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RESEARCH ARTICLE

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College students' attitudes, stigma, and intentions toward seeking online and face-to-face counseling

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Abstract

Objective(s): To investigate differences in public stigma, self-stigma, attitudes (value and discomfort), and intentions to seek help between online and face-to-face counseling. To identify a difference in the relationship between these variables and both counseling modalities.

Method: An online survey completed by 538 college students from one university in the Southeastern United States. The sample included 412 females and 126 males with a mean age of 20.21 years (standard deviation [*SD*] = 1.26).

Results: Significantly higher levels of self-stigma and discomfort toward online counseling were reported. Significantly higher value and intentions were reported toward face-to-face counseling. Self-stigma was positively related to public stigma, value was negatively related to self-stigma, and intentions toward seeking help was positively related to value.

Conclusions: Results suggest face-to-face counseling is seen as a more favorable method of service delivery compared to online counseling. Value toward online

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counseling is an important predictor for seeking this type of help.

KEYWORDS
face-to-face counseling, intentions, online counseling, public stigma, self-stigma

1 | INTRODUCTION

Around one-fifth (20.3%) of all college students worldwide experience a psychological disorder within a given year, however, only 16% of these individuals receive treatment for their mental health issue (Auerbach et al., 2016). As approximately three-quarters of lifetime mental illnesses are onset by the age of 24 (Kessler et al., 2005), it is paramount this age group receives the treatment they need. College students seeking help for their mental health concerns face numerous barriers to engaging in treatment such as stigma (D'Amico, Mechling, Kemppainen, Ahern, & Lee, 2016) and their attitudes toward help-seeking (Kelly & Achter, 1995). Online counseling, defined as the provision of mental health services in a non-face-to-face setting through distance communication such as telephone, email, and videoconferencing (Mallen & Vogel, 2005), provides benefits, such as convenience (Chester & Glass, 2006) and accessibility (Sampson, Kolodinsky, & Greeno, 1997) to clients. Additionally, this method provides anonymity (Young, 2005) that could lessen the impact of these barriers and therefore increase the likelihood an individual will seek treatment (Wallin, Maathz, Parling, & Hursti, 2018). Although online counseling provides these potential benefits, previous researchers have found attitudes toward this form of counseling to be less favorable when compared to the more traditional face-to-face method (Rochlen, Beretvas, & Zack, 2004; Lewis, Coursol, Bremer, & Komarenko, 2015). It is unclear, however, if this is due to a difference in levels of stigma toward this counseling modality. Furthermore, little is known about online counseling and its relationship with stigma, attitudes, and intentions to seek help among the college population. The purpose of this study, therefore, was twofold. First, this study set out to investigate how stigma, attitudes, and intentions toward seeking online counseling differed to that of face-to-face counseling. Secondly, this study sought to examine the relationship between stigma, attitudes, and intentions toward online counseling held by college students, and to identify if this relationship differed to that of these variables related to face-to-face counseling.

1.1 | Public stigma and self-stigma

Clement et al. (2015) found that treatment stigma, or stigma toward mental health help-seeking, has a small to moderate detrimental effect on seeking help. Public stigma surrounding mental health help-seeking is created when an individual believes society perceives those who seek mental health services are unacceptable (Corrigan, 2004). A more specific form of public stigma is social network stigma, which occurs when an individual perceives negative views of help-seeking by their social network, or those they closely interact with (Vogel, Wade, & Ascheman, 2009). In contrast, self-stigma is a negative perception to help-seeking held by the individual toward themselves.

Research explaining how stigma is associated with online counseling is limited. Klein and Cook (2010) investigated the differences between individuals who prefer to seek mental health help via the Internet and those who prefer to seek traditional face-to-face help on numerous factors including demographic variables, perceptions of helpfulness, and stigma. They found that levels of perceived stigma, or the extent these individuals felt discriminated against, were significantly higher for those who prefer to seek mental health help via the Internet than those who prefer to seek help in a face-to-face setting. Wallin et al. (2018) identified similar findings in a sample of

267 Swedish students. The authors found that more participants preferred to seek face-to-face help for a general mental health condition, however, significantly more participants preferred to seek online treatment compared to face-to-face treatment if the problem they were seeking help for was stigmatized.

Although online counseling provides benefits such as anonymity (Young, 2005), and helps individuals maintain nondisclosure of their help-seeking (Wallin, Mattsson, & Olsson, 2016), this factor does not appear to be important when potential users consider reasons for seeking online services (Musiat, Goldstone, & Tarrier, 2014). While researchers have made an initial attempt to investigate stigma toward online counseling, there remains a lack of investigation that directly compares public stigma and self-stigma toward online and face-to-face counseling. This may be due to the fact there are no such measures designed to specifically capture these two types of stigma for the online service modality.

1.2 | Attitudes and intentions toward help-seeking

In addition to stigma, attitudes, defined as the extent to which a person holds favorable or unfavorable views toward a specific behavior (Azjen, 1991), play an important role in mental health help-seeking. Bayer and Peay (1997) found that attitudes toward seeking help for a psychological issue was significantly related to help-seeking intentions among an adult sample of 142 individuals. Furthermore, this factor was shown to have the strongest relationship with intentions to seek help for depression from a psychiatrist in a sample of 2,303 German adults (Schomerus, Matschinger, & Angermeyer, 2009). Rochlen et al. (2004) conceptualized favorable and unfavorable attitudes toward counseling by identifying the value (e.g., utility, benefits, and usefulness of services) and discomfort (e.g., ease, comfort, and emotional feelings related to counseling) associated with different modalities. Individuals who report high value and low discomfort are said to hold more favorable attitudes compared to those who report low value and high discomfort. Research shows that attitudes toward face-to-face counseling are more favorable compared to online counseling. When investigating attitudes toward online and face-to-face counseling, Rochlen et al. (2004), and Lewis, Coursol, Bremer, and Komarenko (2015) found that undergraduate students expressed more perceived value, and less perceived discomfort in face-to-face counseling compared to its online counterpart. Tsan and Day (2007) also found face-to-face counseling as the preferred modality of service delivery, with 87% of college students reporting they would select face-to-face for their chosen form of delivery compared to 1% of participants who rated videoconferencing as their number one choice. Furthermore, Carper, McHugh, and Barlow (2013) reported that clients who were currently seeking face-to-face treatment held negative views toward computer-based psychological treatment, not because of its perceived value, but because of a lack of knowledge toward this type of treatment. More recently, Bird, Chow, Meir, and Freeman (2019) identified similar findings from a study of 588 college students. Participants reported significantly higher value and significantly less discomfort in face-to-face compared to online counseling. With regard to intentions to seek psychological help only one study has investigated the differences between intentions to seek online services in comparison to face-to-face services. Wallin et al. (2018) found participants reported lower intentions to seek online help over the face-to-face method in two separate samples, one a student population and the other an adult population recruited from a health care clinic. The authors identified reasons such as lower treatment expectations related to the perceived helpfulness of online interventions as a reason why intentions to seek online services were lower than the face-to-face method.

1.3 | The relationship between stigma, attitudes, and intentions

Theories such as the Reasoned Action Approach (Fishbein & Ajzen, 2010) propose that variables, such as attitudes toward a behavior and subjective norms, are the best predictors of an individual's intentions to engage in a

health-related behavior. Furthermore, intentions to engage in a behavior is the strongest predictor of actual behavior. Although such theories do not explicitly include stigma, subjective norms, described as a normative belief held by an individual, closely aligns with its description. When investigating stigma, attitudes, and intentions toward face-to-face counseling, researchers have identified a relationship between these variables. Vogel, Wade, and Hackler (2007) reported that public stigma is positively associated with self-stigma, that self-stigma is negatively associated with attitudes toward counseling, and that attitudes toward counseling is positively associated with willingness to seek counseling. The relationship between stigmas can be explained as self-stigma involves the internalization of public stigma (Corrigan, 2004). If for example, an individual believes society holds negative beliefs about mental health help-seeking, that individual may create their own self-stigmatizing beliefs about themselves (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989). Moreover, the negative self-stigma experienced by this individual may have a direct impact on their attitudes toward mental health counseling and intentions to seek help. This relationship between stigmas has been shown in longitudinal research (Vogel, Bitman, Hammer, & Wade, 2013). Although this relationship has been found across a number of other studies (Topkaya, Vogel, & Brenner, 2017; Wade et al., 2015), no research, to our knowledge, has investigated how stigma, attitudes, and intentions to seek online counseling are related.

The purpose of this study was to investigate the differences in public stigma, self-stigma, counseling attitudes (value and discomfort), and intentions to seek psychological help between online and face-to-face counseling. Additionally, this study sought to investigate the relationship between these variables as they relate to both online counseling and face-to-face counseling, and to examine any difference in the relationships between the two counseling modalities. It was hypothesized that participants would report significantly stronger attitudes and intentions toward face-to-face counseling compared to online counseling. Furthermore, it was thought that participants would report significantly higher levels of public stigma and self-stigma toward online counseling compared to face-to-face counseling. Finally, it was hypothesized that self-stigma toward both counseling types would be positively related to public stigma, that value toward counseling would be negatively related to self-stigma, that discomfort toward counseling would be positively related to self-stigma, that intentions to seek counseling would be positively related to value toward counseling, and that intentions to seek counseling would be negatively related to discomfort toward counseling (see Figure 1).

2 | METHODS

2.1 | Participants

A total of 538 college students from a large southeastern university in the United States took part in this study. Of those who participated, 412 (76.6%) identified as female while 126 (23.4%) identified as male.

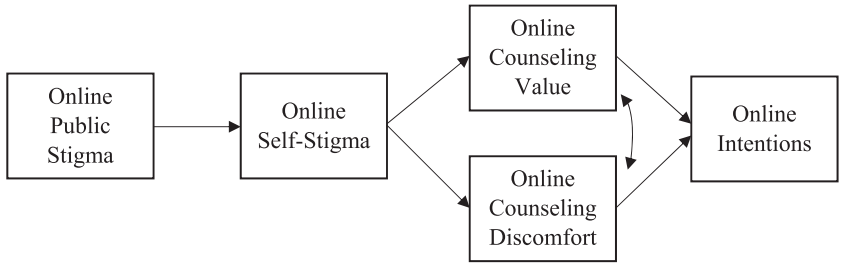

FIGURE 1 The hypothesized model

A majority of the sample was White ($n = 353$, 65.6%), but Hispanic or Latino ($n = 80$, 14.9%), Black or African American ($n = 62$, 11.5%), Multiethnic or Mixed ($n = 26$, 4.8%), Asian ($n = 11$, 2.0%), Other ($n = 4$, 0.7%), and American Indian or Alaska Native ($n = 2$, 0.4%) were also represented. The sample was comprised of Freshman ($n = 44$, 8.2%), Sophomore ($n = 161$, 29.9%), Junior ($n = 172$, 32.0%), and Senior ($n = 161$, 29.9%) level students, with a mean age of 20.21 years (standard deviation [*SD*] = 1.26), and a range of 18–25 years.

2.1.1 | Counseling information

Of the participants who completed this study, 136 (25.3%) reported engaging in some form of counseling (either online, face-to-face, or both) during the past 12 months. A total of 132 (24.5%) reported they had previously engaged in face-to-face counseling only during the last 12 months while 8 (1.5%) reported that they had engaged in online counseling only during the same time period. Four participants (1.0%), reported using both online and face-to-face counseling during the previous 12 months. More participants reported having time in their schedule to seek online counseling services for their mental or emotional health compared to face-to-face counseling. Overall, participants reported having a greater awareness of face-to-face counseling services offered in their community in comparison to online counseling services offered on the Internet. See Table 1 for counseling information related statistics.

2.2 | Measures

2.2.1 | Demographic and counseling information

Demographic and counseling information was collected via a brief questionnaire. Participants reported their gender, age, race, and year in school. Furthermore, participants completed questions related to their previous experience of receiving online or face-to-face services for their mental or emotional health in the past 12 months, if they would have time in their schedule to seek online counseling or face-to-face counseling, how aware they were of online counseling offered on the Internet, how aware they were of face-to-face services offered in their community, and if they had a private location where online counseling could take place.

TABLE 1 Counseling information

	Online counseling	Face-to-face counseling	Both
Previous counseling experience	8 (1.5%)	132 (24.5%)	4 (1.0%)
Time to seek counseling	474 (88.1%)	422 (78.4%)	
Awareness of counseling services			
Completely aware	18 (3.3%)	114 (21.2%)	
Somewhat aware	86 (16.0%)	263 (48.9%)	
Somewhat unaware	168 (31.2%)	104 (19.3%)	
Completely unaware	266 (49.4%)	57 (10.6%)	

Note: Time to seek counseling refers to questions asking if participants had time in their schedule to seek online counseling or face-to-face counseling.

2.2.2 | Counseling attitudes

To assess participants' attitudes toward online counseling and face-to-face counseling, the Online Counseling Attitudes Scale (OCAS; Rochlen et al., 2004), and Face-to-Face Counseling Attitudes Scale (FCAS; Rochlen et al., 2004) were administered. The OCAS and FCAS are 10-item instruments comprised of Value and a Discomfort subscales. The items of the two measures are identical except for the wording of either online counseling or face-to-face counseling. The Value of Online Counseling (OC-V) subscale contains items such as "I would confide my personal problems with an online counselor," while the Value of Face-to-Face Counseling (FC-V) subscale contains items such as "I would confide my personal problems with a face-to-face counselor." The Discomfort with Online Counseling (OC-D) subscale contains items such as "I would dread explaining my problems to an online counselor," while the Discomfort with Face-to-Face Counseling (FC-D) subscale contains items such as "I would dread explaining my problems to a face-to-face counselor." Each question is rated on a 6-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Scores on each subscale range from 5 to 30 with higher scores on OC-V and FC-V indicating higher value toward online counseling and face-to-face, respectively, while higher scores on OC-D and FC-D indicate higher levels of discomfort with online counseling and face-to-face, respectively. In a sample of college students, the test–retest reliability were $r = .88$ for the OC-V, and $r = .77$ for the OC-D, while the internal consistency reliabilities were $\alpha = .88$ to $\alpha = .89$ for OC-V and $\alpha = .77$ to $\alpha = .83$ for OC-D. Test–retest reliability coefficients were shown to be $r = .85$ for FC-V, and $r = .87$ for FC-D, while the internal consistency reliabilities were $\alpha = .85$ to $\alpha = .90$ for FC-V and $\alpha = .69$ to $\alpha = .87$ for FC-D (Rochlen et al., 2004). Internal consistency reliabilities for the sample in this study was $\alpha = .91$ for OC-V, $\alpha = .89$ for OC-D, $\alpha = .92$ for FC-V, and $\alpha = .86$ for FC-D.

2.2.3 | Self-stigma

To measure self-stigma, the Self-Stigma of Seeking Help Scale (SSOSH; Vogel, Wade, & Haake, 2006) was used. The SSOSH is a single factor, 10-item questionnaire, which assesses an individuals' self-stigma associated with seeking psychological help. Each item of the SSOSH is rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater self-stigma toward help-seeking. Five items of the SSOSH are reverse scored. To measure self-stigma toward face-to-face (FCSS), the original items of the scale were used. These items include questions such as "My self-esteem would increase if I talked to a therapist," and "If I went to a therapist, I would be less satisfied with myself." To measure self-stigma toward online counseling (OLSS), the original items were reworded to reflect help-seeking by this counseling modality. Self-stigma toward online counseling items included "My self-esteem would increase if I talked to an online therapist," and "If I saw an online therapist, I would be less satisfied with myself." Additionally, the words "face-to-face" and "online" were added to the instructions of each set of questions to make sure participants reported their self-stigma toward these counseling types. The original scale has displayed reliability coefficients between $\alpha = .86$ and $\alpha = .90$ when utilized with a college population (Vogel et al., 2006). Internal consistency reliabilities for the current study were $\alpha = .86$ for self-stigma toward face-to-face counseling and $\alpha = .86$ for self-stigma toward online counseling.

Factor analysis was completed on the OLSS to determine if wording of the items influenced the dimensionality of the measure. The analysis revealed two factors displaying values above the lower asymptote. The first factor (eigenvalue = 4.56) was constructed of five items with factor loadings between 0.66 and 0.82, and explained 40.8% of the total variance. The second factor (eigenvalue = 1.42) was comprised of the five reverse-worded items, displayed factor loadings between 0.33 and 0.75, and accounted for 7.3% of the total variance. Factor analysis was additionally completed on the FCSS. Similar to the OLSS, two factors emerged.

The first factor (eigenvalue = 4.56) contained five items with factor loadings between 0.62 and 0.81, and accounted for 41.2% of the total variance. The second factor (eigenvalue = 1.26) was constituted by the five reverse-worded items, with factor loadings between 0.28 and 0.71, and explained 9.2% of the total variance. Previous research, however, has suggested participant responses to reverse-worded items can influence factor analysis and cause researchers to reject one-factor models of unidimensional scales (Woods, 2006). As the unadapted face-to-face version (FCSS) of the SSOSH, and the modified online counseling version (OLSS), displayed two factors, both consistent with the regular worded and reverse-worded items, it was determined to treat both measures as unidimensional throughout analysis in the study.

2.2.4 | Public stigma

Participants' levels of perceived public stigma were measured using the Perception of Stigmatization by Others for Seeking Help Scale (PSOSH; Vogel et al., 2009). The PSOSH is a 5-item instrument where participants rate how they believe others would interact with them if they were seeking counseling services (e.g., "Think of you in a less favorable way" and "See you as seriously disturbed"). Instructions for completing the measure were adapted so participants completed the scale twice, once for online counseling (OLPS), and once for face-to-face counseling (FCPS). Responses to items are rated on a 5-point Likert-type scale: 1 = *not at all*, 2 = *a little*, 3 = *some*, 4 = *a lot*, and 5 = *a great deal*. Scores on the PSOSH can range from 5 to 25, with higher scores indicating higher perceived stigmatization from others. The scale has displayed test–retest reliability over a 3-week period (r = .82) and has been found to have internal consistency reliabilities between α = .88 and α = .89 in various samples of college students (Vogel et al., 2009). Internal consistency reliabilities for the current study were α = .92 for public stigma toward online counseling and α = .92 for public stigma toward face-to-face counseling. Factor analysis was conducted to assess the rewording of the instructions on the dimensionality of the public stigma measure for the OLPS and FCPS. For the FCPS, one factor was identified above the lower asymptote (eigenvalue = 3.80), with factors loadings between 0.65 and 0.90, and explained 70.6% of the total variance. The analysis also produced one factor for the OLPS which was above the lower asymptote (eigenvalue = 3.79), displayed factor loadings between 0.66 and 0.91, and explained 70.4% of the total variance.

2.2.5 | Intentions to seek counseling

The Interpersonal Concerns subscale of the Intentions to Seek Counseling Inventory (ICSI; Cash, Begley, McCown, & Weise, 1975) was utilized to measure participants' intentions to seek counseling. This 10-item subscale asks subjects to rate how likely they would be to seek counseling for 10 different concerns including, "relationship difficulties," "depression," "inferiority feelings," and "loneliness." Participants rate the likelihood they would seek help for each concern on a 4-point Likert-type scale ranging from 1 (*very unlikely*) to 4 (*very likely*). Instructions for the measure were modified so participants completed the scale twice, once for their intentions to seek online counseling (OLI), and once for their intentions to seek face-to-face counseling (FCI). Vogel et al. (2007) reported an internal consistency reliability of α = .87 among a sample of undergraduate students. For the current study, the internal consistency reliabilities were α = .92 for the questions related to online counseling and α = .91 for the questions related to face-to-face counseling. Factor analysis was completed to determine the dimensionality of the OLI and FCI. For the FCI, analysis showed one factor above the lower asymptote (eigenvalue = 5.65), had factors loadings between 0.58 and 0.82, and accounted for 51.9% of the total variance. For the OLI the analysis produced one factor above the lower

asymptote (eigenvalue = 5.87), displayed factor loadings between 0.63 and 0.82, and accounted for 54.2% of the total variance.

2.3 | Procedure

Upon receiving Institutional Review Board approval for research involving human subjects, the study was placed in a human subject pool at a large southeastern university within the United States during the fall and spring semesters of the 2017/2018 academic year. Participants (undergraduate students enrolled in a full course load) self-selected into the study and received 30 min of subject pool credit for research completion. After providing informed consent, participants completed a brief demographic and counseling information questionnaire. Participants were then presented with a definition of online counseling and face-to-face counseling:

> *The following questionnaires ask about your attitudes toward seeking counseling through either of two methods: (a)* face-to-face counseling *(where you would go to a counselor's office in person) or (b)* online counseling *(where you would interact with a counselor using the Internet). With most online counseling services, clients can choose among several options. For the purpose of this study, consider having online counseling through the use of a secure videoconferencing software on your own personal electronic device. A client using online counseling services would typically meet with a counselor through videoconferencing from a private location of their choice, such as their own home, while the counselor remains in their office.*

After receiving these definitions, participants completed measures of counseling attitudes, self-stigma, public stigma, and counseling intentions, toward both online counseling and face-to-face counseling, presented in a random order. After completion of all measures, participants were thanked for their time and informed how they can obtain their research pool credit. All study materials were presented in English only, and all data were collected online using Qualtrics secure software. Participants took around 10 min, on average, to complete all study measures.

2.4 | Data analysis

Preliminary analysis was conducted on IBM SPSS (Version 22) using a MANOVA to assess for any differences on all outcome measures due to gender and previous counseling experience as these variables have been seen to be influenced by these factors (Chandra & Minkovitz, 2006; Masuda, Suzumura, Beauchamp, Howells, & Clay, 2005). A repeated-measures multivariate analysis of covariance (RM-MANCOVA) was utilized to examine differences between counseling modalities for all of the variables included in this study using gender and previous counseling experience as covariates. Effect size for η_p^2 can be determined as small (.01), medium (.09), and large (.25). A path model was conducted using *Mplus* (Muthén & Muthén, 1998–2017). Maximum Likelihood Estimation was used to produce a path analysis investigating the relationships among the public stigma, self-stigma, attitudes, and intentions variables toward both forms of counseling. Based on the guidelines by Hu and Bentler (1999) and McDonald and Ho (2002), four-model fit indices were used to evaluate the specified model. The comparative fit index (CFI) and Tucker–Lewis index (TLI) suggest a model demonstrates good fit if the indices are greater than .95 and reasonable fit if they are greater than 090. A standardized root-mean-square residual (SRMR) below .08 is considered a good fit while below .10 is considered reasonable.

For the root-mean-square error of approximation (RMSEA), the model demonstrates good fit if the indices are below .05 and reasonable fit between .05 and .08.

3 | RESULTS

3.1 | Preliminary analysis

Descriptive statistics including means and standard deviations, and correlations for all outcome variables are presented in Table 2. Before the main statistical analysis was conducted, a preliminary analysis was performed to assess for any differences on variables due to gender and previous counseling experience (see Table 3). Results of a MANOVA revealed a difference both for gender (Hotelling's trace = .05, $F(10, 525) = 2.76$, $p = .00$) and previous counseling experience (Hotelling's trace = .08, $F(10, 525) = 3.96$, $p \leq .00$). Significant differences for gender were found for OC-V, OLSS, FC-V, FCSS, and FCI. For previous counseling experience, significant differences were seen for OLI, FC-V, FC-D, and FCI. Due to the significant differences on these variables, gender and counseling experience were used as covariates for all further analysis.

3.2 | Differences between online and face-to-face counseling

Results from the within-subjects RM-MANCOVA using gender and previous counseling experience as covariates showed there were significant differences for counseling type; Hotelling's trace = .56, $F(5, 533) = 59.29$, $p \leq .01$, $\eta_p^2 = .36$. For counseling type, significant differences were revealed for intentions to seek help; $F(1, 537) = 87.71$,

TABLE 2 Correlation matrix, means, and standard deviations for all outcome variables

	OL-V	OL-D	OLSS	OLPS	OLI	FC-V	FC-D	FCSS	FCPS	FCI
OL-V	–									
OL-D	−.50**	–								
OLSS	−.53**	.52**	–							
OLPS	−.21**	.30**	.42**	–						
OLI	.55**	−.334**	−.28**	−.05	–					
FC-V	.39**	−.10*	−.32**	−.15**	.26**	–				
FC-D	−11*	.38**	.37**	.32**	.00	−.35**	–			
FCSS	−.30**	.34**	.75**	.37**	−.11**	−.44**	.53**	–		
FCPS	−.07	.23**	.37**	.81**	.04	−.19**	.41**	.43**	–	
FCI	.24**	−.04	−.16**	.01	.55**	.54**	−.25**	−.24**	−.04	–
M	19.91	16.94	25.75	7.85	22.61	24.01	15.11	24.38	7.86	25.42
SD	5.47	5.66	6.61	3.92	7.34	4.85	5.50	6.47	3.95	7.37

Abbreviations: FC-D, face-to-face counseling discomfort; FCI, face-to-face counseling intentions; FCSS, face-to-face counseling self-stigma; FCPS, face-to-face counseling public stigma; FC-V, face-to-face counseling value; *M*, mean; OL-D, online counseling discomfort; OLI, online counseling intentions; OLPS, online counseling public stigma; OLSS, online counseling self-stigma; OL-V, online counseling value; *SD*, standard deviation.

*$p < .05$.

**$p < .01$.

TABLE 3 Means and standard deviations of outcome variables by gender and previous counseling experience

Variable	Male	Female	Previous experience	No previous experience
OL-V	18.52 (5.05)	20.34* (5.53)	19.78 (5.47)	20.31 (5.48)
OL-D	16.38 (5.46)	17.11 (5.71)	17.00 (5.69)	16.79 (5.57)
OLSS	26.82 (5.94)	25.43* (6.78)	25.96 (6.66)	25.15 (6.48)
OLPS	7.93 (3.70)	7.83 (3.99)	7.78 (3.95)	8.06 (3.81)
OLI	21.31 (7.36)	23.00 (7.30)	22.00 (7.30)	24.40** (7.21)
FC-V	22.35 (5.26)	24.52* (4.61)	23.40 (4.85)	25.85* (4.40)
FC-D	15.26 (4.91)	15.06 (5.67)	15.55 (5.35)	13.79** (5.75)
FCSS	25.45 (5.88)	24.05* (6.61)	24.79 (6.58)	23.18 (6.02)
FCPS	7.95 (3.80)	7.84 (3.99)	7.86 (4.01)	7.87 (3.76)
FCI	22.87 (7.64)	26.22* (7.12)	24.20 (7.29)	29.07* (6.36)

Note: Statistical comparisons were made between gander and previous counseling experience for all outcome variables. Significant statistical difference are indicated by *$p < .01$ and **$p < .05$.
Abbreviations: FC-D, face-to-face counseling discomfort; FCI, face-to-face counseling intentions; FCSS, face-to-face counseling self-stigma; FCPS, face-to-face counseling public stigma; FC-V, face-to-face counseling value; OL-D, online counseling discomfort; OLI, online counseling intentions; OLPS, online counseling public stigma; OLSS, online counseling self-stigma; OL-V, online counseling value.

$p \leq .01$, $\eta_p^2 = .14$, with participants reporting higher intentions to seek face-to-face counseling ($M_{adj} = 25.43$, $SE = 0.32$) compared to online counseling ($M_{adj} = 22.61$, $SE = 0.32$), for self-stigma; $F(1, 537) = 46.38$, $p \leq .01$, $\eta_p^2 = .08$, with participants reporting significantly more self-stigma toward online counseling ($M_{adj} = 25.75$, $SE = 0.29$) compared to face-to-face counseling ($M_{adj} = 24.38$, $SE = 0.28$), for value; $F(1, 537) = 273.67$, $p \leq .01$, $\eta_p^2 = .34$, with participants reporting significantly higher value in face-to-face counseling ($M_{adj} = 24.02$, $SE = 0.21$) compared to online counseling ($M_{adj} = 19.91$, $SE = 0.24$), and for discomfort; $F(1, 537) = 47.01$, $p \leq .01$, $\eta_p^2 = .08$, with participants reporting significantly higher discomfort in online counseling ($M_{adj} = 16.94$, $SE = 0.24$) compared to face-to-face counseling ($M_{adj} = 15.12$, $SE = 0.24$). No significant differences were observed between online counseling and face-to-face counseling for public stigma; $F(1, 537) = 0.01$, $p = .92$.

3.3 | The relationship between stigma, attitudes, and intentions toward online counseling

To analyze the relationship between stigma, attitudes, and intentions toward online counseling, and face-to-face counseling, separate path models were conducted. The hypothesized model was shown in Figure 1. Robust maximum likelihood estimation method was used because the assumption of multivariate normality was not met; the Mardia's multivariate kurtosis (MK) was 10.30 ($p < .01$). The model χ^2 and fit indices were presented in Table 4. According to the cutoffs suggested in Hu and Bentler (1999), the hypothesized model for online counseling displayed a reasonable fit to the data. Based on model modification indices, a path from public stigma to discomfort was added and a respecified model (Figure 2; the top panel) was tested. This model showed a good fit to the data and fit significantly better than the hypothesized model; the χ^2 difference test with Sattora–Bentler correction ($\Delta\chi^2_{SB}$) was significant, $\Delta\chi^2_{SB} = 7.49$, $\Delta df = 1$, $p < .01$. The same hypothesized model was conducted for the face-to-face modality with robust maximum likelihood estimation method (MK = 11.27, $p < .01$). As shown in Table 4, the fit indices provided mixed evidence of model-data fit. The modification indices provided the same suggested

TABLE 4 Model-data fit evaluation

	χ^2	*df*	*CFI*	*TLI*	*RMSEA (90% CI)*	*SRMR*
Online (n = 538)						
Hypothesized model	13.86*	4	.985	.962	.068 (.031–.108)	.029
Respecified model	6.60	3	.994	.981	.047 (.000–.097)	.023
Face-to-face (n = 538)						
Hypothesized model	34.50*	4	.944	.860	.119 (.084–.157)	.046
Respecified model	6.66	3	.993	.978	.048 (.000–.097)	.022
Online vs. face-to-face (n = 538)						
Unconstrained model	9.28	6	.998	.986	.032 (.000–.070)	.024
Constrained model	25.58	12	.992	.971	.046 (.020–.070)	.034
Online: two-group path model (n_1 = 136; n_2 = 402)						
Unconstrained model	9.54	6	.995	.982	.047 (.000–.010)	.027
Constrained model	17.97	12	.991	.985	.043 (.000–.082)	.045
Face-to-face: two-group path model (n_1 = 136; n_2 = 402)						
Unconstrained model	6.90	6	.998	.994	.024 (.000–.085)	.021
Constrained model	17.43	12	.990	.983	.041 (.000–.080)	.042

*p < .01.

parameter as the online modality, that is, a path from public stigma to discomfort (Figure 2; the bottom panel). The respecified model yielded adequate fit and fit significantly better than the hypothesized model, $\Delta\chi^2_{SB}$ = 24.31, Δdf = 1, p < .01. For both modalities, significant paths from the respecified model show public stigma to be a significant positive predictor of self-stigma (β_{online} = .417, β_{f2f} = .431, p < .01), and a significant positive predictor of discomfort (β_{online} = .417, β_{f2f} = .431, p < .01). Self-stigma was seen to be a significant positive predictor of

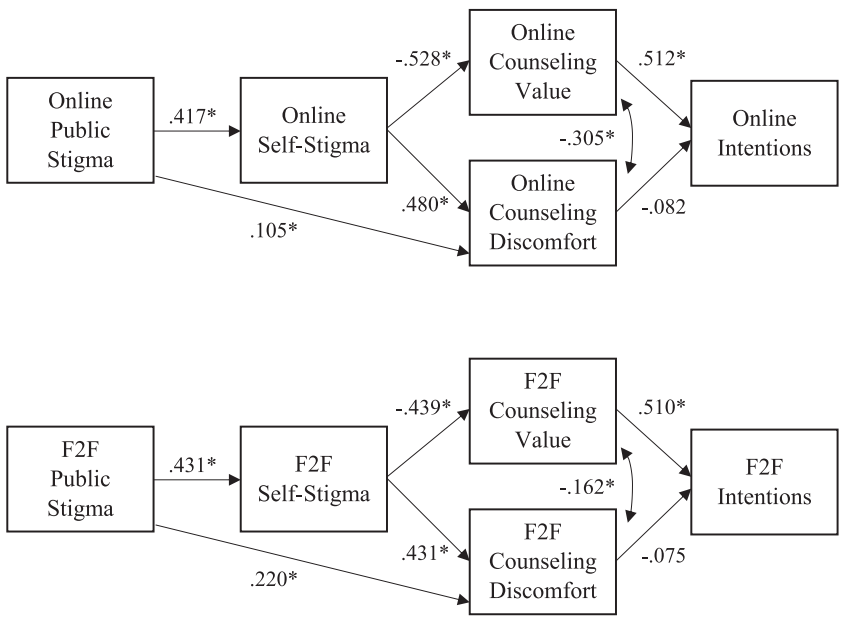

FIGURE 2 The revised model with standardized parameter estimates. *Note.* *p < .01

discomfort (β_{online} = .480, β_{f2f} = .431, p < .01) and a significant negative predictor of value (β_{online} = .105, β_{f2f} = .220, p < .01). Value was additionally shown to be a significant positive predictor of counseling intentions (β_{online} = .512, β_{f2f} = .510, p < .01), however, discomfort did not significantly predict this variable (β_{online} = −.082, p = .069; β_{f2f} = −.075, p = .070). Public stigma has a significant indirect effect on values (β_{online} = −.220, β_{f2f} = −.189, p < .01), discomfort (β_{online} = .200, β_{f2f} = .186, p < .01), and counseling intentions (β_{online} = −.138, β_{f2f} = −.127, p < .01).

To further examine the equality of path coefficients between the two counseling modalities, two-path models including all 10 variables was conducted. In both models, the relationship among the five variables was the same as those in the respecified model, for both online and face-to-face modalities. The correlations between all possible pair of variables associated with different modalities were allowed (e.g., online public stigma and face-to-face public sigma). The first model was an unconstrained model with all six-path coefficients to be freely estimated in both online and face-to-face modalities. The second model was a constrained model with the six-path coefficients being equal between the online and face-to-face modalities. As evidenced by the χ^2 statistics and fit indices, both models displayed a good fit to the data. The χ^2 difference test indicated that the constrained model did not fit significantly worse than the unconstrained model, $\Delta\chi^2_{SB}$ = 16.02, Δdf = 6, p = .013. We concluded that the six-path coefficients in the respecified path model were equivalent between the online counseling and face-to-face counseling.

The last set of analyses was to examine the invariance of the six-path coefficients between two groups: those with previous counseling experience (n = 136) and those with no previous counseling experience (n = 402). As shown in Table 4, for both online counseling and face-to-face counseling, the unconstrained model (with group-specific path coefficients) and the constrained model (with equal path coefficients between the two groups) fit the data very well. The χ^2 difference test suggested that the constrained model did not fit significantly worse than the unconstrained model for both online counseling ($\Delta\chi^2_{SB}$ = 8.43, Δdf = 6, p = .208) and face-to-face counseling ($\Delta\chi^2_{SB}$ = 1.75, Δdf = 6, p = .941). We concluded that the six-path coefficients in the respecified path model were equivalent between "previous experience" group and "no previous experience" group.

4 | DISCUSSION

Preliminary analysis showed males reported significantly lower value, and significantly higher self-stigma, toward both forms of counseling in comparison to females. These findings are consistent with previous research in this area which has constantly identified males as holding more negative attitudes and lower willingness to seek help (Chandra & Minkovitz, 2006; Gonzalez, Alegria, & Prihoda, 2005; Masuda et al., 2005), as well as reporting higher levels of stigma toward face-to-face counseling when compared to females (Chandra & Minkovitz, 2006). This, however, is the first study to show this difference in genders specifically for online counseling. One explanation of the more negative views toward counseling held by males is the gender role conflict. This occurs when individuals experience negative consequences due to their gender (Garnets & Pleck, 1979). In this case, seeking psychological help goes against the commonly held views of society that males should be tough, therefore seeking help may be a threat to their masculinity (Schaub & Williams, 2007).

Those with previous counseling experience (seeking psychology services in the past 12 months) reported higher intentions to seek both forms of counseling compared to those who had not. As previous counseling experience was predominantly face-to-face this may suggest a cross-over effect from face-to-face to online counseling. Additionally, the group with previous experience seeking professional help reported significantly more value and less discomfort in face-to-face counseling. Masuda et al. (2005) found similar results in their study on college students. Outcome expectations have been shown to influence the views that one has toward counseling. Individuals' comfort with disclosing personal information, and the expectations which they hold regarding the effect of this self-disclosure, has been shown to influence their attitudes and intentions to seek help (Vogel, Wester, Wei, & Boysen, 2005). Therefore, providing those within the current study had positive previous experiences, it should be expected that this group report significantly higher attitudes and intentions toward counseling.

When directly comparing the two service delivery modalities several significant differences were identified. As hypothesized, participants reported significantly higher value toward and intentions to seek face-to-face counseling in comparison to online counseling. Furthermore, the sample reported higher levels of discomfort, and higher levels of self-stigma, in the online method. Higher value and lower discomfort placed in face-to-face counseling is consistent with previous research in this area (Bird et al., 2019; Rochlen et al., 2004; Wong, Wong, Tam, & Bonn, 2018). Education has been shown to be a method of improving students' attitudes toward online counseling. When viewing a simulated videoconferencing counseling session designed specifically to inform about this type of service delivery, students' attitudes toward this method have significantly improved (Quarto, 2011). Similarly, the potential benefits that students perceive toward counseling appears to have a stronger relationship with attitudes toward face-to-face services in comparison to online services (Bathje, Kim, Rau, Bassiouny, & Kim, 2014). Further suggesting that knowing about what the counseling relationship looks like in the online setting, and understanding what this service could provide, is important for improving attitudes. Although the current study does not directly address the current levels of education that participants hold toward either face-to-face or online counseling, a higher number of participants reported being more aware of the face-to-face counseling services being offered in their community as opposed to those being offered on the Internet. These differences could be partially explained by the institution where the study was conducted as counseling services offered at this location are predominantly face-to-face.

In addition to attitudes, this study found that participants reported significantly higher intentions and significantly lower self-stigma in face-to-face services. This, to our knowledge, is the first study that has directly compared the face-to-face and online methods on these two variables. Like attitudes, a lack of knowledge regarding online counseling could partly explain why participants' intentions to seek help using this type of treatment is lower. Additionally, treatment expectations may also influence intentions toward seeking online help. Previous researchers have shown students report lower treatment expectations in online counseling compared to the face-to-face method (Wallin et al., 2018). Moreover, as participants place less value in online counseling, they are therefore less likely to use this type of help. When looking at self-stigma, online counseling provides numerous benefits that could reduce the amount of stigma one feels when engaging in therapeutic services. This method provides the client with greater accessibility to the consultant and, more importantly, anonymity as the session can take place in the comfort of any chosen location (Wallin et al., 2016). Although the online method has benefits over face-to-face counseling that could reduce stigma, it was shown that online counseling is more highly stigmatized against, signifying that students would see themselves as weaker if they chose to seek mental health services via this practice modality. This finding may suggest college students potentially view the benefits of this service in a negative manner and would perceive themselves as stronger if they sought help in person. It should also be noted that despite anonymity being cited as one of the benefits for engaging in online counseling (Wallin et al., 2016; Young, 2005), this factor may not be deemed important in the decision-making process of potential service users (Musiat et al., 2014). Furthermore, the differences in self-stigma seen in this study may not be attributed to the internalization of higher levels of public stigma, since there were nonsignificant statistical differences between public stigma toward both forms of counseling.

Findings from this study identify a relationship between online public stigma, online self-stigma, attitudes toward online counseling, and intentions toward seeking both types of counseling services. Previous research have noted a similar relationship between these variables and face-to-face counseling. Vogel et al. (2007) showed that public stigma was positively related to self-stigma, that self-stigma was negatively related with attitudes toward counseling, and that attitudes toward counseling was positively related with willingness to seek help. Other researchers have shown mixed findings when investigating this relationship in online counseling. Bird et al. (2019) found self-stigma to be significantly negatively related to value placed in online counseling and significantly positively related to discomfort in online counseling in a sample of 588 college students. In contrast, Bird, Chow, Meir, and Freeman (2018) found no significant relationships between self-stigma and online counseling value or discomfort in a sample of 101 college students. Previous research in this area, however, has failed to utilize

measures of public and self-stigma aimed to capture these constructs specific to online counseling. Furthermore, these studies did not assess intentions toward this form of help.

The current study found, in both counseling modalities, that public stigma was significantly positively related to self-stigma and discomfort in counseling, that self-stigma was significantly negatively related to value and significantly positively related to discomfort in counseling, and that value was significantly positively related to intentions toward seeking mental health services. The current study identified a negative relationship between counseling discomfort and intentions, but this relationship was not significant for either type of counseling service. Although not hypothesized, results from the path analysis showed a direct relationship from public stigma to counseling discomfort in both counseling types. Bird et al. (2019) reported similar findings in a sample of college students, where it was seen that a significant positive relationship between public stigma and discomfort toward online and face-to-face counseling existed. This relationship suggests it is not only self-stigma which influences the amount of discomfort individuals place in counseling, but also their perceptions of what others may think if they engage in mental health help-seeking. In addition, further analysis showed there to be no differences in the relationships between variables between online and face-to-face counseling modalities, or between groups who had reported counseling experience versus those with no previous experience. Results from the path model may suggest that value in counseling is the more important attitudinal component to focus on when attempting to encourage individuals to seek both types of services.

Strengths of the current study include a large sample size and specific measures adapted to assess stigma and intentions toward online counseling. This study, however, is not without limitations. When investigating factors such as attitudes toward help-seeking conceptual clarity of quantitative measures should be taken into consideration. Even though the current study utilized existing validated measures of counseling attitudes to gather data on this construct, criticism may be aimed at certain questions for their overlap with other factors in this study. For example; "I would confide my personal problems with an online counselor" could measure intentions toward this form of counseling, as opposed to attitudes. Future research in this area should carefully consider measures which align with the operationalized definition of a construct. Other limitations to this study are related to the sampling procedures. As participants were from a single institution in the United States generalizability across other universities is limited. In addition, as this institution only offers face-to-face counseling services to students, future research at locations where online counseling is available should be conducted. A majority of those who took part in the study identified as female, and white, also limiting the generalizability of the findings. Furthermore, a majority of subjects completed this study for course requirements and self-selected into the study. As this is the case, self-selection bias should not be disregarded. Although this study provides insight into the relationships between outcome variables and two modalities of counseling, it should be noted that causation cannot be determined due to the cross-sectional nature of the data. Future research in this area should focus on why higher levels of self-stigma are reported toward online counseling. Additionally, research investigating why there are differences in attitudes (i.e., value and discomfort) toward online counseling compared to face-to-face counseling is warranted.

5 | CONCLUSION

Results from this study suggest face-to-face is still the preferred method of service delivery when compared to online counseling. Four of the five hypotheses related to the difference between the two counseling modalities were supported in favor of the face-to-face method. The hypothesized relationship between the variables investigated in this study was partially supported with value placed in counseling being identified as an important predictor of intentions toward seeking of help. As self-stigma toward online counseling was significantly higher than that toward face-to-face counseling it would appear this factor is not only influencing how this method of counseling is perceived but also the potential likelihood of engaging in this type of service. There were no statistical

differences in the relationships between the path models signifying that self-stigma remains a problem for both counseling types. To improve intentions to seek both forms of counseling interventions should be aimed at reducing self-stigma and increasing value.

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