Introduction

The social media advertising space has transformed in recent years with advertising efforts shifting from traditional media sources to social media platforms that drive brand awareness, build customer engagement, and influence consumer buying behavior (Bresciani et al., 2021; Yang et al., 2016). Social media has become an integral part of American culture, with many Americans relying on social media platforms as their primary medium to receive and share information (Appel et al., 2019). The difference in social media advertising compared to traditional media is in the two-way communication presented through social media. Whereas traditional media advertising comes through a source of one-way communication, social media advertising engages in two-way communication by disseminating information about products online and through social media channels to allow Internet users to access, share, and co-create content (Yang et al., 2016; Yeo et al., 2020).

Digital advertising campaigns on social media platforms are used by numerous recognizable brands, including Adidas, to drive engagement with consumers (Voorveld et al., 2018). With consumer presence on social media increasing annually, advertisers have been forced to update their methods of disseminating information about products and services (Tiago et al., 2014). Traditional marketing efforts such as direct marketing, email blasts, and television advertisements are quickly being replaced with social media advertising to reach more consumers. A Pew Research Center study found that nearly seven-in-ten Americans are present on social media today, and over 80% of adults between the ages of 18-49 use social media sites (Auxier & Anderson, 2021). With about half of social media users visiting these platforms multiple times per day, it is evident why advertisers have shifted focus to social media platforms ahead of other channels for promotional efforts (Appel et al., 2019; Auxier & Anderson, 2021).

While traditional media channels are still used in advertising, emphasizing social media advertising allows businesses to create content specific to a target demographic that can then be observed with social media monitoring software (Voorveld et al., 2018). Focusing advertising efforts on social media is also cheaper and more efficient than traditional media and allows advertisers to use extensive tracking software to analyze user behavior (Northcott et al., 2021). Social media is typically thought of as a communication platform for users, but it is increasingly becoming more of a medium for advertising and marketing (Oumayma, 2020). Due to technological innovations and evolving user demands in the market, social media is constantly changing and adapting (Appel et al., 2019).

Advertising online has shifted the dynamic between consumers and advertisers by giving more power to the customer in deciding when and how much advertising they view (Ahlluwalia & Singh, 2020). Because of this phenomenon, advertisers have used targeted messaging to appeal to many different audiences. Previous literature has found that consumer demographics can influence perceptions of online advertising and thus should be considered in online advertising research (Ahlluwalia & Singh, 2020; Vilčeková & Sabo, 2013). More specifically, many gender- and age- related differences have been found to influence consumer attitudes toward social media advertising (Taylor et al., 2011).

As the convergence of media continues to transform the advertising landscape, it has led consumers to expect tailored messaging relevant to their needs (Kumar & Gupta, 2016). A frequently overlooked consideration for firms in online advertising are the preferences of target audiences. Chu et al. (2013) found that social media users' beliefs about online advertising directly relates to their likelihood of seeking more information about the brand and engaging

with brand messaging. Advertisers can lose interest from users by using messages that are not personalized to specific individuals. Users view these 'wide-net' advertisements as intrusive and not worth their time (Kumar & Gupta, 2016).

Social media is typically considered to be a platform such as a website or application that allows users to send and receive digital content quickly (Appel et al., 2019). Advertisers have shifted their approach in consumer engagement by emphasizing the importance of building brand loyalty and keeping customers interested rather than trying to constantly attract new customers (Oumayma, 2020). For advertisers to effectively hold the attention of and influence consumer behavior, they must have a strong understanding of how social media users view online advertising formats (Cox, 2010). With the online advertising environment becoming increasingly cluttered, advertisers must employ focused campaigns that avoid formats found to be incompatible with the target audience (Cox, 2010). Social media metrics can be implemented by advertisers to understand target audience preferences and determine the most appropriate advertising formats for a social media campaign (Bresciani et al., 2021).

Despite the commonality of consumers and advertisers being actively engaged in social media, research investigating the utility of social media advertising for the cut flower industry is lagging. Research also does not provide quantifiable evidence on the efficacy of social media advertising for this industry. The competitive nature of the floral industry is forcing businesses to pursue innovative trends and refine their marketing skills to differentiate themselves and boost sales (Darras, 2021; Van Rooyen et al., 2001). Firms must understand social media users' preferences for cut flower advertising to craft effective messaging, drive awareness of products, and attract new customers. Widespread utilization of strategic social media advertising campaigns in the floral industry can lead to positive economic impacts that contribute to firms' growth and performance but have been limited in past research (Beier & Wagner, 2016; McCann & Barlow, 2015). Harnessing the power of social networking is necessary for floral retailers to provide meaningful information that can be easily passed on to other consumers (Barton & Behe, 2017). Additionally, the market for green industry products is approaching maturity, with sales increasing at a decreasing rate (Zaffou & Campbell, 2016). With the overall demand for flowers declining over the past decade, testing innovative marketing strategies that will attract new consumers and younger consumers is necessary (Zhao et al., 2016).

Literature Review

Social Media Engagement

In the current digital age, social media as a communicative channel has the potential to impact users through various marketing and advertising techniques (Kapoor et al., 2017). Social media consists of user driven platforms that diffuse content, dialogue and communication to broader audiences while offering an environment for networking (Kapoor et al., 2017). It is user-centric and represents the democratization of content (Oumayma, 2020). Marketing through social media utilizes social networking platforms as a tool to share consumer information, build customer relationships, increase sales, and offer engaging resources (Chen & Huang, 2020

Advertisements have become popular avenues for social media marketers to target consumers with unique ads according to their demographic, geographic, and psychological information (Voorveld et al., 2018). An innovative function of social media platforms is that they empower entities to customize their ad visuals and messages according to customer lifestyles and

interests (Zhu et al., 2016). For Americans aged 18 and older, YouTube (81%) and Facebook (69%) remain, since 2019, as the most widely used social media sites in the U.S. (Auxier & Anderson, 2021). Facebook is also the most widely used platform for social media marketing due to its services that can transform users into buyers by enhancing information exchange, social interaction, and self-exposure (Chen & Huang, 2020). In general, social media advertisements and TV commercials are the most influential ad formats for millennials, and Facebook is a major information source for young adult consumers (Yue et al., 2016). While Facebook remains a popular social media platform, others are quickly gaining users by integrating unique customizations and user experiences (Auxier & Anderson, 2021).

On social media platforms including Facebook and Instagram, businesses can host public pages to facilitate communication with users, promote their products, and offer users the opportunity to like, share, or comment on their posts (Yang et al., 2021). These user actions demonstrate interest toward a business or brand and may indicate broader interactions with potential to increase over time (Yang et al., 2021). Thus, understanding strategies that motivate social media users to interact with a business or organization and ultimately buy a product is paramount. Social media advertisements are one such strategy that may contribute to directing users to further explore a business and its products (Chen & Huang, 2020). Consumers who use social media daily are likely to encounter multiple ads, therefore, social media advertising is influential on the consumer purchase decision processes: need recognition, information search, evaluation of products, purchase decision, and post purchase behavior (Oumayma, 2020).

Image-based and textual-based elements within social media ads may influence how well the ad is received, liked, and acted upon by consumers throughout the purchase decision process (Ordenes et al., 2019). Previous studies have positioned images and visual graphics as key components of ads that capture consumer attention (Li & Xie, 2019; Ordenes et al., 2019). A study examined the effects of image content by collecting data on social media posts related to two product categories from Twitter and Instagram, and found a significant presence effect of image source and picture quality across both platforms (Li & Xie, 2019). High-quality, professional pictures led to higher engagement on both platforms for both product categories, and colorful images may lead to increased user engagement depending on the product (Li & Xie, 2019).

Likewise, Ordenes et al. (2019) confirmed through their text mining study of Facebook and Twitter that consumer brand posts using pictures had a positive effect on user message sharing and engagement. The study suggested that media content advertisers should combine different intentions at the text and image levels. Specifically, informational images in conjunction with a call to action will result in greater engagement than informational images combined with messages providing objective information (Ordenes et al., 2019). Informational images do not direct an action; consumers share messages more often when the messages contain information-oriented images (Ordenes et al., 2019). Within advertisements, complementary textual and visual elements, like information-based images and directive textual messages, lead to more consumer attention and sharing (Ordenes et al., 2019).

Within the scope of image-based elements in social media ads, animation is an evolving information visualization technique that may translate to enhanced consumer attention and engagement. Animation is the process of creating an illusion of movement by sequencing a series of static images which can improve viewer visualization (Goel & Upadyay, 2017). Increased attention may translate to increased arousal when viewing an image, which leads to an increased ability to retain and recall information from the animated item (Holt et al., 2020).

Recall in research studies has been utilized to measure an individual's ability to view information and remember key details to better understand cognitive processing of visual stimuli (Holt et al., 2020; Lamm et al. 2020) The ability to recall information from advertisements has been identified as a need within the research literature to create more targeted advertising strategies (Holt et al., 2020). The incorporation of animation into online, television, and multimedia advertisements represents a newer medium that may be perceived as a more distinctive source of communication that stands out from other advertisers (Goel & Upadyay, 2017). Animated banner ads were found to have better attention-grabbing effects on consumers than static ads due to their representation of motion which may enhance memory and recall of information (Yoo et al., 2004). Previous research has identified a need to further explore the effectiveness of animated content on consumer attitudes and ability to recall content (Holt et al., 2020; Lamm et al., 2020; Martinez et al., 2021). Investigation of animated advertisements within a floral marketing context is a relatively unexplored area of research.

Cut Flower Industry

Recognizing the importance of visual appeal in social media marketing, an agricultural market that may capitalize on social media marketing is the floriculture industry. Specifically, the cut-flower industry is ideal for social media advertising due to the applicability of floral visual appeal to photo media formats that attract more user likes, comments, and shares than other media formats (Chen & Huang, 2018). As a sector within the green industry, the cut flower market can capitalize on advertising efforts through an effect that can be persuasive (alter consumers' desire for a floral product), informative (provide useful information), or complementary (convince consumers that floral products match their preferences) according to Barton and Behe (2017).

Within this specialty market, there is also opportunity to customize ads and meet consumer expectations of tailored messaging that is in tune with their needs (Kumar & Gupta, 2016). One study found that social media enhanced the financial success of the flower industry, and social media had a statistically significant positive effect on mid-sized and large-sized florist business success (Prince & Prince, 2014). Previous studies have determined social media was the most significant component influencing consumer behavior, with ad exposure significantly impacting the purchase decision (Mohamed, 2020). According to recent research, demographic characteristics including age, education, and income affect consumer purchasing preference for cut flowers (Short et al., 2017; Zhao et al., 2016). Different types of cut flowers should be marketed in a way that addresses consumer needs and wants based on the sociodemographic characteristics of a particular floral retailer's target market (Yue & Hall, 2010). Consequently, demographic characteristics should be further explored within a social media advertising context to identify best strategies for tailoring to consumers' unique purchasing patterns for cut flowers.

Theoretical Framework

The Theory of Planned Behavior (TPB) provides a framework to understand specifically how cut-flower social media advertisements affect consumer purchasing intention and behavior. Ajzen's model postulates that human behavioral intention can be predicted and explained according to attitude, subjective norms, and perceived behavioral control (Ajzen, 1991).

Social Media Advertising within the TPB Model

For agricultural and environmental communicators, understanding how social media advertising impacts consumer perception can help to increase awareness, sales and potential loyalty from consumers (Yeo et al., 2020). TPB can be applied in this context because social media is a key element in the consumer decision-making process to purchase from a business. Based on a study exploring purchase intention for products promoted through social media advertising (Alalwan, 2018), social media is impactful on consumer intention to purchase a product. Another study found support for applying the TPB model in predicting intentions to use social networking sites, and that intention was an antecedent to behavior (Baker & White, 2010). Within TPB, behavioral intent is predicted through a) attitude, or how an individual views a behavior as positive or negative; b) subjective norms, or the social influences perceived by an individual related to a behavior; and c) perceived behavioral control, or an individual's perceived ability to perform a behavior (Ajzen, 1991). Behavioral intent is understood as an antecedent to behavior and is applied in the TPB to predict an individual's actual behavior (Ajzen 1991; Baker & White, 2010; Sanne & Wiese, 2017). Relatedly, purchase intention is the perceived likelihood that a consumer will buy a product or service in the future (Lee & Hong, 2016).

Purchasing behavior may be examined from a TPB approach because intentions mediate the impact of attitude on behavior, and attitude toward behavior significantly predicts buying behavior (De Cannière et al., 2009). All three TPB constructs significantly influenced consumer intention to purchase, which significantly predicted their actual purchase behavior, in multiple previous studies applying the theory to consumer purchasing (Baker & White, 2010; De Cannière et al., 2009; Sanne & Wiese, 2017; Yadav & Pathak, 2017). Specifically, adolescents who had more favorable attitudes toward engaging in social networking use, more perceived behavioral control to access social networking, and believed social networking was normative among their friends were found to have stronger intentions to engage in frequent social networking use (Baker & White, 2010). Those with stronger intentions to engage were also more likely to follow intention to behavioral performance (Baker & White, 2010).

Application of the TPB and identification of effective advertising strategies is relevant to agricultural communicators who utilize social media engagement to encourage consumer purchase intention toward cut flower products. Through social media advertising, consumer attitude toward cut flowers is impacted by perceived ad relevance, or the extent to which an advertised product resonates with the consumer's personal needs and values (Jung, 2017). If consumers perceive relevance in targeted social media ads, they are more likely to be interested in the ad (Jung, 2017). A statistically significant relationship was found between perceived ad usefulness, ease of using the social media platform, attitudes, and purchase intentions (Lin & Kim, 2016). Research results have revealed that attitude is the strongest significant predictor of behavioral intention within a social media and online context (Baker & White, 2010; Heirman & Walrave, 2012; Leng et al., 2011). Additionally, social media users with positive attitudes toward social media advertisements were more likely to engage in brand messages and seek information about products which can increase their purchase intention (Chu et al., 2013). By understanding consumers' existing attitudes toward purchasing cut flowers and presenting social media ads that reinforce a positive attitude, communicators can strengthen purchase intention to buy cut flowers.

The subjective norms variable within the TPB application toward intention to buy cut flowers is particularly influential within a social media advertising context. Subjective norms

involve how an individual perceives a behavior or lack of behavior occurring among their peers as well as how they perceive others' approval or disapproval of the behavior (Ajzen, 1991). Subjective norms are driven by personal referents like friends and family, and societal referents such as mass media. Since people mostly make social comparisons of their behavior within in-groups, they are more likely impacted by personal referents than societal (Ho et al., 2015). In the floriculture industry, this translates to friends, family, and peers influencing consumer purchase intention for cut flowers. Subjective norms are important to analyzing social media advertising because social media platforms are based on connections (Facebook "friends" and Instagram "followers") which allows users to inform others of which ads they like by liking, sharing or commenting on them (Sanne & Wiese, 2017).

Perceived behavioral control refers to how an individual perceives the extent of control they have in successfully completing a behavior (Ajzen, 1991). Perceived behavioral control varies across contexts and includes consideration of available resources, personal abilities and barriers to behavior performance (Ajzen, 1991). So, an individual who believes they have sufficient technology, skills, and time available to interact with social media advertising may be more likely to form an intention to actually engage. Previous studies found that perceived behavioral control significantly predicted intention in a social media context (Al-Debei et al., 2013; Baker & White, 2010; Leng et al., 2011) although it did not directly influence behavior in this context. However, a Facebook advertising study indicated that perceived behavioral control was not a significant predictor of consumer intention in a social media platform environment (Sanne & Wiese, 2017) potentially because users are already capable of utilizing Facebook and do not require additional abilities to engage with Facebook advertising.

Research Purpose and Objectives

The purpose of this research was to identify, measure, and describe consumers' attitudes, social norms, and perceived behavioral control of purchasing floral products after viewing a static or animated social media advertisement. The following research questions and hypotheses were used to guide this study:

RO1: Measure consumers' ability to recall information after viewing a social media advertisement as a static or animated graphic.

> H1: Respondents who receive the animated infographic will have a greater recall ability of the social media advertisement.

RO2: Predict consumers' intent to purchase floral products after viewing a static or animated social media advertisement for floral products.

> H2: After viewing the animated social media advertisement, respondents will have a greater intention to purchase floral products than those who viewed the static advertisement.

RO3: Measure consumers' intent to purchase floral products, moderating for internet use and age.

> H3: Respondents' internet use and age will impact their intent to purchase floral products after viewing a social media advertisement.

Methods

The current study employed an experimental design to address the research objectives. Using an online survey through Qualtrics, U.S. consumers 18 years of age or older were the target population for the current study. While part of a larger study focused on understanding consumer preferences for floral products, the current study examined the utilized audience segmentation to identify differences and potential market opportunities to engage with U.S. consumers about purchasing floral products through social media. Therefore, the current study examined consumer social media use, intention to purchase floral products, and advertising preferences on social media. The study was funded by the Floral Marketing Fund.

Within the current study, respondents were randomly assigned to one of seven treatment groups of advertisements: 1) tulip static; 2) roses static; 3) graphic static; 4) tulips animated; 5) roses animated; 6) graphic animated; or 7) none. The seventh group received no advertisement treatment and was used as a control group in this design. The control group had no responses to recall and were omitted from analysis in RO1 and RO2 but included in RO3. The advertisements were presented to respondents as a standalone image. Informational visual images were combined with directive textual messages in each advertisement to present complementary but not identical cues to viewers (Ordenes et al., 2019). In the present context, an informational image offers factual information open to the viewer's interpretation (images of flowers) and a directive textual message directs the viewer to act ("give flowers to show you care").

The static advertisements can be viewed in Figures 1 – 3. The same advertisements were used in the animated version; however, flowing text and an overlayed filter provided bokeh light effects that highlighted the flowers and text on the animated tulip and rose advertisements (treatments 4 and 5). The animated graphic treatment (treatment 6) utilized flowing text, pop-up animation to resemble the flowers as growing, and a bee circling the flowers. The animations on all advertisements were five seconds in length following the recommendations from Facebook (Facebook, 2021) and the timing feature on Qualtrics was used to verify all respondents spent the minimum amount of time viewing the advertisement. Once the respondents viewed the advertisement, they were asked about their preference for the advertisement, attitudes, subjective norms, perceived behavioral control and intent about buying floral products. Each of the associated scales were evaluated *ex post facto* and found to be reliable ($\alpha \geq .80$).

The researchers obtained Institutional Review Board approval and an expert panel consisting of experts in consumer research, survey methodology, economics, and horticulture evaluated the instrument for face and content validity. The instrument was soft launched through Qualtrics and 5% of the sample was collected. The data collection was paused after the soft launch to verify the proper distribution of respondents into each of the treatment groups, design of the scales was appropriate, and scale reliability was calculated. Ensuring the design, reliability, and accuracy of the survey, data collection resumed until all responses were collected.

Figure 1. Tulip static ad   Figure 2. Roses static ad   Figure 3. Static graphic ad

A non-probability, opt-in sample was obtained for the current study. Within public opinion research, non-probability sampling is an acceptable research methodology to identify and measure consumer perceptions (Lamm & Lamm, 2019). Qualtrics was contracted to obtain respondents representative of the 2020 U.S. Census data for the current study, based on gender, race, geography, and age. The experimental design of the study and the random assignment of respondents to one of the seven treatment groups, accounted for any errors that may occur with non-probability sampling techniques (Baker et al., 2013). A total of 8,488 responses were collected. Of the responses, 45% (*n* = 3,823) were male and 55% (*n* = 4,665) were female. The respondents' ages were groups by generation, and 9.1% (*n* = 776) were in the Silent Generation, 28.3% (*n* = 2,512) were Baby Boomers, 19% (*n* = 1,613) were Generation X, 29.6% (*n* = 2,512) were Millennials, and 13.9% (*n* = 1,181) were Generation Z. The respondents were primarily white (71.5 %, *n* = 6,072) and had some college education (73.4%, *n* = 6,237). Table 1 has detailed demographic information about the respondents.

Table 1
Demographics of Respondents (N = 8,488)

	n	*%*
Sex		
Male	3,823	45.0
Female	4,665	55.0
Age		
Silent Generation (76 - 93)	776	9.1
Baby Boomers (57 - 75)	2,406	28.3
Generation X (41 - 56)	1,613	19.0
Millennials (25 - 40)	2,512	29.6
Generation Z (18 – 24)	1,181	13.9
Race		
White	6,072	71.5
Black	1,161	13.7
Hispanic	530	6.2
Asian	322	3.8
Native American	161	1.9
Pacific Islander	43	0.5
Other	199	2.3
Education		
High school or less	2,251	26.5
Some college	2,650	31.2
4-year college degree	1,843	21.7
Graduate or Professional degree	1,744	20.5
Political Affiliation		
Republican	3,278	38.6

Democrat	2,236	26.3
Independent	2,315	27.3
Other	659	7.8

To address the research objectives within the study, the data were analyzed for descriptive and inferential statistics. The data were analyzed using SPSS 26.0.

Results

RO1: Consumers' ability to recall information after viewing a social media advertisement as a static or animated graphic.

Respondents were randomly assigned to one of seven treatment groups: tulip static (n = 1,257), roses static (n = 1,255), graphic static (n = 1,247), tulip animated (n = 1,152), roses animated (n = 1,164), graphic animated (n = 1,164), or control – no advertisement (n = 1,273). To measure respondents' ability to recall the advertisement, respondents receiving one of the six advertisements (n = 7,215) were asked what type of flower was featured in the advertisement. Over half (53%) of the respondents who viewed the static roses advertisement had the greatest ability to correctly identify the type of flower featured (n = 665), while respondents receiving the clipart graphic were the least able to correctly identify the type of flower featured (n = 236, 20.3%). Overall, the 52.1% (n = 3,759) respondents receiving the static treatments were able to correctly recall the type of flowers within the advertisement; whereas 47.9% (n = 3,456) of respondents receiving the animated treatments were able to correctly recall the type of flower in the advertisement (Table 2). Therefore, the first hypothesis, which posited those respondents who received the animated infographic would have a greater recall ability of the social media advertisement, was rejected. To further understand respondents' ability to identify the type of flower by treatment type and recall were analyzed using an ANOVA. A statistically significant difference in respondents' ability to correctly recall the flower in an advertisement by treatment type was found (Table 2).

Table 2
Respondents' ability to identify advertisement flower by treatment type

	Correct Answer %					
	Static		Animated		$F_{(5,7,209)}$	p
Treatment	n	%	n	%		
Tulips	524	41.7	421	36.5	134.45	.00
Roses	665	53.0	507	44.5	125.93	.00
Graphic	382	30.6	236	20.3	195.15	.00

RO2: Predict consumers' intent to purchase floral products after viewing a static or animated social media advertisement for floral products.

A general linear model was used to predict if the type of treatment had a statistically significant impact on respondents' intent to purchase floral products. It is relevant for floral social media retailers to know if animated advertisements are preferred by consumers when interacting with content related to cut flowers. After viewing the treatments, the model was not statistically significant in predicting respondents' intention to purchase local products after viewing an animated or static advertisement ($F_{1,7021} = .141$, $p = .70$). Since the model did not predict respondents' intent to purchase floral products, hypothesis two was rejected (Table 3).

RO3: Measure consumers' intent to purchase floral products, moderating for internet use and age.

An ANCOVA was used to determine if respondents' internet use or age moderated their intent to purchase floral products. Sociodemographic factors have been identified as important to analyze in expanding the market for cut flowers and understanding how to create targeted advertising materials for unique audiences. Respondents' intent to purchase was moderated by their age and their hours of internet use ($F_{3, 7024} = 141.60$, $p = .00$). This finding did support H3 in that both age and internet use would impact respondents' intent to purchase floral products; therefore, the hypothesis was accepted.

Table 3

Intent to purchase floral products by treatment, internet use, and age (N = 8,488)

Variable	Model 1			Model 2		
	B	β	*SE*	*B*	β	*SE*
Constant	.057		.104	.003		.110
Treatment	.003	.005	.004	.005	.007	.005
Attitude*	.357	.323	.010	.359	.322	.010
Subjective Norm*	.584	.528	.010	.547	.496	.010
Perceived Behavioral Control	.003	.002	.010	.046	.039	.011
Internet Use (hours)*				.001	.003	.002
Age*				-.007	-.134	.000
R^2	.508			.531		

Note. * $p < .00$

Conclusions & Discussion

This research sought to identify and understand the antecedents of buying behavior on social media by analyzing consumer preferences, internet use, and intentions related to buying floral products. The study provides key implications for agricultural communication practitioners, specifically applied within the floral industry. With many Americans relying on social media as their main medium for receiving and sharing information (Appel et al., 2019), floral businesses should not ignore the potential of social media in reaching new and existing

customers. With 80% of adults between 18 and 49 years old using social media sites (Auxier & Anderson, 2021) and emerging opportunities to collect data on users' preferences and online habits (Oumayma, 2020), floral communication practitioners can create targeted advertising messages that will resonate with their key audiences. The development of creative marketing strategies based on sociodemographic characteristics is crucial for enlarging the cut flower market and enhancing consumers' perception of floral products as unique and special (Yue & Hall, 2010). Specific considerations for social media cut flower advertisements are highlighted according to findings from this research.

Before applying the findings of the current study further, it is important to note the limitations associated with this research. The treatments tested within this study included photos of common flowers used within a variety of floral products – roses and tulips. No additional information was provided to the respondents about the type of flower; therefore, respondents relied upon their previous knowledge to correctly identify the flowers within the treatments for this research. As with other research utilizing TPB, the current research only measured respondents' intention to purchase floral products and not actual behavior. Finally, respondents of this study were recruited to participate using internet-driven methods. Therefore, these individuals may be inherently different than the overall general population in their use of the internet, and this was a key variable within the current study. While the design of this study did account for sampling errors, these limitations should be noted for the research findings.

According to results from this study, social media advertisements focusing on cut flowers should utilize static photos over animated graphics. This study provides insight on static versus animated elements within floral advertisements which has not been thoroughly covered in existing research on best floral advertising practices (Prince & Prince, 2014; Short & Waliczek, 2017; Yue et al., 2016). The authors rejected the first hypothesis that viewing the animated treatment would enhance the recall ability of the social media advertisements. However, because respondents who received the static advertisements had higher recall of the type of flowers they saw, static advertisements may be more beneficial for floral advertising. By rejecting the second hypothesis, the findings revealed animated social media advertisements failed to increase respondents' intent to purchase floral products.

Animated items may increase attention and arousal among viewers, thereby increasing ability to recall information (Holt et al., 2020), when presenting scientific topics or more conceptual subjects than purchasing cut flowers. However, the use of static photos in the advertisements did positively impact respondents' ability to identify the type of flower they viewed. This aligns with previous research that has determined visual images and photos are important components of advertisements to capture consumer attention (Li & Xie, 2019; Ordenes et al., 2019). Floral products already possess strong visual appeal applicable to photo media formats that effectively engage viewers (Chen & Huang, 2018). The practical step needed is for communication practitioners to capitalize on this visual appeal through social media advertisements that incorporate quality images of floral products. It should be noted, however, that one image of floral products presented to respondents was likely not enough to significantly influence their purchase intention.

Floral social media advertising efforts should concentrate on consumer attitudes and subjective norms in consideration of the TPB framework underlying this study. This research supports previous findings indicating that within a social media context, attitudes and subjective norms predict behavioral intent which in turn predicts behavior (Baker & White, 2010; Heirman & Walrave, 2012; Leng et al., 2011; Sanne & Wiese, 2017), but the model was not significant

when including different treatments of animated or static advertisements. Thus, communicators within the agricultural market of cut flowers should focus on improving consumer attitudes toward cut flowers by presenting social media advertisements that reinforce a positive attitude. Since users with positive attitudes toward social media advertisements are more likely to engage in brand messages and seek information about products (Chu et al., 2013), consumers may be more likely to engage with floriculture advertisements they perceive favorably.

Subjective norms may be more challenging for advertisers to directly influence since they involve personal referents based on online connections. However, by improving attitudes toward cut flowers through social media advertisements, practitioners may increase overall engagement with advertisements (Sanne & Wiese, 2017) which can help positively influence subjective norms toward floral social media content. Monitoring consumer attitudes toward floriculture advertisements can also provide insight to advertisers on how to keep existing customers interested and build brand loyalty instead of focusing on how to reach new customers (Oumayma, 2020). Additionally, the third component of the TPB, perceived behavioral control, could be more impactful in future research related to floral products. Previous studies have found perceived behavioral control significantly predicted intention in a social media context (Al-Debei et al., 2013; Baker & White, 2010; Leng et al., 2011). In future research investigating consumer perception toward social media marketing strategies, the inclusion of other theories beyond TPB may be beneficial to further understanding consumer intention.

This study determined that age and internet use significantly predicted intent to purchase floral products, leading to accepting the third hypothesis. This falls in line with previous literature that has shown consumer demographics can affect perceptions of online advertising (Ahlluwalia & Singh, 2020; Vilčeková & Sabo, 2013). The present study also supports research within the cut flower industry that consumer demographics influence purchasing preference and must be considered when developing advertising materials for a target audience (Short et al., 2017; Yue & Hall, 2010; Zhao et al., 2016). Therefore, information should be collected on customer demographics and preferences before advertising messages or campaigns are created. Floral advertisers should create targeted ads by prioritizing strategies that improve attitude, subjective norms, and perceived behavioral control specific to social media user age groups because this research indicated respondents' intent to purchase floral products was moderated by their age and internet use.

Ultimately, this research highlights the need for communication experts to strategically utilize social media to engage with consumers through relevant and meaningful advertisements. Understanding factors affecting purchase behavior and respective market characteristics is key to keeping cut flowers as a desired product in the consumer's mind amidst a constantly changing and competitive floral business market (Zhao et al., 2016). Measuring consumers' attitude and perceptions toward existing floral advertisements can also provide advertisers with insight into strategies that are working to increase awareness of and loyalty to the company (Yeo et al., 2020). As consumers rely more upon technology to form attitudes and learn about products, the floral industry can effectively engage with consumers to increase the demand and purchasing of floral products.

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