

## Systematic Literature Review: Consumer Attitudes in the Rise of Virtual K-pop Idols

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### Abstract

*Technological advancement over the years have been the catalyst for different kinds of innovations that have developed in modern times. As a result, a wave virtual entity such as virtual influencers have emerged in recent years. In addition, it also led to the rise of virtual K-pop idols. The popularity of virtual K-pop idols suggests that the wave of virtual entities is currently spreading to the music and entertainment domains. This study aims to investigate the potential and opportunities of the virtual K-pop idol that is currently developing. This study proposed a systematic literature review that focuses on investigating the current body of knowledge about virtual idols and virtual influencers, as well as identifying various factors regarding the consumer attitudes. This study aims to identify existing literatures obtained from the Scopus database, conduct a content analysis on selected literatures, as well as identify potential areas for possible future research directions for virtual K-pop idols. A total of 80 articles were included in this study following the selection process from the Scopus database. Through content analysis, several variables or aspects previously investigated in past research were identified, with the majority focusing on consumer behavioral intention and consumer engagement. Additionally, 30 factors related to attitude were identified. Based on this content analysis, a number of recommendations for future research in the domain of virtual K-pop idols were proposed.*

**Keywords:** Consumer Attitudes, Virtual K-pop Idol, Virtual Influencer, Systematic Literature Review, Artificial Intelligence

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## INTRODUCTION

Allowing the intelligent behavior in machines, Artificial Intelligence (AI) has become a tool that provide applications and more untapped potential uses, it has several benefits for several kinds of industries. As a result of this technology, a wave virtual entity, such as virtual influencers, have emerged in recent years. Virtual influencers are like social media influencers that are created by systems and can take any size, shape, style, and personality. Mostly, artificial intelligence technology is used to construct these virtual influencers, and a lot of human labor goes into choosing their appearance, content, and interaction style (Gerlich, 2023). As these virtual entities gain popularity in digital media, academic study is growing more interested in how they affect marketing dynamics, especially regarding consumer relations. The emergence of virtual influencers demonstrates how entertainment and artificial intelligence have impacted cultural dynamics and consumer behavior in this digital age. Social media platforms are commonly used by virtual influencers, these digital personalities have the capacity to grow huge social media followings and achieve engagement rates up to 3.5 times higher than actual human influencers (Kim & Wang, 2023). According to some research findings, consumers prefer virtual influencers over real influencers, and factors including relevance, expertise, trust, and reliability have a significant impact on consumers' acceptance and preference. Furthermore, consumers trust their judgment and their knowledge, these elements also affect consumers' opinions, considerations, and likelihood to buy (Gerlich, 2023).

Additionally, the rise of virtual entities has spread beyond the influencer domain to encompass K-pop, a well-known entertainment industry. Notably, the emergence of virtual K-pop idols is proof of how technology is revolutionizing the music and entertainment industry. Using a wide range of AI-driven features, including machine learning, deepfakes, and motion capture, these virtual entities still require human input (Kwon & Watson, 2023). Virtual K-pop

idols diversify the entertainment industry by fusing cutting-edge technology with creative expression. As they become more well-known, a fresh wave of possibilities and innovative thinking is introduced. Examples of virtual K-pop idols include Eternity, MAVE:, PLAVE, K/DA, and SUPERKIND, which consists of a combination of real human idols and virtual K-pop idol. Similar to virtual influencers, in the virtual K-pop idols industry there is a wide range of styles in their designs.

Through the efforts of Metaverse Entertainment, a virtual K-pop girl group called MAVE: made their debut earlier in 2023. Computer-generated imagery (CGI) was used to create the four members of MAVE:. Using AI technology, Metaverse Entertainment created four final characters by combining the most attractive haircuts, features, and characteristics (Kwon & Watson, 2023). In addition to MAVE, the virtual K-pop girl group Eternity used real-time face-swapping technology and AI-generated voice, they use input from actors, singers, and dancers who provided their skills to the virtual idol's avatar. Then, utilizing motion capture and deepfake technologies, Pulse9 created the virtual group's first music video (Kwon & Watson, 2023). On the other side, unlike other virtual idols which relies on fully or partly AI-generated feature to produce the physical feature and the voice of the idols, virtual K-pop group PLAVE used the help of actual human input and voice. While utilizing game engines and motion capture technologies, PLAVE interacts with their fanbase and provides realistic representations of the movements of their human members in the form of virtual avatars (KTimes, 2024). The album *Asterum*, which PLAVE released as part of their debut, sold over 138,000 copies worldwide, according to South Korea's Circle Albums Chart. The next two year, they released *Asterum: The Shape of Things to Come* and *Asterum: 134-1* that sold more than 800,000 copies combined, made it to the list of top-selling Korean albums of the year among popular human idol groups. In the meantime, MAVE's debut album, "Pandora's Box," was published in January 2023. In the first week of its release, the music video has amassed over 13 million views on YouTube. The question of whether virtual K-pop idols have the potential to become a major cultural phenomenon in the future is being raised by their popularity. Future virtual K-pop idols could be shaped by technological advancements to the fullest extent of their potential. As technology develops, virtual celebrities will have more realistic interactions and lucrative opportunities (Marr, 2023). Therefore, this study aims to explore the matter further in the emerging field of virtual K-pop idols.

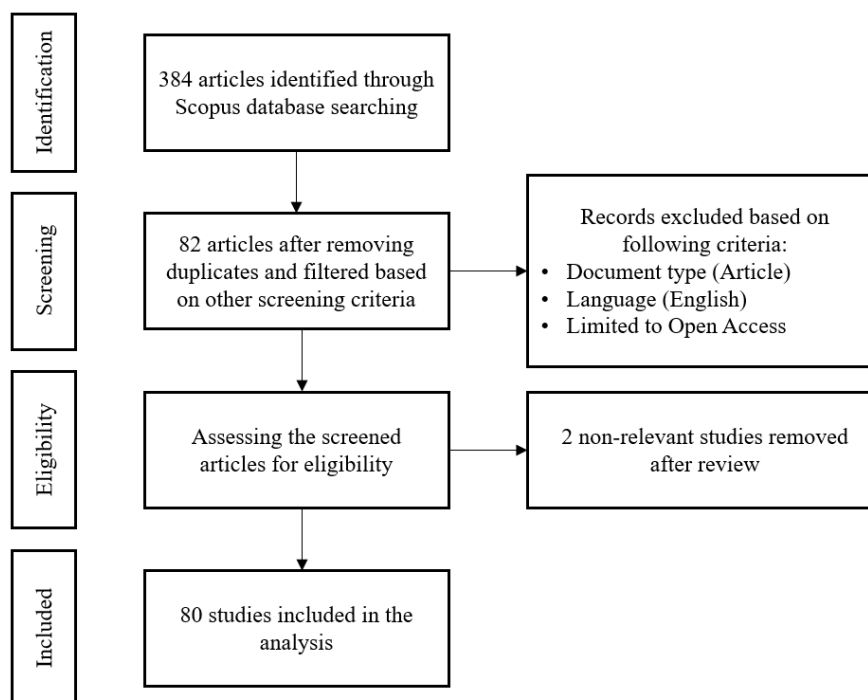
It is essential to examine at consumer attitudes in this emerging field since it might offer information that could help assess how promising the future of virtual K-pop idols is. However, academic studies on the virtual K-pop idol market are noticeably scarce, particularly those which examine the consumers attitude towards this new phenomenon. To the best of the author's knowledge, there is currently very little to no academic study on the relationship between virtual K-pop idols and consumer attitudes. In the meantime, a great deal of research has already been done on virtual influencers. Virtual influencers have been the subject of previous studies on a variety of factors and topics. It may be possible to enhance the body of knowledge regarding virtual K-pop idols by looking into the literature that has already been written about virtual influencers and virtual idols, by determining the aspects of consumer attitude that have been previously examined in this field.

By conducting a systematic literature review, this study aims to identify existing literature on virtual idols and virtual influencers using the Scopus database, conduct network analysis, identify research clusters, conduct a content analysis on selected literature, as well as identify potential areas for possible future research directions. There is only a limited number of previous studies that examine virtual entities through a systematic literature review (Pushparaj & Kushwaha, 2023) or bibliographic analysis (Bansal et al., 2024; Vila-López et al., 2025). Moreover, those studies primarily focus on virtual influencers and have yet to explore virtual K-pop idols, particularly in the context of consumer attitude. It is expected that this research's

findings will benefit numerous areas, primarily academia and research fields. This research is expected to enrich the literature on virtual K-pop idols, music, and entertainment industry, as well as consumer behavior in the industry. This study aims to provide useful insights regarding the consumer attitude of virtual K-pop idols, that is expected to provide new knowledge, perspectives, and understanding about virtual K-pop idols that can benefit all active scholars and researchers, as well as anyone interested in the music and entertainment industry.

## RESEARCH METHODS

The aim of this research is to explore and investigate various existing literatures that discussed virtual entities like virtual idols and virtual influencers. A systematic literature review is the approach used to achieve this paper's objective. This method is considered the most suitable for the study's objectives, as it enables the development of a well-rounded understanding of current knowledge in the field. Moreover, it facilitates the identification of critical research gaps and potential directions for future exploration, offering valuable insights for both scholars and industry practitioners (Mihalache & Mihalache, 2016; Mishra et al., 2021; Pushparaj & Kushwaha, 2023).



**Figure 1.** Articles Selection Process in the Systematic Literature Review

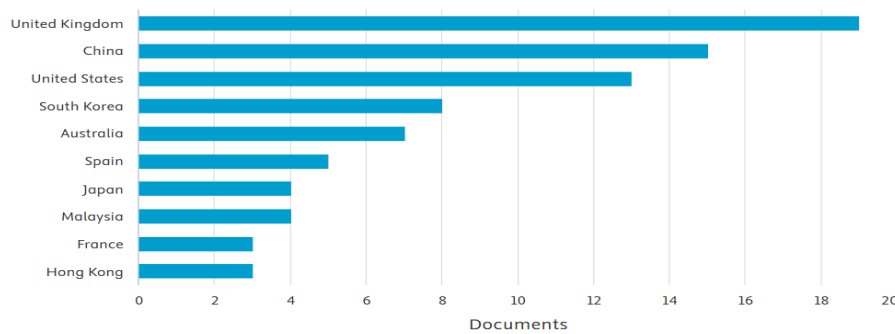
**Source:** The authors.

Using the PRISMA framework, this systematic literature review focuses on articles that are primarily relevant to these virtual entities in the marketing domain by searching from the Scopus database. The keywords used in the identification phase of the literature selection process are: virtual idol, virtual celebrity, and virtual influencer. Figure 1 presented the articles selection process. By using relevant keywords, in the first stage this research discovered and identified a total of 384 research publications from the Scopus database. Afterwards in the screening stage, the identified research publications were filtered down to 82 articles after removing duplicates and filtering them based on several criteria. In the subsequent phase, the research articles were once more chosen for eligibility after being evaluated for their relevance to the topic of this systematic literature review, two documents were eliminated. A total of 80 research articles were

included in the content analysis. This section also presented several descriptive statistics of the articles: publications by country in Figure 1, publications by year in Figure 2, and publications by subject area in Figure 3.

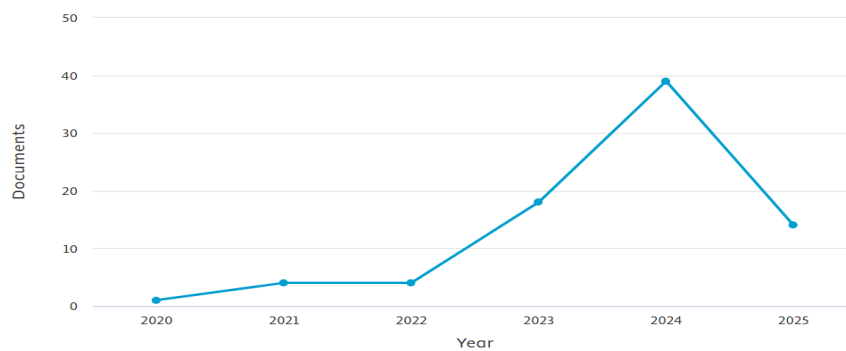
Documents by country or territory

Compare the document counts for up to 15 countries/territories.



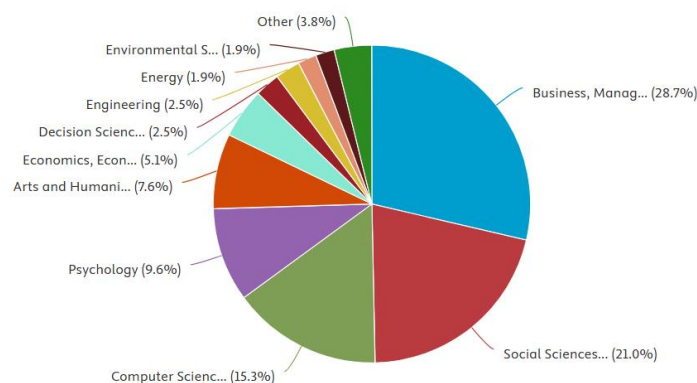
**Figure 2. Publications by Country**  
Source: Scopus database.

Documents by year



**Figure 3. Publications by Year**  
Source: Scopus database.

Documents by subject area



**Figure 4. Publications by Subject Area**  
Source: Scopus database.





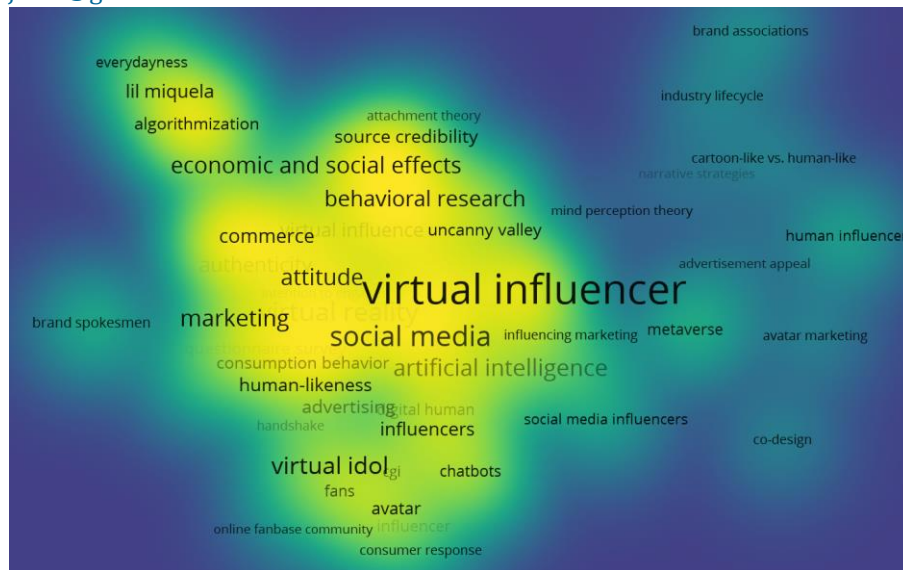


Figure 6. VOSviewer Density Visualization

Source: The authors.

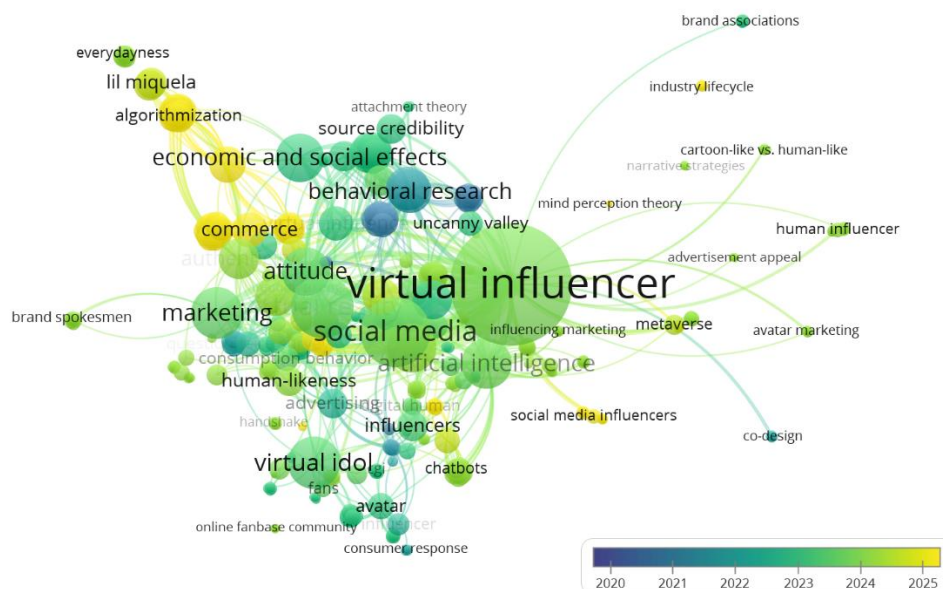


Figure 7. VOSviewer Overlay Visualization

Source: The authors.

More detailed in Figure 7, it shows the pattern in the network visualization based on the year of publication of the article, spanning 5 years (2020-2025) from the oldest collected article. Figure 7 also displays three-color indicators: blue, green, and yellow. From the most current to the oldest year of publication for the gathered articles, the hue denotes the time period. It varies from the most yellow to the bluest. Yellow research regions or clusters show that the field has been heavily studied recently, whereas bluer research areas or clusters show that the field is older or has been studied for several years back.

Furthermore, summary of the content analysis regarding the investigated scope and factors in existing literatures can be seen in Table 1 and Figure 8. Based on Table 1, it can be seen that the existing literature is more concentrated on virtual influencers, while the topic of virtual idols has only begun to be widely investigated in 2023 until now. The most widely discussed variables and aspects regarding virtual influencers include consumer behavioral intention with 13 articles, consumer engagement with 11 articles, consumer attitudes with 9 articles, as well as 11 articles comparing virtual influencers to human influencers. In addition, other articles discuss variables or aspects such as consumer brand-related behavior, consumer

preferences, identity performance, consumer perception, influencer marketing, authenticity, immateriality and digital consumption, as well as a number of papers discussing the conceptual definition and categorization of virtual influencers, papers comparing different types of virtual influencers, papers investigating privacy, ethical, and social implications, and papers investigating virtual influencers with bibliometric analysis and systematic literature review. Meanwhile, for the literature on virtual idols, the most research is in terms of consumer engagement in fanbase communities, with other variables and aspects such as key dimensions and archetypes of virtual idols, consumer trust, attitude, consumer behavioral intention, consumer participation, consumer experience and perspective.

**Table 1.** Existing Literature on Virtual Idol and Virtual Influencer

Main Topic	Variables or Aspects Investigated in the Existing Literature	
Virtual Idol	Consumer Engagement, Fanbase Community	(Chen & Skey, 2024; Kim & Lee, 2024; Li & Pang, 2024; Onishi et al., 2024; Song et al., 2024)
	Key Dimensions and Archetypes	(Tan & Greene, 2025)
	Consumer Trust and Attitude	(Li et al., 2024)
	Consumer Behavioral Intention	(Huang et al., 2022)
	Consumer Participation	(Liu, 2023; Wang et al., 2023)
	Consumer Experience and Perspective	(Lee & Lee, 2023)
	Conceptual Boundary, Benefits and Risks	(Yu et al., 2023)
Virtual Influencer	Consumer Attitudes	(Davlembayeva et al., 2025; Gerlich, 2023; Kuo & Le, 2025; Masri et al., 2023; Mo & Zhou, 2024; Omeish et al., 2024; Ozdemir et al., 2023; Pérez-Sánchez et al., 2024; Um, 2023)
	Consumer Engagement	(Chung et al., 2024; Gerrath et al., 2024; Jayasingh et al., 2025; Ju et al., 2024; Sorosrungruang et al., 2024; Suprawan & Pojanavatee, 2022; Wasti et al., 2024; Xie-Carson et al., 2023; Xie-Carson et al., 2024; Yu et al., 2024; Zelenskaya & Rundle-Thiele, 2022)
	Consumer Behavioral Intention	(Almasri, 2023; Chiu & Ho, 2023; Chung et al., 2024; El Hedhli et al., 2023; Ferraro et al., 2024; Igarashi et al., 2024; Jayasingh et al., 2025; Jin & Viswanathan, 2025; Masri et al., 2023; Pan et al., 2024; Quach et al., 2024; Rungruangjit et al., 2024; Zourrig et al., 2025)
	Virtual Influencers vs Human Influencers	(Ameen et al., 2024; Belanche et al., 2024; Choi et al., 2024; Igarashi et al., 2024; Lee et al., 2025; Looi & Kahlor, 2024; Mrad et al., 2025; Ozdemir et al., 2023; Sakuma et al., 2023; Willemsen et al., 2025; Yan et al., 2024)
	Different Types of Virtual Influencer Comparison	(Arsenyan & Mirowska, 2021; Franke & Groeppel-Klein, 2024; Gambetti & Kozinets, 2024; Kim et al., 2023; Wan et al., 2024; Xie-Carson et al., 2023; Yan et al., 2024)
	Consumers Perception	(Gerlich, 2024; Luo & Kim, 2024; Nasr et al., 2025; Pérez-Sánchez et al., 2024; Wasti et al., 2024)
	Privacy, Ethical, Social Implications	(Ekinci et al., 2025; Liyanaarachchi et al., 2024; Natale & Depounti, 2024; Robinson, 2020)

Bibliometric Analysis, Systematic Literature Review	(Bansal et al., 2024; Pushparaj & Kushwaha, 2023; Vila-López et al., 2025)
Brands and Consumer Preferences	(Gulan et al., 2025; Shen, 2024; Zeng et al., 2024)
Communicative and Commercial Aspects	(Rodrigo-Martín et al., 2022; Rodrigo-Martín et al., 2021)
Influencer Marketing	(Landgrebe, 2024; Sookkaew & Saephoo, 2021)
Identity Performance	(Elyamany et al., 2025)
Authenticity	(Koles et al., 2024)
Immateriality and Digital Consumption	(Miyake, 2023)
Conceptual Definition and Categorization	(Ahn & Kim, 2023; da Silva Oliveira & Chimenti, 2021)

Source: The authors.

### Identifying the Factors Related to the Consumer Attitude towards Virtual Idol

To identify factors that have previously been studied with consumer attitude, this study conducted a content analysis on all selected articles that investigated attitudes towards virtual idols and virtual influencers. A summary of the identified factors is presented in Figure 8. When investigating factors related to attitude, this study also found that the purchase intention variable was discussed quite a lot together with consumer attitude. After conducting the content analysis, this study compiles the previous investigations into a framework that can later be used to help determine the direction of research on virtual K-pop idols in the future.

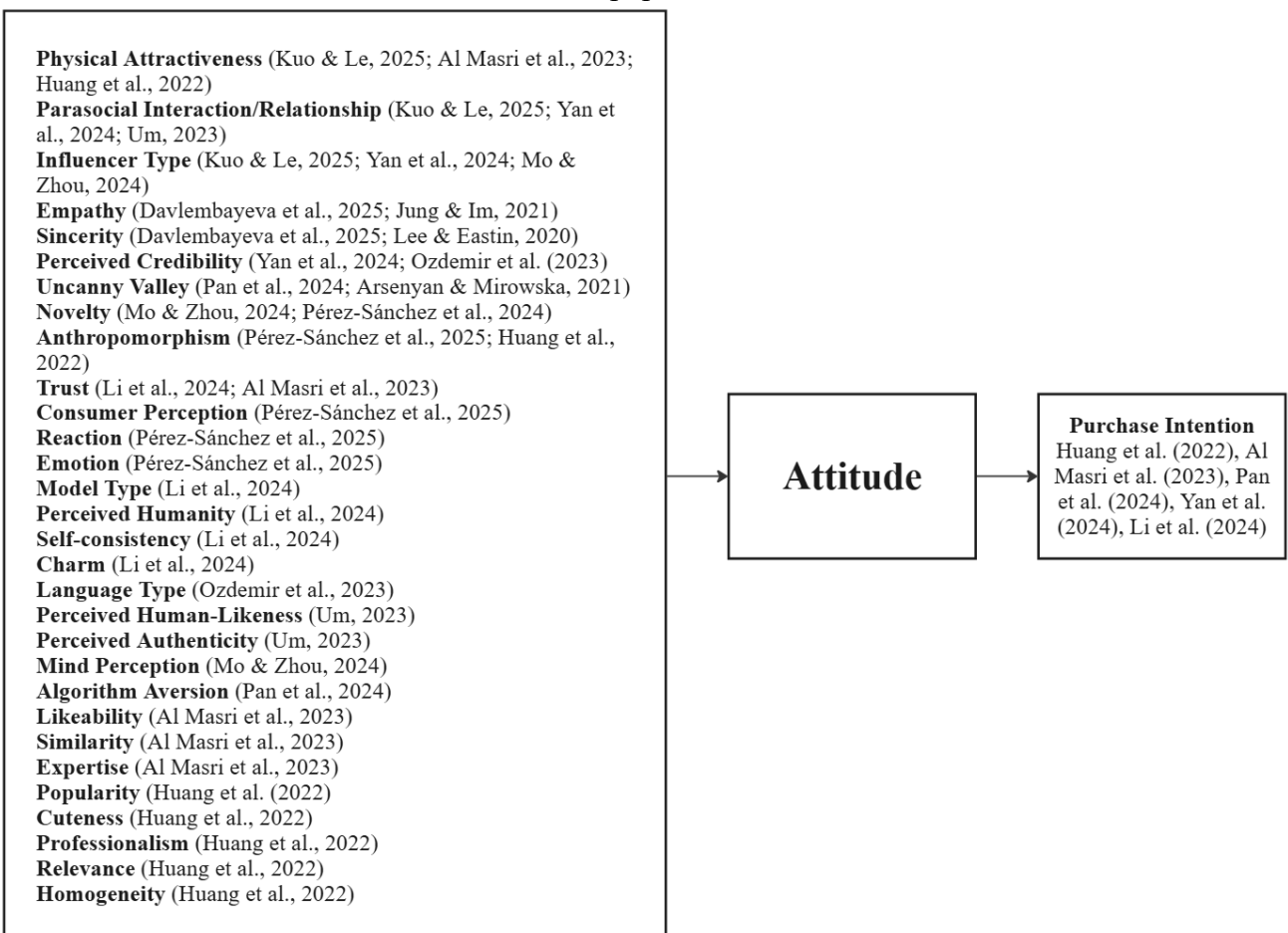


Figure 8. Factors and Variables Influencing and Influenced by Attitude

Source: The authors.



### Identifying Future Research Directions for Virtual K-pop Idol

From the results of content analysis carried out in this section, several suggestions for future research directions can be identified to fill the scarcity of literature regarding virtual K-pop idol. First, based on the content analysis summarized in Table 1, it is known that there is still not much existing literature investigating consumer attitudes in the virtual idol domain, especially about virtual K-pop idols, while the virtual influencer domain has studied this a lot. Furthermore, in line with the aim of this research, in this section, the first suggestion for future research directions would be to explore and investigate regarding the factors that could shape the consumer attitudes towards virtual K-pop idols. The summarized content analysis in Figure 8 can be used as a reference in formulating a framework for possible future research. This research suggests several variables from Figure 8 that can be explored further and be applied to future research virtual K-pop idols, these variables include: physical attractiveness (Huang et al., 2022; Kuo & Le, 2025; Masri et al., 2023) of virtual K-pop idols, and other similar variables such as cuteness (Huang et al., 2022), and charm (Li et al., 2024); parasocial (Kuo & Le, 2025; Um, 2023; Yan et al., 2024), and other variables such as emotion (Pérez-Sánchez et al., 2024), empathy (Davlembayeva et al., 2025; Jung & Im, 2021), sincerity (Davlembayeva et al., 2025; Lee & Eastin, 2020), and likeability (Masri et al., 2023); then the factors related to the uncanny valley (Arsenyan & Mirowska, 2021; Pan et al., 2024) which are commonly studied in non-human entities; as well as anthropomorphism (Huang et al., 2022; Pérez-Sánchez et al., 2024), perceived humanity (Li et al., 2024) and perceived human-likeness (Um, 2023); future research could also explore novelty (Mo & Zhou, 2024; Pérez-Sánchez et al., 2024) based on the notion that the phenomenon of virtual entities is something that is quite new with the latest technological advancements; and other variables such as perceived credibility (Ozdemir et al., 2023; X. Yan et al., 2024), perceived authenticity (Um, 2023), self-consistency (Li et al., 2024), expertise (Masri et al., 2023), and professionalism (Huang et al., 2022).

In addition to the variables identified in Figure 8, based on the summary of Table 1, there are several variables that have not been sufficiently studied in the virtual idol domain; therefore, this study provides suggestions for future research in virtual K-pop idols to examine consumer attitudes and their relationship to variables such as behavioral intentions, consumer engagement, and consumer experience. Additionally, based on earlier criteria like consumer attitudes and behavioral intentions, future study can compare various groups of virtual K-pop idols or other sorts of virtual K-pop idols, such as human-like and cartoon-like idols. Existing research comparing between virtual influencers and human influencers has been widely conducted, future research can fill this gap by comparing virtual K-pop idols and human K-pop idols, which can be seen from the contents of the fanbase community, the relationship between idols and the fans, which then narrows back to consumer attitudes. Future research can also investigate from the privacy implications side, related to the identity or other private matters related to the people and crew behind the virtual K-pop idols, and also from the ethical and social implications side, as presented in the summary in Table 1. Another suggestion is to conduct research related to virtual K-pop idols which describes the conceptual definition and categorization of these virtual entities, which can help contribute to the literature on the segmentation of virtual K-pop idols themselves.

### CONCLUSION

Based on a total of 80 research articles selected in this study, all keywords have been processed using VOSviewer and obtained results in the form of network visualization, density visualization, and overlay visualization, which help in analyzing what has been investigated in the current literature. Then for a more in-depth summary, this study has conducted a content analysis in which it was found that there are a number of main variables or aspects discussed

which are divided into two topics, virtual idols and virtual influencers. In addition, this study also identified a number of factors related to consumer attitudes based on all research articles collected, which are expected to be a reference in determining research topics related to consumer attitudes towards virtual K-pop idols. Furthermore, based on content analysis summarized in Table 1 and Figure 8, future research directions have been identified. The future research directions identified in this study originate from the gaps found between existing literatures on virtual idol and virtual influencer. The suggestions offered in this study include several possible future research regarding consumer attitudes and the factors influencing it, as well as factors like consumer experience, consumer engagement, and behavioral intention. This research also suggests other research directions like comparison between virtual K-pop idols, or virtual K-pop idols and human idols, as well as others regarding implications in privacy and ethics, and how to segment these virtual idols.

There are several limitations on this systematic literature review research paper. First, only Open Access papers are included in the current literature and chosen for discussion in this study. Additionally, all of the sources used for the articles chosen for this research paper come from the Scopus database. By extending the collection of research articles beyond Scopus and utilizing additional sources like Web of Science and Google Scholar, future studies may be able to examine this theme in greater detail.

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