Professional or Interpersonal Trust? 
Effect of Social Network on the Intention to Undergo Cosmetic Procedures

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Abstract
The purpose of this article is to explore the influence of friendship and medical advice networks on customers' intention to undergo cosmetic procedures and its relationship to the role of professional and interpersonal trust in seeking cosmetic information. We propose that both interpersonal and professional trust play a mediating role in medical cosmetic information-seeking behaviors. In doing so, a purposive sampling of 289 customers from 21 cosmetic clinics was surveyed while all these customers received medical cosmetics treatment. The empirical analysis has shown that customers who are central to the friendship network have a high level of interpersonal trust, which positively mediates the relationship between friendship networks and their decisions to adopt cosmetic procedures. Our findings suggest that the understanding of friendship and advice networks enables us to explore the explicit details of how customers exchange information related to cosmetic surgery. Finally, our findings also made practical contributions, while the counseling service of medical clinic is required to take not only professional but also interpersonal trust into consideration.

Keywords
medical cosmetics, friendship and advice network, interpersonal trust, professional trust, social network

Introduction
Cosmetic clinics have been regarded as one of the important sources of well-defined medical cosmetic advice before medical cosmetic therapeutic decision-making is ever-expanding (Hotta, 2018; Willis, 2017). Despite the growing demand for medical cosmetology (Widdows & MacCallum, 2018), the nature of medical cosmetic information seeking and customers’ decision-making to undergo cosmetic procedures is not entirely explored due to the lack of sufficient empirical research on various perspectives, such as interpersonal or professional advice. Particularly, the potential influence of the COVID-19 pandemic has changed the status of macro-economy and further accelerated the revolution of business models (Mohsin et al., 2021), such as cosmetic surgery tourism (Majeed et al., 2020).

Customers are likely to seek both experience-based and professional opinions to access reliable sources of cosmetic information before they undergo initial cosmetic surgery. This is because customers tend to obtain critical information sources and reduce the risk of cosmetic surgery in advance (Maisel et al., 2018). First, customers who seek medical cosmetic information may do so through family, friends, the Internet, mass media, and physicians or professional referral units. As suggested by Wellman and Frank (2001) in their work on friendship networks, such a network is known to provide emotional support. These information sources of medical cosmetics greatly rely on the word of mouth of social networks, which is regarded as a means to understand the information-seeking behaviors in terms of cosmetic therapeutic decisions (Pan et al., 2017). Through the reciprocity process (Pan et al., 2017), customers identified sources of medical cosmetology that were related to informal information networks, such as friendship networks in shaping medical cosmetic perceptions, behaviors, and therapeutic decision-making. Second, advice networks aid customers in their attempt to obtain specific medical information from trustworthy physicians or clinics before undergoing medical cosmetic therapeutic treatment (Krackhardt, 1992). Taken together, the cosmetic therapeutic decision may be influenced by both friendship and advice networks.

Most importantly, to better address medical cosmology information sources, this article employs a well-known social network approach to decipher friendship and advice

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networks and further examine the role of trust in medical cosmetic information networks and their effect on medical cosmetic therapeutic behavior. Customers would acquire related medical information to make medical cosmetic decisions via information exchange and the sharing of cosmetic experiences with others who can identify the sources and flow of current medical cosmetic information. In doing so, the use of social network theory allows us to improve the identification of the structural positions of friendship and advice networks within customers’ perspectives and experiences in referred networks (Stephens et al., 2011). Consequently, this article explores the effect of the above-mentioned types of network structure on the interpersonal ties among a set of referred network actors while using the social network analysis, which considers network ties as conduits through individual actors that influence the behavior of others. The research questions are as follows:

Research Question 1: What impact do customers who have a more central position in a friendship network have on the higher level of interpersonal trust?
Research Question 2: What impact do customers who have a greater structural hole in the professional advice network have on the level of professional trust?
Research Question 3: What effect does the degree of interpersonal and professional trust have on patient’s decisions to undergo cosmetic procedures?
Research Question 4: How have interpersonal and professional trust mediated between networks and patient’s decisions to undergo cosmetic procedures?

Literature Review

Social network theory has offered a useful approach to explore kinds of social ties to encourage the build-up in information network settings (Gibbons, 2004; Mitteness et al., 2016). Both friendship and advice networks have been important channels in maintaining and exchanging professional information (Gibbons, 2004; Mitteness et al., 2016). The friendship network refers to familiar ties involving informal relationships between friends, families, and work partners for information exchange (Gibbons, 2004). On the contrary, the advice network refers to professional information obtained through formal relationships with professional specialists (Gibbons, 2004). To clarify information exchange in medical cosmetic surgery, we applied both of these networks to define shared medical cosmetic decision-making and their key factors and, in turn, to show how these networks differ among information providers regarding cosmetic surgery behavior.

Previous studies related to medical information-seeking studies have shown that network ties are important channels for accessing and transferring medical information and knowledge (Mascia & Cicchetti, 2011; Mercken et al., 2010; Rossa et al., 2010). With this, social network theory can be effectively applied to exploring patient’s medically relevant behaviors that are embedded in clinical network relations. For example, Mascia and Cicchetti (2011) showed that professional networks play a crucial role in hospital physicians adopting and implementing evidence-based medicine into clinical practice. In addition, Scott et al. (2005) applied the social network approach to investigate advice-seeking networks through clinical and nonclinical members of two primary care practices (Chambers et al., 2012). Although previous studies in the medical literature have used the conceptual and theoretical principles of the social network to identify the behavior of customers and physicians, we are not aware of any prior studies that have applied such an approach to explore the information exchange in medical cosmetics.

The literature on social network demonstrates the value of network actors who provide various resources and information for a patient (Chambers et al., 2012). This article argued that trust plays a central role in the interactions between customers and physicians or information providers because customers are uncertain about health conditions and need greater confidence in a physician’s decisions and intentions (Mohseni & Lindstrom, 2007). Furthermore, trust has been associated with a range of patient behaviors, for example, professional trust among customers as each individual’s appraisal of information from specialized medical cosmetic experts is useful and valuable for information acquisition and sharing. On the contrary, interpersonal trust refers to the information-sharing values of each patient’s medical cosmetic experiences and their voluntary sharing mechanism through frequent friendship interactions in the friendship network. Previous studies show that factors impacting patient compliance with doctors’ recommendations are difficult to be achieved as a lack of trust exists between physician and patient (Cheng et al., 2017; Dibben et al., 2000). In addition, Pentina et al. (2009) found that social support is likely to affect young females’ decisions to undergo cosmetic procedures. Consequently, information sources and providers from various channels are strongly influenced by interpersonal trustworthiness and prominent interactions through friendship or advice networks.

To sum up, social networks have been widely applied in understanding different ties and types of network structure such as information exchange. This study takes patients and physicians in the medical cosmetic clinics as analysis units and examines a patient’s propensity to information exchange and acquire before they are engaged in cosmetic surgery.

Hypothesis Development

The social network provides a good framework for analyzing how interpersonal relationships affect the decision of whether customers will interact with and influence others within their friendship network set in terms of medical cosmetics information. Network ties serve as an important vehicle
in accessing and transferring network actors’ resources, including skills, abilities, information, and knowledge, that is, one actor’s behaviors and perceptions of the network will affect other actors in the network (Chambers et al., 2012; Grandinetti, 2018). Furthermore, the social contagion perspective suggests that those individual actors who are most connected to other network actors through interpersonal contacts are most likely to share similar information, attitudes, and behaviors regarding their needs (Angst et al., 2010; Burt, 2004). Therefore, a key assumption underlying friendship network is that the central position of customers is not only better connected to a large number of network actors but also more influential than others.

In addition, friendship networks are associated with the medical health domain (Mitteness et al., 2016; Pentina et al., 2009), particularly in relation to medical information exchange behaviors undertaken by customers, such as the adoption of guidelines or referred therapy information (Mowen et al., 2009). Friendship networks, as a medical information delivery tool, provide customers with the ability to select and obtain useful and relevant medical information and knowledge (Pentina et al., 2009). A patient in a friendship network relies heavily on the opinions of family and friends to better and easily acquire relevant medical information. Therefore, sources of information regarding medical information diffuse more rapidly in well-developed and correctly placed network settings.

Finally, actors in more central positions offer connections with other members and may obtain abundant information from many friends. The network position is important for predicting the sources of medical information among actors (Coleman et al., 1966). An actor who has more network ties may be more likely to obtain abundant information and knowledge. In particular, an actor in a more central position offers connections with other members (Wasserman & Faust, 1994) which may obtain abundant information from many friends. Jehn and Shah (1996) pointed out that friendship ties enable increased cooperation and open communication quickly due to the affection of friends. Customers in central positions have greater visibility than peripheral actors, thereby allowing them to access and disseminate various resources; such customers are also likely to receive information more quickly than peripheral actors in the friendship network. As such, customers in positions of high centrality have many information-accessing and information-sharing opportunities and are therefore likely to provide trustworthy information sharing with their friendship network actors. Specifically, the more frequently the customers exchange medical cosmetics information with other network actors, the more similar their attitudes and behavior are likely to be. Hence, customers having a high degree of familiarity may promote information exchange and interpersonal trust through friendship ties. Accordingly, we hypothesize the following:

**Hypothesis 1:** Customers who have a more central position in a friendship network may have a higher level of interpersonal trust in the network.

Advice networks generally involve information flow and diffusion that offer specific and unique information based on professional expertise. Specifically, advice networks offer work-related expert advice and shared resources, such as assistance and guidance among network actors for engaging in mutual problem-solving (Rast et al., 2018). In a professional medical network, customers and groups of members are connected, thus creating an independent social exchange system that promotes resources and information exchange between partners who acquire the specific resources that they need. With this, professional advice networks allow physicians to provide and interpret useful and specialized medical cosmetic information toward customers for their medical cosmetics decision-making. According to Gibbons (2004), people whose expertise was valued by others accumulate advice ties and thus possess more professional value and gain a central position in the advice network.

Furthermore, actors in an advice network may be likely to gain access to professional and specific information and then consequently promote trust in their professional values. Professional expertise is an important source of professional advice that controls the flow of critical information, as trustworthy professional knowledge can provide an exchange of specific resources and thus gradually build up members’ trust in each other within the advice network. This argument is consistent with the structure holes theory of Burt (2004). Network ties are redundant to the degree that actors are enabled to receive crucial information from dispersed and unconnected critical people from the perspective of knowledge management (Grandinetti, 2018). Similarly, previous studies showed that advice networks comprised weaker ties that link a greater number of diverse individuals (Cha & Roberts, 2019; Ibarra, 1993). Therefore, the structure holes within professional advice networks could capture content that allows actors to acquire critical information that relates to solving professional problems. We expect that positions of structural holes in advice networks will be positively related to professional trust.

**Hypothesis 2:** Customers who occupy a greater structural hole in the professional advice network may have a higher level of professional trust in the network.

Social network theory also argues that social ties and types of network structure play important roles in the process of producing trust in particular dyadic relations (Granovetter, 1985; Uzzi, 1996). In doing so, we defined professional trust among customers as each individual’s appraisal of whether information from specialized medical cosmetic experts is
useful and valuable for information acquiring and sharing. Interpersonal trust refers to the information-sharing values of each patient’s medical cosmetic experiences and their voluntary sharing mechanism through frequent friendship interactions in the friendship network. Therefore, interpersonal and professional trust are critical factors in friendship and advice networks when seeking medical cosmetics information and knowledge, respectively. In a dense network, more frequent communication and interaction may ease the exchange of complex and specific information. Both friendship and advice networks tend to offer well-defined interaction between medical information network members for sharing mutual altruism resources among friends. A trusting relationship between network actors fosters the adoption of similar efforts and behavior to enhance people’s willingness to share with their friends (Fuertes et al., 2017; Gibbons, 2004). Thus, customers who are centrally placed in a friendship network have many information-accessing and information-sharing opportunities that are likely to lead to trust due to their high-frequency interaction with other actors.

In addition, specialized medical cosmetic experts may as a crucial bridge offer specific and unique information applicable in the search for medical cosmetics. Professional information exchange plays an important part in the advice network because professional expertise may control others’ access to critical resources based on their specialized knowledge bases. The valuable and crucial resources provided by professional expertise may provide trust in relation to patient behavior. Taken together, both center and bridged positions are compatible with specific medical cosmetics networks that may expect a more effective exchange of complex and specific knowledge through trusting relations and then likely to lead to patient’s decisions to undergo cosmetic procedures. Thus, a trustworthy networking environment with rich resources may provide a more secure mechanism for creating dynamic relations and reduce uncertainty within the network. We hypothesize the following:

Hypothesis 3a: A high degree of interpersonal trust with regard to an information source may positively influence patient’s decisions to undergo cosmetic procedures.

Hypothesis 3b: A high degree of professional trust with regard to an information source may positively influence patient’s decisions to undergo cosmetic procedures.

According to the hypotheses stated above, there is increasing recognition that trust within medical cosmetic information acquisition and between interpersonal and professional ties plays a critical role in medical cosmetic information-seeking networks and consequent patient’s decisions to undergo cosmetic procedures. To begin with, trust might be influenced in others through the social relation of the trusting person. Previous studies argue that the notion of social relations can affect an individual’s trust in others (Luo, 2005). The primary reason is that trust is embedded in social relationship, and an individual’s position in network structure could influence his or her trust toward others. Furthermore, many empirical studies had been focused on what kinds of social ties facilitate mutual trust to other, such as friendship ties and advice ties (Gibbons, 2004).

In addition, trust has been shown to affect customers’ attitudes and behaviors (Fuertes et al., 2017; Hall et al., 2001; Wilk & Platt, 2016). These arguments suggest a perfectly mediated relationship in which friendship and advice networks are associated with patient’s decisions to undergo cosmetic procedures only indirectly through trust. This is because trust is an initial catalyst required for an individual customer to embrace and adopt useful and valuable information based on professional and friendship-based recommendations. Furthermore, trust is a psychological mechanism that encourages individuals to engage in adopting friends and professional expertise as consultants because they understand that they are entitled to obtain what they need from their friendship and advice networks (Wilk & Platt, 2016). Consistent with the argument of Hall et al. (2001), trust serves as a mechanism that translates information exchange into behavioral outcomes. We argue that trust is a mediating variable in the relationships between both friendship and advice networks and patient’s decisions to undergo cosmetic procedures. Therefore, we further hypothesize the following:

Hypothesis 4a: Interpersonal trust mediates the relationship between friendship networks and patient’s decisions to undergo cosmetic procedures.

Hypothesis 4b: Professional trust mediates the relationship between advice networks and patient’s decisions to undergo cosmetic procedures.

To sum up, Figure 1 outlines the hypothesized relationships of friendship network and advice network on the two types of trust, along with several control variables.

Method

Sample Collections

We employed snowball sampling to collect the sample from the Shin-X clinic in Taiwan. Snowball sampling is a chain referral method used to construct samples from initial contacts who are asked to provide introductions to their friends and who, in turn, are asked to refer others. The sample was directly collected from medical cosmetic clinics of both public and private hospitals that included people who had recently accepted cosmetic surgery (including minimally invasive procedure and microplastic surgery) in the last 2 years; this was done to ensure that all participants have the relevant experience to accurately answer the questionnaire. In doing so, we can make sure that patient’s medical cosmetic experiences made within the last 2 years were still fresh in their memory.
In contrast to conventional data, network data normally do not have an explicit notion of sample size (Kolaczyk & Krivitsky, 2015). This study uses saturation as a methodological principle (Saunders, Sim, Kingstone, Baker, Waterfield, Bartlam & Jinks, 2018); saturation should be operationalized in a way that is consistent within broader and more encompassing assessments of data adequacy, and there should be some limit to its scope. Especially, qualitative health researchers are required to evaluate data adequacy best appraised with reference to features that are intrinsic to the study in prior methodological studies and sample size community norms might best inform (Vasileiou, Barnett, Thorpe & Young, 2018). In addition, previous studies from social networks show that the effective sample size associated with a network depends strongly on the model assumed for the network scales’ reciprocity (Kolaczyk & Krivitsky, 2015).

The sample collection process has to be continued until the sample has been built. Snowball sampling was used to collect samples from a series of medical cosmetics clinics. Snowball sampling is a chain referral method in which a sample is constructed based on initial contacts; customers are asked to provide introductions to their friends, who, in turn, are asked to refer others. This process continues until the sample has been constructed to ensure that a full range of settings was reflected in which customers were able to identify network members who could provide help and support (Robins, 2015).

Finally, customers were randomly collected from 21 medical cosmetics clinics. The 21 medical cosmetics clinics in our working sample comprised 11 plastic surgery clinics and institutions, six dermatological clinics, three medical cosmetic departments in public hospitals, and one workshop. In total, questionnaires were sent to 300 customers for participation in our study; of these, 11 responses were invalid due to individual factors or because the customers declined to participate in our study. Thus, 289 respondents (96.33% response rate) were included.

**Questionnaire and Measurement**

The initial questionnaires combined structured and open questions. We ensured that all participants had actual medical cosmetic experiences that remained fresh in their memory and were thus able to answer the questionnaire accurately via face-to-face interviews while customers waited to receive medical cosmetic treatments or to visit physicians to avoid any misinterpretation of the questions. All participants were volunteers and were assured that their responses would be confidential and used for research purposes only.

The questionnaire was organized into five sections. The first section was designed to capture sources of information regarding friendship network ties. The second section was related to sources of information regarding advice networks. The third part was designed to measure interpersonal trust and professorial trust in their friends and

![Figure 1. The research framework.](image-url)
professorial physicians. The fourth section was related to patient’s decisions to undergo cosmetic procedures. The final section was demographical data.

**Patients’ Decisions to Undergo Cosmetic Procedures**

We applied and modified the work of Henderson-King and Henderson-King (2005) and Jovic et al. (2017) to measure patients’ decisions after they obtained various sources of medical cosmetics information. In total, seven items were used to measure postadoption behavior using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The constructs and their items are summarized in Table 1.

**Friendship Network**

Participants were asked to identify a series of friend ties with each of the customers who exchanged medical cosmetics information with their friends, families, and colleagues. To assess friendship networks, participants were asked to indicate “the extent to which each person you know considers and perceives themselves as your best friend and can offer medical cosmetics information.” In addition, all friends and medical cosmetics associate members of the friendship network were asked to name themselves. Five-point Likert-type scales were used to assess the frequency of patient’s interaction from 1 to 5. This approach allowed each patient to identify their own friend relationships; this is particularly important given that we were testing the effects of relationship type on the acceptance of friends’ information exchange. Each patient’s set of friends forms his or her friendship ego network. The friendship networks were used to calculate the degree of centrality through the symmetric friendship matrix for each respondent using the software Ucinet (Apostolato, 2013). Betweenness centrality is computed using

\[
\text{Betweenness patient } i = \sum \sum b_{jk}(i), i \neq j \neq k, \text{ and } j < k,
\]

where \( b_{jk} \) is a number representing information flowing between customer \( j \) and \( k \) that must pass through patient \( i \). The flow of patient \( i \) is the sum of all \( b_{jk} \), where \( i, j, \) and \( k \) are distinctive. The flow measure is therefore a measure of the contribution of patient \( i \) to all possible maximum flows and depends on the level of interaction within the advice network of patient \( i \).

**Trust**

In assessing the views of the customer regarding their trust in medical cosmetics information sources, previous work on patient trust measurement by Luo (2005) has been applied and modified to explore customer’s trust regarding medical cosmetics within sources in friendship and advice networks. Two aspects of trust were examined after exploratory factor analysis (factor loadings > 0.7, Eigenvalue > 1.0, cumulatively explained variance > 0.6, and Cronbach’s alpha > 0.8): three items on interpersonal trust and five items on professional trust. The constructs and their items are summarized in Table 2.

| Defined items                                                                 | Factor     |
|-------------------------------------------------------------------------------|------------|
| (1) I would like to collect information related to medical cosmetics through my social network | 0.86       |
| (2) I would share medical cosmetics to my social network                       | 0.83       |
| (3) I intend to use medical cosmetics by a suggestion from my social network   | 0.81       |
| (4) I would like to use medical cosmetics again                                 | 0.77       |
| (5) I thought that medical cosmetics networks are suitable for exchanging cosmetic information when needed | 0.80       |
| (6) I would recommend cosmetics information to other people in my social network | 0.81       |
| (7) Overall, I am dedicated to using medical cosmetics                         | 0.75       |

Cronbach’s \( \alpha \) = .91
Control Variables

The control variables included gender, age, education level, occupation, marital status, income, and residence location in the regression models after reviewing previous studies on customers’ behaviors in social networks.

Analysis

Medical Cosmetics Information Network Analysis

We visualized the network using social network analysis to draw the patterns of medical cosmetics information and customer network members. Social network analysis allows us to examine how the pattern of a patient’s network ties in their medical cosmetics information networks influenced their medical cosmetics decision behavior. We plotted networks graphs from 21 medical cosmetics clinics with 289 customers (Figure 2). All 21 (labeling of A-U) nodes that represent medical cosmetic clinics with professional accreditation were presented in the graph.

Network analysis shows that differently sized nodes represent the degree of popularity as referenced by the customer in our sample. Regarding the degree of centrality, Clinic A is more popular for providing cosmetics treatments.

Table 2. Factor Loading for Trust.

| Defined items                                                                 | Factor 1 | Factor 2 |
|-------------------------------------------------------------------------------|----------|----------|
| (1) I think that my families and friends talk straightforwardly about medical cosmetic | 0.18     | 0.92     |
| (2) I think that my families and friends exchange medical cosmetic information | 0.22     | 0.85     |
| (3) I think that my families and friends are honest in providing information sources | 0.21     | 0.83     |
| (4) I think that my physicians and professionals encourage me to speak openly  | 0.74     | 0.26     |
| (5) I think that my physicians and professionals are honest in providing cosmetic | 0.78     | 0.17     |
| (6) I think that my physicians and professionals will clearly explain the medical information | 0.82     | 0.16     |
| (7) I think that my decisions in my medical cosmetic therapy are often respected by my physicians and professionals | 0.81     | 0.16     |
| (8) I think that my physician takes his patients’ opinions seriously.          | 0.80     | 0.17     |
| Cronbach’s α                                                                  | .87      | .89      |

Figure 2. The information-sharing network of medical cosmetics.
Customers who are connected to central actors are more likely to accept cosmetics treatment in most of the clinics. As shown in Figure 2, customers who connect with Clinic A (the largest node in the graph) tended to accept cosmetics treatments because a large number of customers are more likely to recommend medical cosmetics to their families and friends. Interestingly, we found that customers were more likely to be connected to a customer who accepted similar suggestions to make medical cosmetics decisions if they received recommendations from their medical cosmetics network members. The primary reason for this is that Clinic A offers more advanced technologies and cheaper therapies compared with its competitors.

Furthermore, we also found that many customers originally received their medical cosmetics treatments in other clinics, such as those found in B, C, E, F, K, and G rather than in the A clinic. These customers left their original clinic and joined the A clinic to seek medical cosmetics treatment after receiving recommendations from their friends and colleagues who had received treatment at the A clinic. Thus, A clinic had developed a strong reputation in the medical cosmetic industries through word of mouth.

In addition, the network analysis shows that friendship networks play an important role in determining medical cosmetics information flow. Most customers who begin to receive medical clinical treatment are likely to seek assistance from their friends, families, and colleagues to access information on well-developed medical cosmetics services by word of mouth; particularly in professional services such as medical cosmetics, customers rely heavily on credibility and experience. Thus, the information sources used by most cosmetic decisions are reached through their friends,
families, and colleagues who have had well-defined experiences in cosmetic surgery.

To sum up, these observations and findings are the result of high cosmetics information flow and exchange within the network community and its members. The network analysis reveals important insights into the effect of the network structure on the effective diffusion and exchange of cosmetics information in medical cosmetics practices.

**Statistical Analysis**

Descriptive statistics were calculated for all variables, and valid sample data are shown in Table 3. The mean degree of centrality in friendship networks was 0.59, and the mean degree of centrality in advice networks was 0.72. The mean structural hole in friendship networks was 0.58, and the mean structural hole in advice networks was 0.31. From Table 3, it must be noted that the mean interpersonal trust (4.15) is larger than the mean professional trust (3.91), which implies that cosmetic customers are likely to accept their friends’ recommendations and suggestions in clinical decision-making.

Table 4 shows the results of the regression analysis. Models 1 and 3 in Table 4 are the basic models used to test all control variables on interpersonal trust and professional trust, respectively. In Models 1 and 3, educational level is significantly and positively correlated with interpersonal trust (with a high degree of education expressing high trust). Location is significantly and negatively correlated with both trusts (with northern Taiwan and central Taiwan expressing high trusts).

Model 2 in Table 4 shows that centrality in friendship networks is important for enhancing interpersonal trust after controlling for the effects of the control variables, which supported Hypothesis 1. Model 4 shows that structural holes in advice networks do not significantly impact professional trust; therefore, Hypothesis 2 is not supported. Model 6 in Table 4 shows the effect of the cosmetic decision variable on interpersonal and professional trust and the nine control variables. The empirical results of centrality in friendship networks and structural holes in advice networks have no significant relationship with cosmetic decisions. As expected, both interpersonal and professional trusts are significantly related to cosmetic decisions; therefore, Hypotheses 3a and 3b are supported.

Finally, the results shown in Table 4 show that the effect of centrality in friendship networks on trust is indirect, through interpersonal trust. This does not satisfy the condition for mediation (Preacher et al., 2007). Hypothesis 4a is fully supported, but hypothesis 4b is not supported. Accordingly, the results in Table 4 show that interpersonal trust fully mediated the relationship between friendship network and patient’s decisions to undergo cosmetic procedures.

**Discussion**

This article provides theoretical and empirical support for the argument that friendship networks (interpersonal trust) and advice networks (professional trust) have significant impacts on patient’s decisions to undergo cosmetic procedures. The hypothesis results are presented in Table 5.

Our results suggest that cosmetic customers who possess abundant friendship relationships may likely access trustworthy cosmetic information that predicts these cosmetic patient’s decisions to undergo cosmetic procedures. These primary findings support the notion that the centrality positions of...
friendship networks underlie the effects of network ties on interpersonal trust and significantly influence patient’s decisions to undergo cosmetic procedures. Thus, a better explanation is that interpersonal trust plays a crucial and mediatory role in such a network information flow. This enables us to understand why customers who occupy a position of centrality in the friendship network might have more opportunities to acquire new and useful information and knowledge about medical cosmetics. On the contrary, our finding also indicates weaker support for a mediating effect of professional trust between advice networks and patient’s decisions to undergo cosmetic procedures. The primary reason is that cosmetic customers are likely to prefer to seek advice regarding cosmetic information from their friends, families, and colleagues rather than from other channels. Consistent with Burt’s (2004) perspective, structural holes that network actors occupy are of greater utility in settings where crucial knowledge is more important than diverse information sources. Thus, the structural hole in an advice network may not also have a statistically significant effect on professional trust.

This article contributes both theoretically and methodologically to explaining how friendship and advice network ties and trust influence customers’ decisions. Specifically, this article extends prior social network research by addressing both roles of friendship and advice network characteristics on cosmetic decisions that may reduce a patient’s seeking cost and risk and increase their access to trustworthy medical cosmetic information. A patient who is more central may be more embedded in abundant resources of cosmetic information and may therefore affect others more easily, as they select and make medical cosmetic decisions because of their own, more frequent exposure to friendship relationships with friends, families, and colleagues. A patient who holds strong friendships ties is likely to benefit from the useful and homogeneous knowledge and experience acquired in relation to medical cosmetic information. Theoretically, we echoed the results of previous studies of Wellman and Frank (2001) and Stephens et al. (2011) that the sources of medical cosmetic information greatly rely on the word-of-mouth communication of informal relationships networks. These sources of medical cosmetic information greatly rely on the word-of-mouth communication of informal relationships networks aesthetics as a way to help and understand the relational medical cosmetic therapeutic decision-making. On the contrary, advice networks generally involve information flows and knowledge diffusion, which can provide useful resources to network actors who are embedded in social activities (Gibbons, 2004; Mitteness et al., 2016). Therefore, the advice network provides detailed and specific medical cosmetic information for understanding medical cosmetic therapeutic decision-making and consequently post-adoption behaviors of medical cosmetic patients.

Finally, the findings indicate that the impacts of interpersonal trust and professional trust have a strong effect on patient’s decisions to undergo cosmetic procedures in relation to medical cosmetic treatments. Obviously, customers with both interpersonal and professional trust were more likely to adopt the advice appropriately in their cosmetic treatments. The findings imply that medical cosmetic surgeries may be viewed as highly invasive therapies, and trust is crucial in the medical cosmetics information-seeking process that comprises both interpersonal and professional trust. Indeed, this article shows that both interpersonal and professional trust are strongly associated with patient’s decisions to undergo cosmetic procedures, and customers who are close to each other in social networks are more likely to make a similar decision. Consequently, this article provides a unique perspective to explore the sources of medical information by focusing on friendship and advice networks and patient’s decisions to undergo cosmetic procedures, which have been largely unexplored in the health care literature.

Table 5. The Results of Hypothesis Test.

| Hypothesis                                                                 | Results                      |
|---------------------------------------------------------------------------|------------------------------|
| **Hypothesis 1:** People who have more central position in the friendship network may have higher level of interpersonal trust in the network. | Hypothesis 1: Supported      |
| **Hypothesis 2:** People who have more structural hole position in the professional advice network may have higher level of professional trust in the network. | Hypothesis 2: Not supported   |
| **Hypothesis 3a:** A high degree of interpersonal trust with regard to the information source will positively influence post-adoption behavior. | Hypothesis 3a: Supported     |
| **Hypothesis 3b:** A high degree of professional trust with regard to the information source will positively influence post-adoption behavior. | Hypothesis 3b: Supported     |
| **Hypothesis 4a:** Interpersonal trust mediates the relationship between friendship network and post-adoption behavior. | Hypothesis 4a: Supported     |
| **Hypothesis 4b:** Professional trust mediates the relationship between advice network and post-adoption behavior. | Hypothesis 4b: Not supported  |

Conclusion and Implication

Customers’ perceptions of the patient’s decisions to undergo cosmetic procedures are not widely accepted measurement items in the medical information-seeking literature. Thus, to
assess the customers’ decisions to undergo cosmetic procedures during medical cosmetics treatment, the sources of medical cosmetic information do not occur in isolation from their social context. This article has shown that friendship and advice network characteristics, such as centrality and the existence of structural hole positions in medical cosmetic information networks, may have different implications for customers’ subsequent decision-making. Specifically, trust plays a critical role in cosmetic information flow and leads to their willingness to recommend medical cosmetology to their friends and potential customers.

This article has several implications that should be highlighted. First, the practical implications suggest that the debate about interpersonal trust arising from friendship networks is likely to increase resource exchange, information sharing, and values assessment through friends, families, and colleagues. The adoption of friendship networks is particularly important in seeking medical cosmetic information because potential cosmetic customers may obtain useful and experience-based information, which they can use to assess future therapy decisions. In addition, managers of medical cosmetic clinics should recognize the importance of medical cosmetic information networks when they would like to improve their reputation regarding cosmetic services. In particular, managers of medical cosmetic clinics should be encouraged to maintain contact more frequently with network members with the aim of sharing cosmetic information because this practice may increase cosmetic customers’ propensity to adopt experience-based medicine and clinical decisions, which could, in turn, affect patient’s decisions to undergo cosmetic procedures. Finally, advice ties are essential to offering professional knowledge for medical problem-solving when customers need specific information. A lack of advice ties may limit the transfer of professional medical knowledge among actors. Specifically, professional trust retains a positive and significant impact on patient’s decisions to undergo cosmetic procedures.

Further research works based on the combination of network-based and word-of-month measurement and structured decision-making of medical cosmetic therapy are suggested to have a better understanding of the effect of information flow on patient’s decisions to undergo cosmetic procedures. Particularly, in the post-pandemic era of COVID-19, emerging customers’ behaviors in cosmetic surgery tourism are required to explore tourists’ perceptions of cosmetic surgery tourism for medical service quality. In addition, as social network researchers have engaged in debates on the cultural difference of what “Guanxi” and trust actually mean to East people in decision-making, we also suggest future research to compare the difference in cosmetic decision-making styles between East and West.

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