

Examining the hypodermic syringe effects of media on preferences and decision-making in Japan

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Abstract

This paper focused on the effects of media on the preferences and opinions of people living in Japan. It aimed to find out how the media influences the preferences, opinions, and decision-making of the respondents. The first research question sought to find out the form of media that people in Japan usually use. The second question wanted to know the level of awareness of the respondents on the effects of media in influencing their opinions and preferences. The third question wanted to find out the extent of influence the media has on the social, political, and economic opinions of the respondents. Lastly, the fourth question sought to answer how the media help the respondents in decision-making. Results showed that most of the respondents rely on online media, such as social media and websites, more than the traditional forms. Nevertheless, both forms of media have influences on the opinions and decision-making of the respondents. Furthermore, their social, political, and economic opinions are affected by different forms of media and these forms of media have helped the respondents think for themselves.

Keywords: Hypodermic Syringe Effect; Media; Magic Bullet Theory; Media Influence; Sociology

1. Introduction

The media have been a great tool with which people communicate and achieve a common goal. This makes them essential across societies and cultures. In this research, the focus will be on this topic, media, and their impact on modern society.

One of the significant influences of media to society is their effect on people's values, beliefs, practices, and preferences. To analyze the effects of media on the members of the society, several models or theories have been introduced. One of these models is the hypodermic syringe effect, also called hypodermic needle model and magic bullet theory (Thompson, 2023; Perera, 2024).

The Hypodermic Syringe Effect refers to the direct and powerful effect the media has on its audience; more specifically, the general public or the society. This particular model suggests that the media yields the power to act as a syringe with the intention of injecting the message into the audience who are merely the receivers (Khan, Khan & Batool, 2015).

Hypodermic Syringe Effect states that humans tend to be influenced easily by the media. Social and mass media such as news, television and articles are often biased, having lopsided commentaries (Elejalde, Ferres, & Herder, 2018), which are accelerated further by cyber cascade or filter bubble. Cyber cascade is a phenomenon in which people with similar ideas and ideologies form strong online connections, resulting in the formation of closed, extremist communities that

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exclude all opposing or dissimilar opinions. It also often results in ideological polarization as the interactions of closely-knit groups amplify their beliefs through their interactions in the media.

There have been frequent mentions of the terms “filter bubbles” and “echo chambers” in news reports. These terms are also used in the subject “informatics” for Japanese common tests for university admissions with a section to learn about the effect of cyber cascade, and how unawareness of it could be detrimental (Ministry of Internal Affairs and Communications, 2019).

According to news reports, Japanese people are often driven to hoard essentials in supermarkets and places elsewhere that are claimed to become out of stock by impulse. This has led to the realization of the importance of delving deeper into this topic. The possibility of the existing relevance between this effect and generation added on to the reason for this interest.

Thus, this research aimed to investigate the effects of media on the values, preferences, and decision-making of people in Japan.

1.1. Statement of the Problem

This study primarily aimed to investigate the effects of media to the values, preferences and decision-making of people in Japan.

Specifically, it tried to answer the following questions

- What forms of media are usually used by people in Japan?
- What is the perceived level of awareness of the effects the media has in influencing opinions and preferences of the respondents?
- To what extent does the media influence the social, political, and economic opinions of the respondents?
- Does the media help people think for themselves?

1.2. Review of Related Literature and Studies

This section offers summaries of some literature sources pertinent to the nature of this study.

The Hypodermic Syringe Model, also known as the "magic bullet theory," is a model of communication that was popular in the early 20th century. It suggests that the media has a direct and powerful influence on its audience, like a syringe injecting information directly into the mind (Tutor2U, n.d.).

In his paper “A Comparative Media Research Study on the Relevance of the Magic Bullet Theory of Mass Communication in Social Media Age”, Thakur (2020) stated that the hypodermic syringe effect (or magic bullet theory, which he used in his paper) played an important role in the behavior of the villagers in India and Pakistan border. The messages they received from social media and the news coverage of Indian and Pakistani media had frightened the villagers and “boosted the war-like situation.” Thakur concluded that the effects of the magic bullet theory have been experienced by exploratory methods over the audiences of the digital and social media age, although he noted that these effects had been rejected by other researchers.

On a similar note, during the onset of the Covid-19 pandemic, Hyodo (2020) noted in his online article for *The Mainichi*, a Japanese newspaper, that people flocked to pharmacies in Japan to grab face masks upon hearing news of coronavirus infection in the country. This led to the panic buying observed in some cases. When Japan reported its first case of the coronavirus, one company that produces sanitary and health products reported that they received up to ten times the usual number of orders, and that were operating unceasingly to keep up with the demand. Meanwhile, Harding (2020) also noted a similar case in her article for *JET Connect* that the idea that almost all of the toilet papers sold in Japan come from China started circulating on social media, thus netizens and media outlets speculated the shortage in the country. As a result, photos of physical altercations and long queues to buy toilet papers went viral.

Also seeing the effect of hypodermic syringe or bullet syndrome in modern society, Nwabueze and Okonkwo (2018) claimed that magic bullet theory was still relevant today as the audience reacted in an ‘actively passive’ manner to certain media contents. They described this reaction as the “Zombie Effect”.

This was furthered by Ahmad, Al-Jalabneh, Mahmoud, & Safori (2023) in their conference paper that investigated a sample of Jordanian people in reference to their attitudes and behaviors using both social media and the traditional

media during the Covid-19 pandemic. The study revealed that social media was the most followed avenue to seek information regarding the crisis. It was also revealed in their study that there is no significant difference between the respondents' age, place of residence, and educational level in relation to following updates about Covid-19 both on social media and traditional media. They highlighted the need for better strategies to combat misinformation since audiences tend to rely heavily on digital platforms for crisis-related information.

However, Nwabueze and Okonkwo (2018) recommended further studies on bullet theory using other issues so as to establish relevance of this theory in the digital age, contrary to claims that the theory is no longer relevant in contemporary society. Ahmad, Al-Jalabneh, Mahmoud, & Safori (2023) justified the continued relevance of the theory in times of crises, such as Covid-19. They suggested further empirical research on media effects to better understand how audiences process and respond to information especially in crisis situations.

Contrasting the previous references, Kenekwukwu (2015) capitalized on different theories contradicting the magic bullet theory, such as the individual difference theory, perception studies, social categories theory, two-step flow hypothesis, and consonance/dissonance theory, and argued that media audiences are active and filter information they are getting from different media sources. He concluded that since the audiences are active and react differently to subjects for discussion provided by the media, their interpretation to these messages differ based on demographics.

Supporting this, Umoren (2022) believes that the magic bullet theory is now extinct and has just become an academic material. This is after conducting a study using analytical research design. In his study, he claimed that the traditional media influence is no longer relevant to the modern-day audiences. Hence, the audiences actively interpret and process information in whatever ways they think could suit their needs and circumstances rather than passively absorbing contents fed by the media.

In their study titled "Social media discourse and voting decisions influence: sentiment analysis in tweets during an electoral period", Rita, Antonio, & Afonso (2023) analyzed the views and opinions of people through their tweets during an election period. Their study found out that social media sentiments, such as tweets, were not reliable to predict the outcome or results of the elections due to the fact that the public most likely voted for the winning candidates whose presence were not as popular in social media.

On a similar note, Kowalewicz (2022) highlighted the instances where the people may not be directly influenced by social media. She pointed out that many consumers still prefer a brand they already trust even if social media is suggesting other competitors as alternatives. She also emphasized that some consumers exercise their critical thinking as they question media advertisements and influences and their recommendations, and instead, do their own independent research before making a purchase.

2. Data Collection Methods

2.1. Research Design

This study employs a simple descriptive research design utilizing quantitative data collection to gain comprehensive understanding of the research topic.

Quantitative data is collected through structured surveys or questionnaires, where responses are presented numerically. This method is particularly effective for measuring and analyzing trends, as it involves closed-ended questions that are easier to quantify, generalize and analyze statistically. Researcher bias is unlikely to occur in the data itself, unless explained, as it is shown in numbers.

For this study, a questionnaire was employed to investigate the impact of media on individuals' preferences and decision-making. This approach was chosen for its convenience and accessibility to a wider audience. However, though more samples could be reached by this method, researchers can still control the participants.

2.2. Participants

The study involved 25 respondents, aged under 20 and over 50 years old, who voluntarily participated in the survey. Participants were selected using a combination of random and availability sampling.

The participants were grouped into the following age categories: under 20, 20~29, 30~39, 40~49, 50 and above. Majority of the respondents are in the 30-39 age range.

Given the nature of the data collection methods, the respondents come from seven of the eight regions of Japan. Majority of the respondents are living in the Kansai Region.

2.3. Data Collection

Data was collected through the administration of a survey questionnaire, which included both open and closed-ended questions. The survey participants were selected using convenience sampling, meaning that individuals who were readily available and willing to participate took part in the study. Due to its convenience, an online survey questionnaire through Google Forms that consisted of 10 items or questions were given to the respondents. The questionnaire had two parts: the first part asked for the profiles of the respondents, which include age and region of residence in Japan; the second part consisted of 7 multiple choice questions. The answers were tabulated and a simple frequency count was used to analyze the results of this study.

2.4. Data Analysis

This study's data analysis procedures included a few simple steps. First, the responses were collected and tabulated. Because this study used a simple survey, the frequency of responses was determined and interpreted.

Finally, based on the research questions, the researcher interpreted the data analysis results and drew conclusions and recommendations. The findings were discussed in relation to previous studies on media and hypodermic syringe effect or magic bullet theory.

3. Results and Discussions

The study involved 25 respondents, aged under 20 and over 50 years old, who are currently living in Japan. The participants were grouped into the following age categories: under 20, 20~29, 30~39, 40~49, 50 and above.

Table 1 Age of the Respondents

Age	Frequency	Percentage
Under 20	3	12
20-29	5	20
30-39	13	52
40-49	3	12
50 and above	1	4
TOTAL	25	100

Table 1 shows that the majority of the respondents (13 people) are in the 30-39 age range. They comprise 52% of the total respondents. One in their 50s responded to the questionnaire, and they comprised 4% of the total number of respondents.

Table 2 Residence in Japan

Region	Frequency	Percentage
Hokkaido	1	4
Kanto	4	16
Chubu	1	4
Kansai	16	64
Chugoku	1	4
Shikoku	1	4
Kyushu-Okinawa	1	4
TOTAL	25	100

Table 2 shows that the respondents came from seven of the eight regions of Japan. Sixteen or 64% of the respondents are currently residing in the Kansai Region, four people or 16% are living in the Kanto Region, while one each responded from Hokkaido, Chubu, Chugoku, Shikoku, and Kyushu-Okinawa Regions. No one from the Tohoku Region responded.

Table 3 Source of News and Information

Source	Frequency	Percentage
TV	5	20
Newspapers or Magazines	1	4
News Websites	11	44
Social media	21	84

This question allowed respondents to choose multiple answers; hence, the total number of responses exceeded the actual number of respondents. However, based on the results, 21 out of the 25 respondents or 84 percent depend on social media for the news and information they need. It is followed by news websites with 11 (44%) responses and TV with 5 (20%) responses.

These results are a validation of the February 2025 report by Statista (2025), an online global data and business intelligence platform, stating that there are about 5.56 billion people worldwide who use the internet. This corresponds to 67.9 percent of the present-day world population. Out of this number, 5.24 billion are current social media users worldwide. This translates to 63.9 percent of the world’s population.

On the other hand, it is also worth noting that there is one respondent who answered newspapers or magazines as their source of news and information. This supports the claim of Media Center (2024) that print magazines have been facing a profound challenge as online platforms have become the go-to for people who are looking for immediate news and tailored content. As a result, print publication sales have been experiencing a decline, while digital versions have been increasingly preferred because of lower distribution costs and a broader reach.

Table 4 Has the media ever changed your opinion on social or political issues?

	Frequency	Percentage
Yes, many times,	4	16
Yes, sometimes	18	72
No, not much	1	4
No, never	2	8

It can be gleaned from the table that the respondents have been influenced by the media on their social or political opinions. Almost all of them have changed their opinions on social or political issues because of the media. Eighteen or 72% said that they sometimes get swayed by the media, while four or 16% have experienced it many times. One respondent disagreed, saying the media has not influenced their opinions that much, while two of them answered they have never changed their opinions because of the media.

Table 5 How much media affect what people buy

	Frequency	Percentage
A lot	14	56
Somewhat	8	32
A little	3	12
Not at all	0	0

All of the respondents are affected by the media in deciding what to buy. This is shown by Table 5, where 14 of the 25 total number of participants or 56% think that the ads or advertisements they see on different media platforms affect what people buy a lot. Eight or 32% think that the ads somewhat affect their purchasing decisions, while three or 12% think there is a little. None of the respondents believe that the media does not have any effect on their purchasing activities.

Sathya and Isabella (2024), in their study to investigate the connection between advertising and consumer behavior, discovered that exposure to advertising, customer perceptions, and purchasing behaviors were positively correlated. They highlighted the ability of advertising to persuade people and affect how they make decisions.

This was reaffirmed by Sreedhar (2025) claiming that the consumers are influenced by advertisements that appeal to emotions or are presented with a strong value proposition. Emotional ads were reported to create a stronger brand recall, particularly among young consumers.

Table 6 Do social media platforms change trends more than traditional media?

	Frequency	Percentage
Yes, a lot	20	80
Yes, a little	5	20
No, traditional media is still stronger	0	0
Not at all	0	0

All of the respondents agreed that social media platforms change trends more than traditional media. Twenty believe that social media has been contributing a lot to the change in trends, while five believe the contribution is little. Meanwhile, none of the respondents believed that traditional media is still stronger than social media in terms of its effect on social trends.

This strengthens the study of Khumar, Kumaran, and Nazini (2024) where they tracked the impact of social media over the traditional media from 2010 to 2020. They noted the significant growth of ad revenues on social media as compared to the decline in the traditional media ad revenue. This could be attributed to the increasing number of social media user’s vis-a-vis the decreasing viewers of traditional broadcast media. Consequently, the instances of misinformation recorded from 2015 to 2022 showed an overwhelming leap in numbers, while the people’s trust in media decreased almost doubly (Khumar, Kumaran, & Nazini, 2024).

Table 7 Does the media help people think for themselves?

	Frequency	Percentage
Yes, always	7	28
Yes, sometimes	15	60
No, not really	3	12
No, never	0	0

Whether the media helps people think for themselves, the respondents had differing views as shown in Table 7. Fifteen of the respondents think that the media sometimes help people think for themselves, while seven said they always are assisted by the media. Three claimed that the media does not have much influence, while none believe it has never influenced them in their decision making.

In his article, *A Virtual Life: How social media Changes Our Perceptions*, Thomas (2016) explored how social media creates fragmented identities which lead the individual to present idealized versions of themselves online while feeling disconnected from reality. Meanwhile, Arias (2019) highlighted in a study that while the media does not significantly persuade individuals on its own, it plays a crucial role in shaping common knowledge, which enhances social coordination. This result suggests that the media does not directly change the individual’s beliefs. Rather, it lies in fostering collective awareness or social coordination (Arias, 2019).

4. Conclusion

Based on the results of the survey conducted to find out the effects of media on the values, preferences, and decision-making of the people, majority of the surveyed respondents who are living in Japan use online sources such as social media and news websites rather than the traditional forms of media. From the results, it can be concluded that the media, both traditional and social media, influence the opinions and preferences of the respondents. Their social, political, and economic opinions are affected by what they see or hear on social media and the traditional forms of media, and more surprisingly, have helped them think for themselves.

This study, however, has several limitations. A bigger number of participants should have been tapped to answer the survey questionnaire. This is to ensure a more diverse opinion and a larger scope of the study. Follow up interviews could also help bring out the best responses to the given set of questions. Moreover, the time used for this study is quite short. As a result, not that much data was collected. This limits the reliability of the gathered information.

It is therefore recommended that future studies tackle the same or similar topic to ensure an updated record of academic articles and references. Likewise, a bigger number of respondents could be involved to delve deeper into the influence of media on the personal preferences and decision-making opportunities of people, not only in Japan but also in a wider scope of study.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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