How Social Presence Influences Consumer Well-Being in Live Video Commerce: The Mediating Role of Shopping Enjoyment and the Moderating Role of Familiarity

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Abstract: In recent years, with the rapid development of live-streaming commerce, the social dynamics and psychological impact of such online activities merit further discussion. In this study, we investigate the sensory experiences of viewers watching live streaming and examine how these online experiences influence consumer well-being. We developed a conceptual model to understand this mechanism based on the relationship between social presence, shopping enjoyment, familiarity, and consumer well-being. The results of 410 samples indicate that (1) social presence in live-streaming commerce has a significant positive effect on consumer well-being; (2) shopping enjoyment plays a mediating role in the process of social presence predicting consumer well-being; and (3) familiarity plays a moderating role in the second half of the indirect effect of social presence on well-being. This study examines the relationship between social presence and consumer well-being in the context of live-streaming marketing, expanding the research scenario of consumer well-being and clarifying the psychological mechanisms and boundary conditions of the effect of social presence on consumers well-being, which has important implications for online interactive marketing enterprises to enhance social presence and promote consumers long-term well-being.

Keywords: social presence; shopping enjoyment; familiarity; well-being; live marketing

1. Introduction

Human beings have never stopped thinking about and searching for well-being. Since the 1970s, some scholars have proposed that consumption is a sub-field of people’s lives and that the feelings it engenders are the main components of people’s subjective well-being [1]. In the field of consumption, there is an increasing focus on the research and use of consumer satisfaction. Consumer well-being is the satisfaction of people in the field of consumer life. Satisfaction in the field of consumer life originates from satisfaction with specific events and experiences in consumer life [2,3]. Along with the rapid development of mobile Internet technology, which marks a shift from offline to online consumer life, the daily activities of consumers are becoming more and more dependent on interactive devices and social media services [4,5]. In recent years, Internet celebrity video marketing, represented by short online video platforms such as TikTok, Kwai, and Weibo, has emerged as a new commercial form. It mainly centers on brand promotion and product sales through the medium of Internet celebrity influence and fan interaction [6]. The core of this marketing method is to construct the shopping emotion and familiar perception between Internet celebrities and fans in the virtual network environment, create a harmonious interpersonal network community, and ultimately improve the satisfaction- and consumption-based well-being of fans. With the rapid development of computers, “face-to-face” interaction is gradually being replaced by human–computer interaction (HCl). From virtual reality technology, chatbots, voice-activated content, interactive short videos, and real-time streaming media to mobile...
messaging applications, interactivity has become an indispensable part of contemporary marketing practices. In live marketing, merchants present products to consumers by combining sound and real-time videos, providing an interactive, attractive, and user-centered synchronous environment [7]. Unlike traditional online retail, live streaming has realized the transformation from “text + picture” marketing mode to video interactive marketing, and the highly visual interface has increased consumers’ sense of social presence [8]. Gefen and Straub (2003) first introduced the theory of social presence into the field of marketing to explore the influence of social presence on e-commerce websites on consumers’ trust and purchase intention [9]. He elaborated social presence as the degree to which consumers can perceive rich information by combining media attributes and social task characteristics. Social presence can shorten the psychological distance between consumers and merchants, thus improving consumers’ trust in products and streaming media [10].

With the development of online shopping, the importance of social presence as a newly introduced variable in the field of marketing has received increasing attention from researchers. Previous researchers have verified the influence of social presence on consumer shopping experience, purchase intention, and trust [11,12]. However, existing studies are mainly focused on consumers’ cognitive responses, ignoring the influence of social presence on consumers’ emotional state (e.g., shopping enjoyment) in the field of marketing during the shopping process. The social facilitation theory in the field of social psychology shows that the presence of others can arouse the emotions of individuals and then affect their consumption attitude and behavior by changing their physiological emotional state [13,14]. In a study of the interaction with brand avatars, Foster et al. (2022) found that the addition of social elements can increase consumers’ satisfaction and entertainment value [15]. In addition, that familiarity leads to satisfaction is one of the most widely replicated phenomena in psychological science [16]. Although the moderating effect of familiarity has not been examined in the social presence literature, some scattered evidence in the literature suggests that familiarity may moderate the effect of social presence on consumer satisfaction. Söderlund (2002) showed that the more interaction with customers, the more familiar customers tend to express higher levels of satisfaction and behavioral intention compared with unfamiliar customers [17]. As a result, consumers’ familiarity with products affects their emotional response [18]. According to the hedonic adaptation model, although pleasant experiences can bring improvements in well-being, this feeling will gradually disappear the longer a customer spends with, and the more familiar they become with, the product [19]. Because all previous studies were implemented in offline shopping scenarios, in our study, we attempted to study the moderating effect of familiarity in the context of online live marketing. In addition, social presence as a theory has been widely accepted, but as a variable, the study of its antecedents and backward effects needs to be further enriched and expanded. Especially from the perspective of presence, it is not clear how the presentation mode of online celebrities’ live video affects consumer psychology and well-being. Therefore, exploring the possible internal relationship between the social presence of online celebrities’ live video and consumer well-being, as well as its effects and mechanisms, is not only the need of e-commerce practice but also an extension of the theory of social presence. With the development of e-commerce, the role of social factors will be continuously enlarged. In the future, social presence may be used to explain the “black box” linking the characteristics of the live-streaming environment and consumer behavior intentions.

This study makes several main contributions to the literature on live-streaming e-commerce. For a long time, people have focused on the well-being of real space consumption. The research on well-being brought by the experience of consumption of cyberspace and the realization of well-being is still scattered and lacking in the field of consumption. This study, through the interpretation of consumer social presence in webcasts, provides theoretical support for grasping consumer well-being in cyberspace. First, we examine the relationship between social presence and consumer well-being in the context of live-streaming media. Second, we study the mediating effect of shopping enjoyment on the
relationship between social presence and consumer well-being and the moderating effect of familiarity. Finally, it has certain practical reference significance for the development and improvements in live-streaming commerce. The organizational structure of this paper is as follows: First, we review the previous studies and proposed hypotheses. Next, we describe the research methodology and results. Finally, the research results are discussed, and the theoretical and practical implications, limitations, and future research directions are proposed.

2. Related Literature and Hypotheses
2.1. Social Presence and Consumer Well-Being

Social Presence Theory (SPT) originated from the concepts of “intimacy” and “immediacy” in psychology [20,21]. Short et al. (1976) defined social presence as “the significance of others in interaction and the consequent significance of interpersonal relationships” [22]. Lee (2004) posits that social presence reflects a psychological state in which communication and dialogue experiences with other virtual social actors are experienced as real existence [23]. Under the influence of Short’s research, Cyr and Head (2007) defined social presence as the user’s perception of the website, that is, personal, social, enthusiastic, and sensitive [24]. Their research shows that improvements in social presence will promote online consumers to have a positive attitude toward shopping websites. Hassanein and Head (2005) posit that social presence is the degree of warmth and social competence that consumers perceive when participating in online shopping interactions [25]. In the past decade, academic research on social presence has been deepening, gradually expanding from the traditional field to fields such as distance education, HCI, and marketing [26]. With the emergence and rise of interactive social media, the traditional marketing mode has changed from one-way communication to interactive (i.e., two-way) communication. Live broadcast, as a type of social media with high real-time and high interactivity, combines the broadcast of activities with the real-time communication of cross-mode video media, providing consumers with an interactive, attractive, user-centered synchronous environment and realizing real-time interaction between consumers and streaming media (electronic suppliers) as well as between consumers [27,28]. In the online shopping scenario, consumers will be stimulated by social environment cues such as text, emoticons, sounds, and videos in the process of interacting with salespeople, other consumers, and website systems, and they will feel warm, forming a social sensation similar to “being with others” in real life.

Although people may have different understandings of well-being, the definition of well-being is the emotional reflection and cognitive evaluation of people’s own life state, which is a subjective feeling [29]. With the development of positive psychology, well-being, as an important psychological indicator to measure the quality of life, has attracted more and more researchers’ attention. In recent years, the marketing field has paid more and more attention to the impact of marketing activities on consumer well-being and mental health. Researchers mainly used the concept of subjective well-being and life satisfaction theory to define consumer well-being [30]. Subjective well-being is a cognitive evaluation of people’s life satisfaction and a subjective feeling. After introducing this concept into the consumption field, consumer happiness points to the subjective evaluation and emotional reflection of individual consumption activities [31]. Desmeules (2002) defined consumer well-being as an overall satisfaction evaluation and positive/negative emotional reaction of consumers to their consumption activities [32]. The theory of life satisfaction holds that specific activities in the life field can affect life satisfaction in this field from bottom to top [33]. According to this theory, consumer well-being can be defined as consumer satisfaction with specific events and experiences in a consumer’s life [34]. At present, most researchers use this definition to study consumer well-being [35,36]. Therefore, based on the above scholars’ definition, this paper defines consumer well-being as the overall satisfaction evaluation of consumers’ consumption activities.
With the development of information and communication technology and the popularity of mobile devices, consumer shopping scenes have gradually shifted from offline to online. The existing research shows that the use of social media in e-commerce has a profound impact on consumers’ perceptions of satisfaction and well-being. Jarvenpaa and Todd (1996) found that consumers with a higher social presence will enjoy their shopping experience more and have higher satisfaction [37]. Marsden (2010) posited that social e-commerce uses social media technology to promote interaction between users and businesses, so as to improve the user’s shopping experience [38]. In recent years, virtual anchors driven by artificial intelligence have been widely used in the field of e-commerce live streaming, and the interaction level of artificial intelligence will affect the customer experience of consumers [39,40]. Fang et al. (2018) found that users’ experience and satisfaction with products would be affected by the presence generated by artificial intelligence products [41]. They proposed that artificial intelligence bots bring a sense of contact with others to alleviate the loneliness of the participants, thus further improving customer presence and satisfaction with the products. In the context of network streaming platforms, live-streaming marketing provides consumers with interactive space to contact others, which provides consumers with a warm experience and makes them feel that they are accompanied by others, and increases social contact [42]. Well-being is broadly related to social connection; the lack of social connection is the main risk factor for unhappiness [43]. The influence of social presence on well-being in a live-streaming environment has been studied by researchers. Zhou et al. (2020) found in their research that social presence in the live-streaming environment can make people feel accompanied by others and improve the subjective well-being of the audience [44]. Wang et al. (2022) posited that the essence of live-streaming e-commerce is social commerce [45]. Consumers share product information and interact emotionally in the virtual space provided by live streaming to meet their purchase needs and emotional needs [46]. In the study of social media, Pittmann and Reich (2016) found that the sense of connection brought by social presence would have an impact on users’ well-being [47]. Erfani (2017) also found in his research on the social networking site Facebook that social presence can positively affect users’ well-being [48]. Nangpiire et al. (2022) argued that a positive interaction or participation experience will itself create value for consumers, promote the accumulation of consumers’ personal resources, and increase consumers’ well-being [49]. It can be seen that in the process of online shopping, improvements in social presence not only help meet the needs of consumers for social contact but can also promote the accumulation of a positive psychological state and psychological resources, which has a positive impact on consumers’ well-being [50]. Thus, we propose the following hypothesis:

H1. Social presence will positively influence consumer well-being.

2.2. The Mediating Role of Shopping Enjoyment

Enjoyment refers to the degree of positive emotions that users feel when interacting with digital systems [51]. In the context of online live shopping, we regard enjoyment as shopping enjoyment, that is, the degree of positive emotion consumers feel when interacting with live-streaming media technology. Social interaction is an important factor in a happy consumer experience [52,53]. In the live-streaming scenario, consumers who feel real social interaction will experience more enjoyment. Contact with others can satisfy consumers’ social needs [54], and the perceived presence of others can provide information and moral support, reduce perceived risks, and enhance consumers’ confidence in making informed purchase decisions. In addition, the shopping scene in which the presence of others is felt increases hedonic value and has a positive impact on positive emotions and brand attitudes of consumers [55,56]. At the same time, when someone is present, it will have a positive impact on the shopping atmosphere. In this atmosphere, consumers will give priority to the sociability and entertainment value of the shopping environment [57]. The research of Achterhof et al. (2022) shows that when people feel that interpersonal
communication is real, they will feel happier [58]. Animesh et al. (2011) found that the increase in psychological closeness or closeness caused by social presence will lead to the generation of internal enjoyment in virtual environments [59]. Live-streaming media, as a special form of e-commerce with highly personalized and interactive social relations, can promote the interaction between consumers and merchants or other consumers through social media technology, promote consumers to have a sense of social presence, and finally improve the emotional arousal and pleasure level of consumers [60–62]. Baños et al. (2008) stated that users who feel a higher sense of presence feel more positive emotions [63]. Parsons and Rizzo (2008) proposed that presence is a prerequisite for emotional reaction in virtual environments [64]. At present, no researchers have directly explored the relationship between social presence and shopping enjoyment in online live-streaming media. However, in a retail environment using virtual reality technology, Kim et al. (2021) found that the presence consumers experience in the virtual shopping environment will affect their perceived enjoyment [65]. In the live-streaming marketing environment, researchers usually pay more attention to the effect of the feeling of social interaction with others on consumers’ psychological experience and behavior [66]. In a study on the use of social software, Sujeong (2016) found that the stronger the social presence felt in the interaction between individuals and others, the more enjoyment they gain in the use process [67]. Thus, we propose the following hypothesis:

H2. Social presence will positively influence shopping enjoyment.

Research has shown that engaging in and enjoying daily activities is one way to achieve high levels of well-being in daily life [68]. Online consumption is one of people’s daily activities. Participating in online consumption and enjoying the positive emotional experience brought by this activity has a positive impact on consumers’ well-being. Moreover, the positive emotions consumers feel during shopping help build lasting psychological resources, such as social connections, opportunities, and knowledge, which lead to well-being [69–71]. Positive emotional states also contribute to the quality of interpersonal relationships and may result in greater access to social support and/or more effective mobilization of social support to promote social bonding [72], leading to well-being [73]. Researchers on shopping enjoyment and consumer well-being have focused on offline shopping. Morrison et al. (2011) found in a study on consumer loyalty in offline brick-and-mortar stores that improving consumers’ excitement and pleasure can affect their shopping behavior and satisfaction with the shopping experience [74]. The emergence of live-streaming media provides consumers with an interactive and synchronous environment, which enables consumers to feel the same “face-to-face” feeling online as in offline physical stores. Thus, we propose the following hypothesis:

H3. Shopping enjoyment will positively influence consumer well-being.

Previous studies have shown that interaction in marketing environments can increase consumer satisfaction [75], and such interaction can satisfy the connection characteristics of social needs. In turn, consumers will have more positive feelings about the shopping process, thus making them satisfied with the shopping experience [76]. In addition, existing studies have demonstrated the mediating effect of enjoyment. Willems et al. (2019) proposed in a study on tourism marketing that enjoyment mediates the relationship between presence and consumer behavioral intention [77]. Thus, we propose the following hypothesis:

H4. Shopping enjoyment mediates the relationship between social presence and consumer well-being.

2.3. The Moderating Effect of Familiarity

The mediating effect of shopping enjoyment can explain how social presence affects consumer well-being, but its boundary conditions are unclear. The degree of well-being
produced by consumers experiencing social presence is different, which means that there are moderating factors between social presence and consumer well-being. Research has shown that consumer well-being is influenced by familiarity. Brand familiarity, as an important variable affecting consumers’ consumption processes [78–80], includes consumers’ understanding of the relevant information about the brand and the relevant association with the brand. According to Alba and Hutchinson (1987), familiarity is the amount of product- and/or service-related experience accumulated by consumers, which may increase their expertise and then affect their attitude toward the brand [81,82]. Familiarity can also regulate the relationship between additional service performance and consumer satisfaction, repurchase intention, and word-of-mouth intention. Live streaming creates an interactive environment for consumers, in which information about products owned by users can be activated, thereby increasing the chances of consumer satisfaction [83]. Therefore, the higher the consumer’s familiarity with the product, the richer and more reliable the experience information that can be activated, and the higher the consumer’s satisfaction may be. Previous researchers have found that social presence is defined as the salience of interpersonal interaction in mediating dialogue. Therefore, when consumers feel more interaction in the service scene compared with unfamiliar consumers, consumers with high familiarity tend to express higher satisfaction and behavioral intention. When there is less such interaction, consumers with high familiarity express less satisfaction and behavioral intentions than consumers with low familiarity. Thus, we propose the following hypothesis:

H5. Familiarity moderates the relationship between social presence and consumer well-being; this relationship is more positive when familiarity is high rather than low.

Familiarity not only positively moderates the association between social interaction (interaction with people) and consumer well-being, but it also has a negative moderating effect on consumer well-being in terms of environmental experience and atmosphere [84]. According to the hedonic adaptation model, although a pleasant experience can bring improvements in well-being, this feeling will gradually disappear with the increase in the number of times that consumers experience products or the increase in familiarity with the product. Therefore, the experience of positive emotions in consumption will be regulated by familiarity, which will further reduce consumer satisfaction and well-being [85]. Previous studies have shown that familiarity will produce a more refined cognitive structure for consumers, which may affect the emotional response of consumers [86]. Emotion is a key factor in defining the consumer experience and consumer response. To be specific, emotion is a key factor in forming customer satisfaction [87,88]. Customer satisfaction is a response to a good evaluation of the consumption experience [89]. However, in this process, familiarity will create a more refined cognitive structure for consumers [90], and their knowledge and professional skills concerning the brand will also increase. Thus, consumers will be more analytical or critical of products and services, and the novel experience brought by the unique interactive environment/picture will be greatly reduced, which will affect the emotional response of consumers and further reduce the experience of satisfaction and consumer well-being. Thus, we propose the following hypothesis:

H6. Familiarity moderates the relationship between shopping enjoyment and consumer well-being; this relationship is more positive when familiarity is low rather than high.

In summary, in this study, we hypothesize a moderated mediating model with shopping enjoyment as the mediating variable and familiarity as the moderating variable (Figure 1). We systematically discuss the role of familiarity and shopping enjoyment in the process of social presence affecting consumer well-being and provide empirical data. Specifically, we test whether shopping enjoyment plays a mediating role in the relationship between consumers’ social presence and well-being in the context of webcasting.
and whether familiarity moderates the mediating process of social presence affecting consumer well-being.

![Diagram](image)

**Figure 1.** The conceptual model and hypothesized relationships.

### 3. Methods

#### 3.1. Samples and Data Collection

The respondents of this study are mainly from Jiangxi Province, and the participants are those who have experience watching Li Ziqi’s videos. A total of 410 questionnaires were collected to test the hypotheses in this study through the Chinese online survey platform QuestionnaireStar (https://www.wjx.cn). In this sample, males and females accounted for 41.7% and 58.3%, respectively. From the perspective of education level, the participants mainly had bachelor degrees (74.6%). In terms of occupation, students (68%) were the majority (Table 1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Classification</th>
<th>Number</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>171</td>
<td>41.7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>239</td>
<td>58.3</td>
</tr>
<tr>
<td>Age</td>
<td>Before 1980</td>
<td>27</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>1980–1989</td>
<td>26</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>1990–1999</td>
<td>214</td>
<td>52.2</td>
</tr>
<tr>
<td></td>
<td>After 2000</td>
<td>143</td>
<td>34.9</td>
</tr>
<tr>
<td></td>
<td>High school or less</td>
<td>19</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Junior college</td>
<td>20</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>306</td>
<td>74.6</td>
</tr>
<tr>
<td></td>
<td>Graduate or above</td>
<td>65</td>
<td>15.9</td>
</tr>
<tr>
<td></td>
<td>Public service unit</td>
<td>13</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>Self-employed person</td>
<td>22</td>
<td>5.4</td>
</tr>
<tr>
<td>Vocation</td>
<td>Farmer</td>
<td>6</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td>279</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>90</td>
<td>21.9</td>
</tr>
</tbody>
</table>

#### 3.2. Measurements

Li Ziqi, a well-known food blogger with nearly 50 million fans and 220 million likes, has become a representative of online celebrity video marketing, with annual sales of CNY 3 billion for the products she endorses. Therefore, Li Ziqi was used as the material for the questionnaire survey. All items were based on existing research and slightly modified in conjunction with this study. All items were measured on a five-point Likert scale, ranging from (1) “strongly disagree” to (5) “strongly agree” (see Table 2). The content and style of these projects have been adapted to suit live-streaming commerce. We also asked questions about demographics, such as gender, age, and education level. Based on the background of this study, the social presence questionnaire was adapted from that of Parker et al. (1976), consisting of four items: “On Li Ziqi’s video site, the interactions with other users and fans were personal”, “On Li Ziqi’s video site, the interactions with other users and fans were warm”, “On Li Ziqi’s video site, the interactions with other users and fans were very close”, and “On Li Ziqi’s video site, the interactions with other users and fans were humanized” [91]. Based on the study of Diener et al. (2009), three items were used to
measure well-being: “Overall, I am a happy person”, “In general, I am very satisfied with my life”, and “I feel good about myself and my life is good” [92]. The shopping enjoyment scale compiled by Koufaris (2002) was used to measure the shopping enjoyment in live-streaming media: “I found my visit interesting”, “I found my visit enjoyable”, “I found my visit exciting”, and “I found my visit fun” [93]. Drawing on three previous studies on familiarity, three items were used to measure familiarity: “I often see the introduction of Li ZiQi on TV, Internet, or in books, newspapers, and magazines”, “I often watch video programs of Li ZiQi”, and “I am very aware of the video reports related to Li ZiQi” [94–96].

Table 2. Measurement items, reliability, and validity assessment.

<table>
<thead>
<tr>
<th>Factor and Indicators</th>
<th>Factor Loading</th>
<th>α</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social presence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Li ZiQi’s video website, the interactions with other users and fans were personal</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Li ZiQi’s video site, the interactions with other users and fans were warm</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Li ZiQi’s video site, the interactions with other users and fans were very close</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Li ZiQi’s video site, the interactions with other users and fans were humanized</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping enjoyment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found my visit interesting</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found my visit enjoyable</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found my visit exciting</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found my visit fun</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I often see the introduction of Li ZiQi on TV, Internet, or in books, newspapers, and magazines</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I often watch video programs of Li ZiQi</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very aware of the video report on Li ZiQi</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-being</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On the whole, I am a happy person</td>
<td>0.85</td>
<td>0.92</td>
<td>0.92</td>
<td>0.80</td>
</tr>
<tr>
<td>I am generally very satisfied with my life</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel good about myself and my life</td>
<td>0.90</td>
<td></td>
<td></td>
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</tbody>
</table>

4. Analysis Results

4.1. Measurement Model

To examine the measurement model in this study, we used confirmatory factor analysis. Specifically, we looked at the factor loading of each item, internal consistency, composite reliability (CR), convergent validity, and discriminant validity. Table 2 shows that all items’ factor loadings are higher than the threshold value of 0.70. Internal consistency was assessed by Cronbach’s alpha values, all of which exceeded 0.80. CR was used to assess the CR of each structure, with a minimum threshold level of 0.87. In addition, convergent validity was assessed by calculating the average variance extracted (AVE), with all values above 0.70. Discriminant validity was assessed by the AVE arithmetic square root greater than the internal correlation coefficient between components [97]. In this study, all pairwise correlations shown on the diagonal of the correlation matrix in Table 3 are smaller than the square root of AVE.

Table 3. Descriptive statistics and correlations.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. social presence</td>
<td>3.2</td>
<td>0.948</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. shopping enjoyment</td>
<td>3.6</td>
<td>1.02</td>
<td>0.666 **</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. familiarity</td>
<td>3.089</td>
<td>1.09</td>
<td>0.597 **</td>
<td>0.52 **</td>
<td>1</td>
<td></td>
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<tr>
<td>4. well-being</td>
<td>3.79</td>
<td>0.859</td>
<td>0.41 **</td>
<td>0.499 **</td>
<td>0.275 **</td>
<td>1</td>
</tr>
</tbody>
</table>

Note. ** p < 0.01

4.2. Common Method Bias

In our study, we adopted a questionnaire method, which may cause common method bias [98]. Before formally analyzing the data, Harman univariate analysis was used to test
the common method deviation. The findings show a variance value less than the cutoff value of 24.47% (i.e., 50%). At the same time, confirmatory factor analysis was used to test the single factor model, and the results showed that the model fit index was very poor ($\chi^2/df = 20.98$, GFI = 0.608, CFI = 0.576, RMSEA = 0.236, NFI = 0.566, and NNFI = 0.511). Therefore, there is no serious common method bias among the study variables.

4.3. Mean, Standard Deviation and Correlations for All Study Variables

According to Table 3, social presence is significantly positively correlated with shopping enjoyment ($r = 0.666, p < 0.01$), familiarity ($r = 0.597, p < 0.01$), and well-being ($r = 0.41, p < 0.01$). Shopping enjoyment is positively correlated with familiarity ($r = 0.52, p < 0.01$) and well-being ($r = 0.499, p < 0.01$). Familiarity is positively correlated with well-being ($r = 0.275, p < 0.01$).

4.4. Test of Mediating Effect

After decentralizing the variables, the study referred to Wen and Ye (2014) test steps for mediating effects. Model 4 (bootstrap sampling; 5000) in the PROCESS macro program compiled by Hayes (2013) was used to test the mediating effect of shopping enjoyment between social presence and consumer well-being [99,100]. The results show that social presence significantly positively predicts consumer well-being ($\beta = 0.10, t = 2.44, p < 0.05$), which supports Hypothesis 1. Social presence significantly positively predicts shopping enjoyment ($\beta = 0.67, t = 17.97, p < 0.001$), which supports Hypothesis 2. Shopping enjoyment significantly positively predicts consumer well-being ($\beta = 0.26, t = 6.64, p < 0.001$), which supports Hypothesis 3. Shopping enjoyment plays a mediating role in the prediction of social presence on consumer well-being; the mediating effect value is 0.07, and its 95% bootstrap confidence interval is [0.112, 0.241]. The results support Hypothesis 4 (Figure 2).

![Figure 2](image.png)

**Figure 2.** The mediating role of shopping enjoyment in the relationship between social presence and consumer well-being. Note. **p < 0.01.**

4.5. Test of Moderating Effect

Model 1 in the SPSS macro program PROCESS was used to test the moderating effect of familiarity on social presence and consumer well-being. The results are shown in Equation (1) of Table 4. The product (interaction term) of social presence and familiarity had a significant predictive effect on consumer well-being ($\beta = 0.02, t = 2.79, p < 0.05, 95\% CI = [0.01, 0.04]$); Model 59 in the SPSS macro program PROCESS was used to test the moderating effect of familiarity on shopping enjoyment and consumer well-being. The results are shown in Equation (3) of Table 4. The product (interaction term) of shopping enjoyment and familiarity had a significant predictive effect on consumer well-being ($\beta = -0.02, t = -2.39, p < 0.05, 95\% CI = [-0.04, -0.01]$), indicating that familiarity not only moderated the direct effect of social presence on consumer well-being but also moderated the effect of shopping enjoyment on consumer well-being; that is, it moderated the second half path of the intermediary model. Hypotheses 5 and 6 were supported.
Table 4. Results of moderated mediation analyses.

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Equation (1) ( (\text{Outcome Variable: Well-Being}) )</th>
<th>Equation (2) ( (\text{Outcome Variable: Shopping Enjoyment}) )</th>
<th>Equation (3) ( (\text{Outcome Variable: Well-Being}) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta ) ( t ) ( 95% \text{ CI} )</td>
<td>( \beta ) ( t ) ( 95% \text{ CI} )</td>
<td>( \beta ) ( t ) ( 95% \text{ CI} )</td>
</tr>
<tr>
<td>Social presence</td>
<td>0.27 7.07 *** [0.20, 0.35]</td>
<td>0.56 12.28 *** [0.47, 0.65]</td>
<td>0.14 3.20 *** [0.05, 0.22]</td>
</tr>
<tr>
<td>Familiarity</td>
<td>0.03 0.58 [−0.06, 0.11]</td>
<td>0.21 4.02 *** [0.11, 0.32]</td>
<td>−0.02 −0.41 [−0.10, 0.07]</td>
</tr>
<tr>
<td>Interactive item 1</td>
<td>0.02 2.79 ** [0.01, 0.04]</td>
<td>0.01 1.09 [−0.01, 0.03]</td>
<td>0.04 3.67 *** [0.02, 0.06]</td>
</tr>
<tr>
<td>Interactive item 2</td>
<td>−0.03 −2.59 * [−0.05, −0.01]</td>
<td></td>
<td>−0.03 −2.59 * [−0.05, −0.01]</td>
</tr>
<tr>
<td>Shopping enjoyment</td>
<td></td>
<td>0.24 6.01 *** [0.16, 0.32]</td>
<td></td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.016</td>
<td>0.002</td>
<td>0.012</td>
</tr>
<tr>
<td>( F )</td>
<td>7.8 **</td>
<td>1.2</td>
<td>6.71 **</td>
</tr>
</tbody>
</table>

Note. *** \( p < 0.001 \), ** \( p < 0.01 \), and * \( p < 0.05 \). The standard score was used for each variable in the model. Interactive item 1 is the product of social presence and familiarity, and Interactive item 2 is the product of shopping enjoyment and familiarity.

To show the moderating effect of familiarity more clearly, familiarity was divided into a high group (M+1SD) and a low group (M-1SD) according to plus or minus one standard deviation, and a simple slope test was performed. The moderating effect of familiarity between social presence and consumer well-being is shown in Figure 3, and the moderating effect of familiarity between shopping enjoyment and consumer well-being is shown in Figure 4. As can be seen from Figure 3, for consumers with high familiarity, social presence significantly positively predicts well-being (simple slope = 0.25, SE = 0.06, \( p < 0.001 \)). However, for consumers with low familiarity, the predictive effect of social presence on well-being was not significant (simple slope = 0.006, SE = 0.051, \( p > 0.05 \)), indicating that the higher the level of consumer familiarity, the greater the impact of social presence on well-being. In contrast, at low levels of familiarity, social presence may not have a significant effect on well-being.

Figure 3. The moderating effect of familiarity on the relationship between social presence and consumer well-being.
Figure 4. The moderating effect of familiarity on the relationship between shopping enjoyment and consumer well-being.

Then, we analyzed the moderating effect of familiarity on the relationship between shopping enjoyment and well-being in the second half of the mediation model (Figure 4). It transpires that the predictive effect of shopping enjoyment on the well-being of consumers with low familiarity (simple slope = 0.28, SE = 0.040, \( p < 0.001 \)) is greater than that of consumers with high familiarity (simple slope = 0.14, SE = 0.048, \( p < 0.01 \)). This suggests that the shopping enjoyment of consumers with lower familiarity has a more positive effect on well-being than the shopping enjoyment of consumers with higher familiarity.

5. Discussion

We examined the relationship between social presence and consumer well-being in the context of live-streaming marketing. In addition, we examined the mediating effect of shopping enjoyment and the moderating effect of familiarity. The results show that social presence could directly affect consumer well-being and indirectly affect consumer well-being through shopping enjoyment. In addition, familiarity moderates the direct effect of social presence on consumer well-being, which is more effective at high levels of familiarity. Familiarity also moderates the second half of the indirect effect of social presence on consumer well-being; at low levels of familiarity, shopping enjoyment was more effective in predicting consumer well-being.

5.1. Theoretical Contributions

The theoretical significance of this study is mainly manifested in the following three aspects: First, our research contributes to the consumer psychology research literature by proposing and confirming the effect of social presence on consumer well-being in the online consumption environment. Online consumer psychology research has highlighted the importance of considering streaming media and social presence because they influence consumers’ interactive satisfaction, quality of life, and perception of well-being [101]. These studies appear particularly valuable for identifying ways to improve brand attractiveness.
and the success rate of e-marketing. However, although previous researchers have noticed the impact of presence on consumer psychology and behavior [102], in many cases, consumer well-being is of limited study for the outcomes of social presence. The current study enriches the effects of social presence in live-streaming media, indicating that social presence would influence consumer well-being. This is one of the few studies that establishes the relationship between social presence and consumer well-being.

Second, our study further contributes to the research in consumer psychology by identifying shopping enjoyment as a mediator linking social presence and consumer well-being. Given the importance of consumer well-being for marketing, previous studies have mostly focused on several important influencing factors (e.g., use motivation, material ownership, consumption environment, and demand satisfaction) [103,104], and what is missing from research is shopping enjoyment. This construct represents the degree of positive emotion that consumers feel in the process of interactive marketing. Previous research on shopping enjoyment focused on offline shopping environments. Consequently, it is necessary to better understand the role of the shopping environment in influencing the well-being of online consumers. Furthermore, our findings are consistent with previous studies, which confirmed the relationship between social presence and shopping enjoyment and the association between shopping enjoyment and consumer well-being [105,106].

Third, by applying a moderated mediation framework, we revealed the moderating role of familiarity, expanding the applicability of the hedonic adaptation theory in the online shopping environment [107]. This study extends the social presence and shopping enjoyment literature by answering the call to examine boundary conditions for the effectiveness of social presence and shopping enjoyment. Social presence and shopping enjoyment have been established as strong predictors of positive outcomes of consumer well-being [108]. Yet, only a few researchers have focused on the potential boundary conditions that either promote or hinder the positive effects of social presence and shopping enjoyment. This study suggests that high familiarity strengthens the positive effect of social presence on well-being. This result is consistent with the research results of Zhu and Chang (2015), that is, in a live broadcast environment with a social nature, consumers experience more interaction, and consumers with high familiarity are more likely to arouse positive emotions and show more satisfaction [109]. Low familiarity strengthens the positive effect of shopping enjoyment on well-being. This result is consistent with the central assumption of the hedonic adaptation model of Lyubomirsky et al. (2005), that, compared with the interpersonal interaction perception brought by social presence, shopping enjoyment, as an aspect of the live broadcast environment, is more likely to cause consumers to have hedonic adaptation [110].

5.2. Practical Implications

First, interaction is the key to the current marketing environment and e-commerce platform to build the core characteristics of consumer society’s presence [111]. E-commerce enterprises should consciously improve the interactivity and social presence of live streaming when carrying out live-streaming shopping business [112]. Managers should pay attention to the fact that the more real-time interaction and feedback in live streaming, the higher the level of social presence perceived by consumers [113]. For example, managers can encourage consumers to write online reviews and actively engage in discussion interactions, and this type of interaction can promote more positive consumer behavioral intentions [114,115]. In addition, the increase in such interactions can make consumers feel that they are accompanied in the process of shopping and meet their emotional and belonging needs. At the same time, managers should pay attention to the entertainment function of improving shopping pleasure to improve consumers’ shopping attitudes on the website, thus increasing their repurchase intention. In addition, attention should be paid to creating a pleasant and warm live-streaming atmosphere. Anchors can bring consumers a sense of intimacy by adding a series of topics related to their personal lives during the live broadcast, thus generating a positive attitude toward the brand [116,117]. In addition,
live streaming usually uses different social media as carriers, so managers should also formulate different marketing plans according to the social modes of different types of platforms. For example, for media such as Instagram, where images are the main output form, topic collection and sweepstakes can be used to increase interaction opportunities with consumers.

Second, attention should be paid to the positive and negative effects of familiarity on consumer psychology. On the one hand, the more familiar consumers are, the more likely they are to have a positive attitude toward a product or service. Nostalgia in movies has a positive impact on consumer familiarity [118]. Therefore, managers can choose the mode of micro-film to deepen consumers’ memory of products when advertising. On the other hand, according to the hedonic adaptation model, as consumers repeatedly experience shopping enjoyment in short videos, consumer pleasure and well-being will decrease. Therefore, managers can increase the interaction with consumers to slow down the occurrence of hedonic adaptation.

5.3. Study Limitations and Future Research

Our study provides useful insights and contributions to the literature on social presence; the study is not without limitations, however. First, our study uses the theory of life satisfaction and subjective well-being to define and measure consumer well-being, focusing more attention on satisfaction and well-being in the field of consumer life. As e-commerce becomes more embedded in consumers’ lives, future research could focus on its positive effect on consumer psychology in a wider range of areas. At the same time, there are many factors that affect consumer well-being. In this study, we only tested the mediating effect of shopping enjoyment and the moderating effect of familiarity. Future researchers can explore the mediating and moderating effects of other variables between social presence and consumer well-being. For example, previous research has shown that flow experiences can moderate the impact of social presence on consumer well-being. The parasocial interaction and perceived dialogue between consumers and chatbots can mediate the effect of social presence on consumer interaction satisfaction and brand favorability. Moreover, consumers’ emotional arousal is also related to the influence of social media influencers [119], and future researchers can consider the moderating effect of influencers’ impact.

Second, consumers’ familiarity, shopping enjoyment, and well-being will change with the passage of time. In our research, we adopted cross-sectional design and a questionnaire to study consumers’ past live-streaming experiences. Therefore, consumers’ memories of past live marketing may still be biased compared with the actual situation, and the subjectivity of the consumers may have an impact on the results of the study. Future researchers can use longitudinal study design and experimental methods to explore the deeper relationship between variables.

Third, the subjects in this study are mainly young people from one place, and the sample representation is not high enough. Considering the deepening of the population aging problem and the rising consumption demand of the elderly [120], the sample of the elderly group should be increased in the future to improve the theoretical model. At the same time, this study did not consider the differences between different types of live streaming and only used Li Ziqi as the experimental material. Future studies can subdivide the types of live streaming, explore the differences between different types of live streaming in the influence path, and improve the external validity of the study.

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