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Article

Can Virtual Reality Change Minds?

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Abstract

This study investigates how immersive journalism delivered through virtual reality can shape audience attitudes toward refugees by activating affective and cognitive mechanisms associated with behavioral response. Drawing on two focus group sessions with sixteen participants in Northern Cyprus, the research compares the empathetic engagement and evaluative shifts generated by a 360 degree VR documentary with those produced through a traditional 2D viewing format. Participants who experienced the content in VR reported a heightened sense of presence, emotional proximity, and perspective taking, which corresponded with a positive change in their views toward refugees. In contrast, those who watched the same content in 2D expressed emotional discomfort yet demonstrated no notable attitudinal change, suggesting that non-immersive viewing maintains psychological distancing and reinforces pre existing beliefs. The findings indicate that immersive journalism can operate as a technological catalyst for short-term attitudinal reorientation in politically sensitive contexts, particularly by eliciting embodied emotional responses that traditional formats struggle to generate. Although the study is limited by its small sample size and reliance on self reported reflections, it contributes to the growing body of evidence that immersive media hold behavioral and perceptual relevance for journalism practice, audience engagement, and the broader public understanding of marginalized populations.

Keywords: immersive journalism; emotion; empathy; virtual reality; journalism

1. Introduction

The advent of digital technology has profoundly transformed journalism, opening new avenues for storytelling and audience engagement. Among the innovative approaches emerging in recent years, immersive journalism stands out as a powerful tool capable of promoting deeper emotional connections between audiences and news stories. Unlike traditional journalistic methods, immersive journalism places viewers within a virtual environment that recreates real-life situations, cultivating a strong sense of presence and immediacy. This enhanced sense of "being there" has been shown to elicit stronger emotional reactions, increase empathy, and potentially influence viewers' attitudes and behavior toward complex social issues (Sanchez 2017; Shin and Biocca 2017; Sundar, Kang and Oprean 2017; Rose 2018; Hassan 2019).

This study seeks to explore the potential of immersive journalism to enhance empathy and shape perceptions of refugees in Northern Cyprus. The research focuses on the refugee crisis in the Mediterranean and the broader Middle East. By examining how audiences respond to a VR documentary about a Syrian refugee girl living in a refugee camp in Lebanon, "My Home Shatila," in comparison with a traditional 2D viewing, this research aims to assess whether immersive storytelling can effectively bridge emotional and perceptual gaps in a politically sensitive context. As media practices continue to evolve, understanding the capacity of immersive technology to promote social and attitudinal change remains a critical area of inquiry, holding important implications for journalism, policy development, and humanitarian advocacy.

2. Literature Review

The rapid evolution of digital media technologies in recent years has significantly transformed conventional journalism practices and reshaped the ways in which news is experienced. One of the most striking examples of this transformation is immersive journalism, which incorporates audiences into the heart of the news event by creating a strong sense of physical presence. In doing so, it shifts the audience's role from passive viewers to active participants who *experience* the news. Supported by technologies such as virtual reality (VR), augmented reality (AR), and 360-degree video, this emerging form of media has gained prominence particularly in the coverage of humanitarian crises and conflict zones, where emotional engagement is high and the potential to generate empathy is critical (Grönroos and Voima, 2013; Lee and Hsiang, 2014; Lewis and Westlund, 2015).

In this context, empathy is no longer viewed merely as an emotional connection between individuals, but as a domain of political and ethical responsibility. The term "politics of empathy" refers to the ways in which audiences emotionally connect with the "other" through media representations, and how these emotional responses influence their social and political attitudes. Especially in news stories related to war, migration, and displacement, topics rich in emotional content, the capacity to enhance empathy positions the media not only as a transmitter of information, but also as a powerful agent in shaping public perception and social awareness.

Immersive journalism effectively offers a virtual world where news stories are recreated, and users are invited to an embodied experience. The main idea of immersive journalism is to allow the audience to be involved in a reconstructed scenario in the virtual world that represents the news story (De La Peña et al., 2010). Nonny De La Peña and her colleagues define immersive journalism as follows: "Producing news in a way that people can gain first-person experience of the events and situations described in the news" (De La Peña et al., 2010: 291). Thus, the viewers are given the feeling of "being there" and "they get the opportunity to experience the event from the perspective of a character depicted in the news story... They also have the chance to empathize with the story individually" (Çaba, 2018:714).

Immersive journalism attracts the attention of the viewers because it offers them the opportunity to emotionally participate in the events depicted in the news reports (Nonny de la Pena et al. 2010: 298; Pantti, 2010: 176). The temporal coexistence of immersion and interaction is vital for VR, which is more than just "being there" or providing augmented reality. It is essentially a simulation that creates virtual worlds with realistic movements or audio configurations that respond to users (Burdea and Coiffet, 2003). For example, an embodied user at the center of a VR experience becomes part of the mediated landscape and situation to such an extent that they may experience real physical reactions, such as an increased heart rate or sweaty palms, when looking over a cliff in a 3D-animated environment (Blascovich and Bailenson, 2011; Bengtsson and Couvering, 2022).

VR has four main elements: virtual world, immersion, emotional feedback, and interaction. The virtual world is a place where post-built content is streaming. Immersion is understood as an individual's sense of presence, a sense of "being there" either mentally or physically. Emotional feedback and interaction are explained as the technology's ability to respond to the actions of the users (Sherman and Craig, 2003). Most journalism productions shown as VR today consist of 360-degree videos (Cornia et al., 2016). With 360-degree videos, audio and images can be transmitted live to the viewer, who can focus on wherever s/he wants and has the chance to observe the events from a broader angle.

Immersive journalism is a technology in which the viewers are an integral part of the narrative, enabling first-person experiences using VR technologies. Storytelling, empathy, virtual/real duality and interaction are the basic elements of immersive technologies (Soler-Adillon & Sora, 2018). In VR, the viewers are immersed in the event. By wearing VR headsets, they leave their physical environment and watch the reproduced content through this headset. A three-dimensional view and depth level is captured through 360-degree videos. By moving their head, the viewers can change the angle of view similar to the human gaze. With the use of spatial sound technology, the viewers perceive the direction of the sound as if it were real. The viewers can take a more active role in the

event. They can be an observer, a character, or the main character of the story. The viewers may feel that they are in the setting of the story and react as if they were there. The sense of presence (being there) gives immersive journalism technology significant advantages over traditional narrative. It evokes a sense of more developed truth and transparency in the viewers (Benitez and Herrera, 2020; Canorea, 2022).

2.1. Empathy and News Reporting

Previous research has shown that emotional participation in immersive journalism enhances empathy in the viewers, however, whether enhanced empathy leads to a change in the viewers' opinions has not been discussed in the literature as extensively (Sanchez Laws, 2017).

Empathy is the ability of an individual to understand and respond to another person's experiences (Rogers, 1958). Sinclair et al. (2017) distinguished between sympathy, empathy, and compassion, noting that empathy is characterized by features such as acting with genuine concern based on emotional understanding, assuming an altruistic role, taking action, and engaging in small acts of kindness without expecting anything in return. In essence, the emotional component of empathy involves an effective response to another person, reflecting emotional congruence (Cao et al., 2021; Zhou et al., 2021).

In simpler terms, empathy is the process of putting yourself in another person's shoes, and it is generally defined as the concern for the well-being of others and the ability to imagine oneself in the place of another person (Davis, 1983). Rogers (1983) defines the concept as accurately understanding and feeling another person's emotions and thoughts by putting oneself in her/his place and conveying this understanding to her/him.

The perceived distance between news audiences and news events is particularly significant, especially in the context of international news, as such stories often appear distant and irrelevant to viewers (Kwon et al., 2017). To reduce this perceived distance, many 360° journalism contents aim to emotionally and directly convey the lives of ordinary people suffering in different parts of the world. These types of content call on viewers to put themselves in the place of those who are suffering, even if they are geographically distant. The act of imagining oneself in another person's situation through mental imagery is known as "perspective-taking" (Batson et al., 1997), and this process has been a crucial component in understanding the multidimensional nature of empathy (Davis, 1996). When can see, hear, and feel as another person within immersive virtual environments, experiencing the world from that person's perspective, they tend to feel a much stronger sense of connection and "being one" with that person compared to when they are merely asked to imagine the other's experience (Ahn et al., 2013).

In addition to the cognitive ability to process and understand the suffering of others, immersive news narratives, by presenting intense real-life situations such as the conflict in Iraq with concrete visual and auditory cues, have been found to closely simulate reality, thereby triggering emotional responses (Diemer et al., 2015; Sundar et al., 2017) and enhancing enjoyment derived from the news content (Vettehen et al., 2019).

Immersive journalism technologies are thought to improve people's empathy and are increasingly becoming a research topic (Kors et al., 2016). VR technologies have begun to be called "ultimate empathy machines", as they strengthen the viewers' feeling of "being there" (Constine, 2015; Milk, 2015).

Sundar et al. (2017) found that participants exposed to VR and 360° video news conditions expressed higher levels of empathy such as feelings of sympathy and compassion toward characters in the story compared to participants in text-based conditions. Studies have shown that participants in VR experiences develop empathy and compassion for the virtual characters they interact with during the experience. In addition, it has been observed that the participants may want to help these characters. Some researchers suggest using VR as a tool to reinforce pro-social behavior (Baños et al., 2004; Riva et al. 2007; Gillath et al. 2008). In a study by Ana Luisa Sánchez Laws (2014), it was found out that news reports using immersive journalism techniques were more successful in arousing

empathy than other journalism methods. With enhanced empathy, one can put oneself in someone else's shoes, and grasp her/his feelings, and take action to mitigate her/his pain (Blank-Libra, 2016).

Emotions in Journalism

Visuals such as photographs, drawings, graphics, tables and moving pictures in the news reports can be used to influence human attitudes, ideas and beliefs (Helmets and Hill, 2004: 2). The impact of visuals on people's emotions is critical to journalism. Studies show that journalism is not only based on creating meaning, but also on sensory expectations and the experience of consuming news texts (Howes, 2006).

Along with digital journalism, when an event happens, it is often shared and discussed on social media instantly. Thus, news becomes open to interpretation on social media. In this process, emotion becomes a more important factor for both the news reporter and the consumer of news, who distributes it on social media. Through a cycle of feedback, the appeal to emotions affects the way news is produced in the future (Beckett, 2015).

In our age, the media have become personalized due to the increasing use of mobile devices and their constant presence in our lives. Our physical relationship with news reports has also changed, as mobile devices are always on and available to us. In addition, we integrate the social networking platforms, websites and media applications into our mobile devices (Beckett & Deuze, 2016). Today, people communicate with each other through networked technologies and networked communication gives the users the capacity to better understand people's emotions and moods and is very quick at recording and evaluating human emotions. McStay (2016) calls this situation "empathetic media". Emotions are obviously at the heart of all the foregoing developments. With emotions, people become more interactive with technology and this situation fuels people's desire to reach news and information (Bardoel & Deuze, 2001; Heinrich, 2011; Russell, 2011; McStay, 2016).

Emotional journalism fits into the emotionally charged networking environment that is gaining influence today, however, it is admitted by journalists and scientists that it interferes with objectivity, which is considered as a fundamental principle in journalism ethics (Peters, 2011; Beckett and Deuze, 2016).

Emotions are seen by many as necessary to increase the popularity of a news story on the internet. However, the appeal to emotions in news reports is conventionally considered as mere entertainment or disturbance, reducing the value of a news report. (Pantti, 2010). On the other hand, from an alternative perspective, emotions create an aesthetic atmosphere in immersive journalism and guide the viewers about how stories should be experienced (Bordwell and Thompson, 2010).

The appeal to emotions can be an impactful tool to convey messages. Emotional messages attract the attention of the viewers and viewers better understand and remember the message given in this way (Lang et al., 1995). Emotions are seen as an auxiliary narrative technique in conveying information. In addition, it is argued that emotions not only facilitate the understanding of a news report but also improve empathy in the person who reads or watches it. For example, when a person who is suffering in a difficult situation is portrayed in a news report, viewers can connect with the person who is the subject of the news report, because of which the news report can become more interesting (Grabe and Zhou, 2003: 316). Immersive journalism has the potential to offer viewers a deeper and richer perspective on stories, appeal to emotions, and develop empathy (Sanchez Laws, 2017).

Today, journalists appeal to emotions in their news coverage for several reasons. The first reason is the economic competition in the digital world. As there are many data entries in the internet environment, the information must be accurate, reliable and fast. In addition, everyone on the internet is a potential competitor. Advertising revenues of the news media constitute another economic factor. The fees that media organizations receive from advertisers vary according to the number of viewers of their news content. As a result, media organizations that present news in which emotions are used intensely receive more economic support, which, unfortunately, also leads to the development and circulation of fake news on the internet (Bakir and McStay, 2018).

Technology comes to the forefront as the second reason for using emotions as a tool. It has been proven by researchers that appeal to emotions attracts the attention of consumers and provides more interaction (Pantti, 2010). Newspapers are primarily published on social media today rather than being sold by bookstalls. News reports appeal to emotions, because people tend to share the news contents that affect them emotionally (Jenkins, Ford, & Green, 2013). Digital media increases emotionality. People are less constrained in an online environment. As a result, a fertile ground is being created for the rise of media content and news contexts that aim to reveal emotional reactions (Bakir and McStay, 2018).

Neuroscience comes in third place. Compared to reacting to facts, people tend to react to emotions easier. Emotions are also important for the marketing of news. It is important to know what kind of news reports people react to and how they interact with them on a personal and social level (Beckett and Deuze, 2016).

3. Research Method and Data Collection

Given the growing importance of emotional engagement in news consumption, this study explores how immersive journalism techniques can influence individuals' perceptions and attitudes toward refugees. Specifically, we aim to address two key research questions:

- Does immersive journalism enhance empathy?
- If so, does this enhanced empathy lead to a positive change in viewers' opinions?

To investigate these questions, we conducted two focus group studies. In the first focus group, eight participants watched the video titled "My Home Shatila" using a VR headset, while in the second focus group, another eight participants watched the same video in a two-dimensional mp4 format. All participants were Turkish Cypriots from diverse age groups.

"My Home Shatila" is a 4-minute-13-second-long 360-degree video about Fadia Alham, a 14-year-old Syrian refugee girl living in Lebanon's Shatila refugee camp. The video portrays Fadia's difficult life in the refugee camp, conveying her fears and dreams through an emotional narrative.

The focus group participants, selected through snowball sampling with careful attention to ensuring age range diversity, were asked semi-structured questions before and after watching the video, in addition to participating in focus group discussions. Focus groups, a data collection technique typically involving 4 to 12 participants with shared characteristics and a moderator, aim to create a multi-voiced environment where participants feel comfortable expressing their true thoughts (Şahin, Suher, and Bir, 2009). The focus group method is known for its effectiveness in collecting information about individuals' feelings, opinions, ideas, and perspectives (Krueger & Casey, 2000). In this method, participants feel less isolated and pressured, as they engage in the interview collectively, leading to easier and more sincere information sharing compared to one-on-one interviews (Gülcan, 2021: 98). However, while focus groups are a convenient method for understanding perceptions and experiences on a given subject, it is important to note that findings obtained through this approach cannot be generalized to a larger population (Hennink, 2007: 11).

In this study, we conducted a thematic analysis to address the research questions outlined above. Thematic analysis involves systematically organizing collected data into meaningful units to enable in-depth description and interpretation of data themes (Boyatzis, 1998). According to Braun and Clarke (2019), this process comprises six steps: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and preparing the final report.

4. Findings

The findings demonstrate a clear behavioral divergence between participants exposed to the immersive VR environment and those who watched the same content in a traditional 2D format. Participants in the VR group not only exhibited higher levels of emotional activation but also showed observable changes in their attitudes toward refugees—an indication of a cognitive affective shift. The expressions of empathy, perspective-taking, and personal identification observed among VR

viewers suggest that the sense of immersive presence temporarily reconfigured their evaluative judgments, which can be interpreted as a short term behavioral indicator. In contrast, participants in the non-immersive MP4 group reported emotional discomfort but maintained attitudinal stability, reflecting habituation and desensitization effects commonly associated with repeated exposure to mediated suffering. This pattern shows that traditional formats are insufficient to disrupt pre existing belief structures and therefore do not initiate behavioral or perceptual recalibration. Taken together, the comparative findings indicate that VR functions as a catalyst that activates affective processing pathways capable of influencing opinion formation, whereas 2D media consumption maintains cognitive distance and preserves existing attitudes. These results collectively position immersive journalism as a technologically mediated stimulus with the capacity to alter evaluative orientations toward socially marginalized groups, aligning the findings with theoretical expectations regarding technology and driven behavioral influence.

As shown in the table below, participants using the headset include five men and three women from various age groups. Among the participants who did not use the headset, there are four men and four women, also representing a range of age groups.

Table 1. Age and Gender Distribution of Focus Group Participants.

Participants Using the Headset			Participants Not Using the Headset		
Headset (Participant No.)	Gender	Age	Headset (Participant No.)	Gender	Age
P. 1	M	27	P. 9	M	29
P. 2	M	31	P. 10	M	33
P. 3	M	35	P. 11	M	38
P. 4	M	45	P. 12	M	45
P. 5	M	57	P. 13	F	33
P. 6	F	42	P. 14	F	38
P. 7	F	54	P. 15	F	41
P. 8	F	70	P. 16	F	72

4.1. Participants' Initial Attitudes Toward Refugees

Before watching the videos, participants in both focus groups were asked what they thought about refugees and what should be done about the refugee question. Before watching the video, the participants in both groups voiced similar views on refugees. Participants in both groups commented that the country's economy would be much worse with the arrival of refugees, the citizens' welfare would decrease and there would be difficulties in accessing resources. For example, P. 5 from the first group stated that the country was hardly self-sufficient and hence, refugees constituted a threat to the country:

Our country is a small one; everything is made for 300 thousand people. However, due to the migration waves, our population has doubled, and this causes high costs and difficulties in hospitals, roads, schools, and living conditions, especially rentals. Our Northern Cyprus is only sufficient for us, it is for us. (P. 5).

Participants also raised concerns that incoming refugees would cause social conflict, and that the crime rate in the country could increase. P. 16 from the second group mentioned that every refugee could threaten the social structure:

I believe that this has become a threat to the existence of society. I also believe that it is at a level that can lead to changes, corruption and unrest in the behavior patterns in daily life, and that the graveness of this situation is gradually increasing. (P. 16).

4.2. What Caught the Audience's Attention in the Video

After watching the video about the Syrian refugees, participants in both groups were asked the following questions: "How did this news report make you feel?" and "What caught your attention in the video you watched?" It was observed that participants using the VR headset paid closer attention

to the environment, noticing details down to the smallest elements and providing detailed descriptions of the scenes. In contrast, those who viewed the video in MP4 format were less able to explore the video's depth and primarily focused on surface-level, obvious aspects.

Focus Group I

In the first group, when asked "What caught your attention in the video you watched?", participants related the content to their own lives, discussing scenes through examples from their personal experiences. The diversity in age among participants enriched the discussion by bringing a variety of perspectives. They mainly concentrated on the primitive living conditions and the limited activities visible in the scenes. Additionally, features such as bullet marks on the walls drew significant attention. Notably, especially among the older participants, there was a visible display of empathy, as they reflected on their own experiences during the war times in Cyprus.

P. 5: People have no social life; they live in primitive conditions. The kitchens and homes look like ruins, and we felt that.

P. 5: We lived through similar things; the walls are full of bullet holes.

P. 8: Our homes were like this too. There are no animals on the streets—no cats, chicken, dogs, birds. There's no greenery, no hope for the future. It's a disgrace for our generation, having no social life and no prospects.

P. 2: People lead a simple, primitive life.

P. 6: They live under extremely primitive conditions.

P. 4: At one point, I felt as if I were in prison. (Everyone agreed here.) I wondered, "When will I be able to get out of this place?"

P. 6: It's as though there are no humane conditions at all.

Researcher: So, did you experience the emotions directly conveyed by the video?

(Everyone responded affirmatively here.)

P. 2: It's normal on a screen, but with VR goggles, it felt like you were actually there, as if you were living there.

P. 8: Yes, when looking through the goggles, it felt as though you were really there.

Everyone agreed here, expressing that viewing through the VR goggles made them feel as if they were present in that environment.

Focus Group II

In response to the question, "What caught your attention in the video you watched?", some participants from the second group highlighted several key elements that stood out to them. However, they did not relate the refugees' living conditions to their own experiences; instead, they discussed "them" in a distant, external context.

P. 10: The neighborhoods were slums, and it showed that the children were living in poor conditions.

P. 14: The fact that people stayed in such homes, had no electricity when it rained, and managed to survive in a damp house with little food and clothing shows how pitiful their situation is.

P. 15: What stood out to me the most was people losing their lives due to electricity. When it rained, they would cut off the electricity, and people had to live in fear, enduring tough conditions to survive.

4.2.2. Does the Sense of "Being There" in Immersive Journalism Increase Audience Empathy?

Participants using VR indicated that they deeply felt the sense of "being there" while watching the video. Especially those who experienced the violent conflicts that took place in Cyprus between 1963 and 1974¹ empathized with the subjects of the video by recalling their experiences during the war years. P. 8, a 70-year-old female participant "confessed" that the video she watched scared her and reminded her of the war on the island:

I felt there, as if I was in the video. I had war like this in the past. I was a little scared when I watched the video. For a moment, I felt as if I was going to experience the same things again. So frankly, I felt sorry for them. (P. 8).

Watching the video with a VR headset, participant 4 also said that the video reminded him of the migration period and the war in Cyprus in the past:

Of course, we are also people who have actually experienced migration somewhere. So, I was born in 1965 in Paphos. You know, there was a war in '74 and Turkish soldiers landed on the island. Greeks and Turks killed each other, so to speak. We have experienced similar things as well. We went to the refugee camps in '74. We went to the British Base. We stayed in the camps, and then they took us to Türkiye. We were accepted as refugees there, that is, we were refugees, and then we moved from south to north [of Cyprus]. We moved to Güzelyurt. They gave us a house and we lived there. I can feel very well what these people are going through and, of course, I don't wish anyone to experience such days. (P. 4)

P. 4, who experienced the video through a VR headset, stated that it made him feel as though he were truly present in that environment. He also emphasized that VR technology should be utilized in schools, suggesting that it might dissuade those inclined toward war from pursuing it:

After the video, of course, I felt like I was there. I felt like I lived there, and I think this technology, this video should be used in education as well. I wish schools would show videos with this technology and people would see what war is and sense it..I don't think anyone watching a video with this technology would desire war any more. (P. 4).

Participants who watched the video in MP4 format emphasized empathy less than VR viewers. For example, P. 10 who watched the video in MP4 format, stated that he had watched many videos in this format and on the subject before. He stated that these videos are a “fact of the life”:

I'm upset, but I've watched a lot of videos like this. I felt sorry for all of them before, but I also feel sorry for myself and my own people, I feel sorry for us, even more so. Therefore, the priority should be our own people. First, those who live in this country... Like I said, I've watched a lot of videos like this before. Of course, this video is not ordinary, these are the reality of the world, the life of refugees, they are real, but, ultimately, we must think about ourselves. So, in the end we must think about ourselves. Frankly, this video did not affect me much. (P. 10)

Focus Group I

Regarding the feeling of “being there,” participants in the first group generally responded positively to the question, “Did you feel as if you were there?” During the discussion, they shared emotional expressions such as “I wanted to reach out and hold her hand” and “I wanted to hug her.” It was evident that participants responded to this question in a personal tone, expressing strong emotional reactions. The frequent presence of the girl in the video had a significant emotional impact on them.

P. 8: Yes, it felt as if she was standing right in front of you, looking at you.

P. 6: I felt as if I was having a conversation with her.

P. 8: Yes, the girl had such a warm look.

P. 3: This made the video feel more emotional, as if you were inside it—she appeared everywhere, almost as if she was really there.

P. 5: At one point, I even felt uneasy, as if she might be watching me while sitting on a rock.

P. 2: Good thing I didn't actually reach out and hold her hand.

P. 6: I was close to reaching out and hugging her.

Focus Group II

Participants who did not use VR headsets generally responded to the focus group question, “Did you feel as if you were there?” by stating that the video did not create a true sense of immersion for them. While they acknowledged the emotional and depressing nature of the content, they described the experience as similar to watching ordinary online videos, lacking the powerful feeling of being physically present in the scene.

P. 9: I've watched a lot of videos like this, and these types of videos are very popular right now, so for me, it wasn't very different from the other videos I've watched.

P. 15: It didn't feel real, but I did get a bit of a sense of helplessness from the video. Other than that, it didn't give me much of a sense of reality.

P.16: I didn't get a sense of reality either, but I still wouldn't want anyone to live in such an environment.

P. 13: I didn't exactly feel like I was there. There were things in the video that caught my attention, and I think it was a sad video, but I didn't fully get the feeling of being there.

P. 14: I didn't feel like I was there either. The video was a bit emotional and upsetting for me, but I didn't feel as if I was actually there.

P. 12: I didn't get that feeling either, to be honest. It felt like the regular videos I watch on YouTube.

4.2.3. Does Empathy Result in Opinion Change?

After watching the video, participants in both focus groups were asked, "Have your opinions about refugees changed after viewing the news content? If so, how?" Prior to the research, we hypothesized that VR, by providing a more detailed and immersive portrayal of human suffering, would enhance empathy and consequently influence viewers' opinions. Our observations supported this hypothesis. Participants who experienced the video through a VR headset reported experiencing greater empathy and showed a positive shift in their attitudes toward refugees. In contrast, the group that watched the video in MP4 format did not exhibit any change in their opinions. Additionally, as noted earlier, those who viewed the video in MP4 mentioned that they had been exposed to similar content previously; although they felt upset, their attitudes toward refugees remained unchanged.

Among the eight participants who watched the video using VR headsets, six had negative opinions before watching the video, and their views on refugees changed after viewing, as shown in Table 2. Two participants, on the other hand, held positive opinions about refugees from the beginning and did not experience any change in their views after watching the video. In the case of participants who watched the video without the headset, none of the eight participants showed any change in their initial opinions, indicating that they maintained the same views even after watching the video.

Table 2. Participants' Opinions Before and After Watching the Video.

Participants Using the Headset (Participant No. & Gender)				Participants Not Using the Headset (Participant No. & Gender)			
	Age	Before	After		Age	Before	After
P. 1 M	27	Negative	Positive	P. 9 M	29	Negative	Negative
P. 2 M	31	Negative	Positive	P. 10 M	33	Negative	Negative
P. 3 M	35	Negative	Positive	P. 11 M	38	Negative	Negative
P. 4 M	45	Positive	Positive	P. 12 M	45	Negative	Negative
P. 5 M	57	Negative	Positive	P. 13 F	33	Negative	Negative
P.6 F	42	Positive	Positive	P. 14 F	38	Positive	Positive
P.7 F	54	Negative	Positive	P. 15 F	41	Positive	Positive
P.8 F	70	Negative	Positive	P. 16 F	72	Positive	Positive

P. 2, who watched the video with a VR headset, stated that his views on refugees were negative before watching the video, but after watching it, he empathized and took a positive perspective.

In fact, our problem is not with refugees, the reason for our concerns is actually political. Our views are a bit antipathetic about refugees, but after the video, I feel like we should view the situation a little more emotionally. I think a little more positively about refugees now after watching the video. (P. 2).

P. 6, who watched the video with a VR headset, stated that her feelings were already positive before watching the video, but after watching the video she thought that the refugees needed help.

So, I never had negative thoughts about refugees. People leave their country, for all kinds of reasons, political reasons, all kinds of wars, racial...I have never found them strange. Nobody wants to leave their country. After the video, I think they need help. They need to go to another country as soon as possible. No person should live under these conditions, this feeling was also conveyed in the video. (P. 6)

P. 3, who watched the video with a VR headset, stated that the video changed his perspective on refugees, "although not drastically."

When something visual is involved, people feel more emotional, especially when you see it in front of you, when you are directly in it. For this reason, I believe that the video made a change in my thoughts, although not too extreme. We feel pain when we see it like this, it affects us more when it is a visual source. No one wants to be in the place of these people. Nobody wants to be in this situation, especially after the video. (P. 3)

P. 5, who watched the video with a VR headset, stated that "his emotions have changed.":

My emotions have, of course, changed. As someone who has lived through these in his own time, as someone who has seen war, I suddenly put myself in their shoes, and what I went through in those days is what I see now. It is difficult to live in these conditions. I change my mind about everything, whether at home or on the street, at schools or anything else. I expect them to adapt to the new age as soon as possible. Of course, we were upset when we saw them this way. I think this is the shame of the age. At the moment, I think more positively than before (P. 5).

Watching the video with a VR headset, p. 7 also stated that the video she watched changed her thoughts and emphasized that she felt people's pain:

Of course, it did [change my feelings]. I was more upset. When I saw it, my thoughts changed, it made me emotional. (P. 7)

Contrary to the participants in the first focus group, the second focus participants expressed no opinion change after watching the video. P. 11 stated that his views have not changed:

Of course, after watching the video, my thoughts did not change (P. 11).

Another participant who watched the video in MP4 format, P. 10 also states that he was upset about the video content he watched, but that the video was not effective enough to change his mind.

I'm still thinking the same way. There has been a change in my feelings, but my opinion has not changed, even though I am sad, I think the same. Frankly, it wasn't an effective video to change my mind. (P. 10)

Along similar lines, P.12 who watched the video in MP4 format also stated that the video made him sad; however, his opinions did not change:

Yes, the video made me sad. I can't say it didn't hurt, but there are a lot of videos like this around, so we feel sorry for all of them, but if I am to talk specifically about this video, it didn't change my mind. Because as I said, this situation is starting to hurt us now. (P. 12).

5. Conclusions

Our research, while limited in scope, supports the existing literature on the ability of VR to create empathy. Participants who watched a video in a VR environment experienced more emotionality and empathy than their counterparts. This aligns with studies by Baños et al. (2004), Riva et al. (2007), Gillath et al. (2008), and Sanchez Laws (2017), suggesting that immersive journalism techniques can evoke greater empathy than traditional methods. Immersive journalism offers a richer, more profound perspective, appeals to emotions, and enhances empathy.

In the first focus group, the sense of "being there" was intense; six out of eight participants felt as if they were inside the story, while two did not express an opinion. Conversely, empathy was lower among the second focus group: Only three participants expressed empathy, while five did not.

Watching the video with a VR headset primarily allowed the viewers to pay attention to all details and social life, for example, "bullet holes in the wall" and "power outages". It has also been observed that the viewers using the VR headset moved with curiosity in every direction, since the video was 360 degrees. Some viewers who watched the video with a VR headset got emotional and cried.

VR viewers paid closer attention to details like "bullet holes in the wall" and "power outages," moving with curiosity due to the video's 360-degree format, and some were emotionally moved to tears. Before the video, all participants except one from the first group held negative attitudes towards refugees; however, all participants from the first group expressed positive opinions afterwards. The VR experience evoked reflections of the Cyprus conflict between 1963 and 1974, fostering empathy for the refugees.

In the second focus group, only three members voiced positive opinions toward refugees before the video and this statistic has not changed after they watched the video. The participants also stated that because of the abundance of such videos, human suffering became ordinary and a "part of life". In addition, they did not pay attention to the details of the video as much as the VR viewers.

In conclusion, this study underscores the significant potential of VR technology in enhancing the "sense of being there" within immersive journalism, thereby increasing empathy among viewers and influencing their opinions. As media technology continues to evolve, its responsible and ethical implementation holds a crucial role in cultivating a more empathetic and informed public discourse. However, it is essential to acknowledge the limitations of this research, particularly the relatively small sample size and the short-term assessment of attitude shifts. Moreover, the sociocultural context of Northern Cyprus where historical memories of displacement remain vivid may have intensified emotional responses among VR participants. Future studies should prioritize longitudinal evaluations to determine the long-term sustainability of the positive effects of immersive journalism and to examine whether these effects translate into tangible behavioral changes and heightened advocacy efforts.

Despite these constraints, the study contributes to growing evidence that immersive technologies hold significant potential to shape public attitudes in politically sensitive contexts. As VR becomes increasingly integrated into journalistic practice, understanding its behavioral implications will be essential for media ethics, policy formation, and the broader societal negotiation of humanitarian narratives.

The findings of this study have several implications for journalistic practice, media research, and policy development related to refugee perception and social cohesion. From a journalistic perspective, the results suggest that immersive storytelling can serve as deliberate tools to increase empathic engagement, challenge traditional narratives, and reduce emotional disconnection toward vulnerable groups. As news organizations increasingly experiment with VR-based reporting, understanding VR's capacity to reshape audience attitudes becomes crucial for editorial decision-making and ethical responsibility.

From an academic research perspective, the study highlights the need for further investigation into the behavioral pathways through which immersive journalism impacts cognitive and emotional processing. The demonstrated link between presence, empathic activation, and attitudinal change highlights the importance of integrating communication studies with behavioral science, human-computer interaction, and media psychology. This interdisciplinary approach is crucial for developing more robust theoretical models that can explain how technologically mediated experiences alter social perception.

The findings suggest that, from a policy perspective, immersive media can contribute to reducing societal resistance towards refugee communities by cultivating empathic identification and reducing perceptual distance. In contexts where public opinion plays a decisive role in migration management, social integration, and humanitarian support, VR based interventions can complement awareness campaigns and education initiatives. However, ethical considerations, particularly regarding emotional impact, potential manipulation, and the representation of real human suffering in simulated environments, must be carefully considered. Therefore, the responsible use of immersive journalism must balance interactivity with sensitivity and ensure that technological capabilities empower, rather than exploit, affected communities.

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References

¹ The Cyprus problem, also known as the Cyprus conflict, Cyprus issue, Cyprus dispute, or Cyprus question, is an ongoing dispute between the Greek Cypriot community which runs the Republic of Cyprus and the Turkish Cypriot community in the north of the island, which runs the unrecognized de facto state of the Turkish Republic of Northern Cyprus. This dispute is an example of a protracted social conflict.

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