourse around the health and safety aspects of games (which were mainly negative) dropped significantly after the pandemic lockdown period when the big purchase announcements took place. Major purchases coincided temporally with pandemic gaming exposure; both factors plausibly contributed to a shift in tone, though disentangling their relative effects requires further analysis.

Despite the interest, media focus on acquisitions lacks deeper analysis. The business potential of games almost never couples with their cognitive or educational possibilities. In other words, mainstream media frames gaming solely as a capitalistic pursuit.

## 5 Discussion

The emergence of new technologies and their disruptive nature has been a mainstay of media studies. Although media scrutiny is critical for assessing game developers’ practices, decisions, and products, media typically focuses on gaming’s risks (Bigl and Schlegelmilch, 2021; Wirman, 2016).

In this work, we analyzed Turkish media’s portrayal of games and gaming, pre-, post-, and pandemic-era shifts. Our hypotheses were that the media’s handling of these topics would become more positive and change discourse thematically. We based these hypotheses on gaming becoming a main outlet for households under pandemic lockdown and social distancing. To explore the answers to our questions, news articles from about 4,000 Turkish-language publications over a 4-year period were analyzed. Articles were cleaned and coded for sentiment and themes by two researchers.

Our results partially supported both hypotheses. On the sentiment side, negative coverage declined significantly during the pandemic, however, the positive coverage did not increase. Overall sentiment shifted to positive mainly due to reduced negative coverage. On the thematic side, thematic shifts occurred as certain categories declined. For example, health and safety and cultural and social themes declined, and were replaced by business-related coverage.

Neither shift is sustainable or comprehensive. Both changes stemmed from negative coverage being decreased and they were not replaced by nuanced and informed coverage that addresses multiple aspects of games and the industry when needed. The success stories of Turkish game developers have sparked national pride and, along with rising affinity to gaming under the pandemic lockdown period, temporarily put the sensationalist approaches to remission. Yet the local media still lacks critical analysis of industry practices.

Beyond audience-driven explanations, the decline in negative coverage can be understood through the political-economy lens established in Section 2. Turkish media outlets operate under structural

conditions like heavy dependence on advertorial content, weak journalist unions, and ownership convergence under AKP-era consolidation (Yesil, 2016; Över, 2021), all of which directly incentivize coverage alignment with commercially powerful sectors. As the Turkish games industry attracted billion-dollar international acquisitions and became a source of national economic prestige, it simultaneously became a sector that media owners and editors had financial and reputational reasons not to antagonize. Coverage critical of gaming companies or of the industry’s health impacts carries commercial risk when those same companies are advertising clients or when positive industry narratives serve political goals of demonstrating Turkey’s digital-economy success. This structural incentive structure, rather than any genuine journalistic reassessment of games’ social value, likely accounts for much of the negativity decline we observe—a mechanism consistent with the advertorial and paid-content dynamics documented by the Section 2 sources. Critically, this also explains why the positivity that replaced negativity was commercial in nature: business coverage poses no threat to advertising relationships, while nuanced coverage of health, cultural, or social dimensions might. The political-economy framework thus offers a more theoretically grounded explanation of our findings than lockdown exposure alone can provide.

Viewed comparatively against Western media markets, the Turkish case offers a distinctive emerging-market trajectory that constitutes this study’s central theoretical contribution. Like Germany (Brückner, 2021) and the United States (Williams, 2003), Turkish press coverage of games became less negative after the pandemic. Similarly, British, and American coverage showed a shift toward framing games as socially useful during lockdowns (Robeers and Sharp, 2020). However, in all three Western contexts, declining negative coverage was accompanied by a corresponding rise in positive cultural and social framing—games were repositioned as entertainment, community, and wellbeing resources. In Türkiye, by contrast, the vacuum left by declining health-and-safety content was filled almost exclusively by business-oriented coverage: acquisition news, investment figures, and market growth narratives. We argue this divergence is structurally rooted in Türkiye’s status as an emerging games market. In Western contexts, the cultural legitimacy of gaming had already been substantially established; during the pandemic, media simply reflected an existing cultural shift. In Türkiye, gaming’s legitimacy was still being constructed through economic credentials—the billion-dollar acquisitions of Peak Games, Gram Games, and Rollic provided the ‘proof points’ needed for mainstream media to take the industry seriously. This means the positivity gained is commercially contingent: it rests on the continued economic performance of the sector rather than on a durable cultural re-evaluation of games and gamers. For policymakers and industry stakeholders, this signals that media diversification efforts, including press literacy initiatives and investment in specialized games journalism, remain necessary to achieve the depth of coverage that would reflect gaming’s full social and cultural significance.

Our work has multiple limitations. First, the neutral sentiment coding category did not give us much insight and lowered our reliability instead. Instead of three categories (positive, neutral, or negative), a continuous sentiment score (e.g., a polarity index scaled from -1 to +1) or computational validation of a random subsample against our manual codes would yield more analytical sensitivity. We were unable to adopt this approach because no validated, domain-appropriate Turkish-language sentiment analysis library existed for our corpus at time of coding; this remains a clear avenue for future work. Second, thematic categories could be further divided but this may

<sup>7</sup> <https://www.playzula.com/>

have complicated interpretation. Third, our temporal design identifies co-occurrence rather than causation. Several confounding events, including WHO ICD-11 gaming disorder classification, the GameStop short squeeze, and a series of high-profile Turkish studio acquisitions, overlapped with pandemic-era shifts. An interrupted time-series (ITS) analysis or regression discontinuity design could more rigorously isolate the pandemic's independent contribution; we encourage future work to adopt such approaches. Finally, our analyses are descriptive and exploratory; peaks and troughs are identified visually and contextually rather than through inferential statistics. Regression-based or interrupted time-series methods would enable formal hypothesis testing about the magnitude and timing of shifts, and we encourage future research to adopt these designs. The value of the present work lies in its scope (3,566 articles; 4 years; 21 thematic categories) and in being the first systematic examination of this phenomenon in a Turkish-language corpus.

Future work should assess whether pandemic-driven positivity has persisted beyond the lockdown period. As game-related health discourse continues to evolve—encompassing new dimensions such as AI-driven game characters and their emotional effects (Keshavelal et al., 2025) and the broader impact of digital technologies on health and time management (Nawaz et al., 2025)—media framing studies will need to track whether mainstream coverage keeps pace with these developments.

While pandemic-era conditions may have temporarily shifted media focus, there was not a lot of flourishing discourse around the positive social, cultural, and health aspects of games. Instead, the positivity was fueled by a commercial lens and supported by the role of games at households during the lockdown. Industry growth and global acquisitions have likely reduced discourse imbalance. We propose that collaboration among industry, policymakers, and media is needed for balanced coverage. Industry growth aids coverage but is not sufficient on its own. Our results prove crucial in the perception of videogames for an emerging market and industry like Türkiye, since media framing impacts public and policymaker perceptions.

## Data availability statement

The data analyzed in this study is subject to the following licenses/restrictions: none. Requests to access these datasets should be directed to [sercan.sengun@ucf.edu](mailto:sercan.sengun@ucf.edu).

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SŞ: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. SD: Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

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