

Extension Agent Intention to Participate in Supplemental Professional Development Programming

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Abstract

This study sought to investigate the motivating factors for Georgia Extension Agents to participate in supplemental professional development opportunities beyond those required for their current role. The study was based on Ajzen's theory of planned behavior, focusing on intention, attitude, subjective norm, and perceived behavioral control. The correlation analysis results indicated that attitudes and perceived behavioral control are statistically significant and positively correlated with intention, suggesting that favorable attitudes and high confidence in completing professional development programs increase the participation rate. Moreover, multiple regression analysis revealed that attitudes and perceived behavioral control collectively accounted for 48.6% of the variance in intention, highlighting the effects of both external environmental influences and personal motivation in affecting individuals' intention to participate in supplemental professional development programs.

Introduction

Cooperative Extension Agents (agents) have been instrumental in disseminating critical knowledge and fostering community development across diverse fields, ranging from agriculture and natural resources to family and consumer sciences and positive youth development (Rafie et al., 2021). Agents play a pivotal role in bridging the gap between research-based knowledge and community needs. Demands on agents continue to evolve in an ever-changing landscape, creating the necessity for robust and tailored professional development opportunities (Stone & Coppernoll, 2004). As the needs and expectations of the communities they serve continue to evolve, agents are faced with increasingly complex challenges that require

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specialized expertise, adaptable skills and innovative approaches. To meet these needs effectively, it is critical for Extension leadership and organizational development units to establish and maintain a strong framework for professional development that supports agents in their various capacities (Garst et al., 2014; Smith et al., 2017).

Despite the demonstrated importance of quality training opportunities, there is no established Extension professional development model in the United States. While there are national opportunities available, most Extension professional development opportunities are conducted at the state level (Garst et al., 2014). Within this context, each state is tasked with designing their own training model for new and experienced agents. The need to develop relevant and timely training has led to research being conducted throughout the nation to determine major needs and effective strategies that have been put in place in other states (Benge et al., 2021, 2011).

Agents undergo a variety of training to enhance their skills, knowledge and effectiveness in their roles. The specific types of training can vary based on the focus area of the Extension program and the needs of the communities they serve (Keith et al., 2017). Agents often receive training in specific subject areas relevant to their Extension work, such as agriculture, horticulture, family and consumer sciences, nutrition, natural resources and 4-H youth development (Lakai et al., 2012). Such training help agents stay current with the latest research, technologies, and best practices in their respective fields (Baker & Hadley, 2014). Agents may also engage in workshops that help them improve their organizational, communication, and leadership skills, including program development, evaluation, and conflict resolution (Vines et al., 2018). Additionally, agents working with 4-H youth programs may be provided with specialized training on positive youth development, curriculum design, and experiential learning methods (Garst et al., 2007).

The first national assessment of professional development needs among Extension educators across all program areas was conducted with agents from 69 institutions (Lambur, 2012 as cited in Garst et al., 2014). Among the needs identified in this study were evaluating and reporting program effectiveness. Many peer-reviewed studies have explored the importance and impact of agent professional development at the onset and throughout the career. For example, agents who participate in effective training often exhibit higher levels of job satisfaction, improved skills and a deeper understanding of emerging trends in their respective fields; furthermore, they are better equipped to address community challenges, resulting in more successful programming and greater community engagement (Benge et al., 2021). In addition to historical programming norms, the COVID-19 pandemic led to the rapid advancement and adoption of digital tools and platforms (Classen, 2023). Many agents actively pursued technological training and were better positioned to disseminate information efficiently, engage with more diverse clientele, and adapt to changing communication preferences (Greene et al., 2020).

Despite the benefits of professional development, agents face challenges that hinder their access to and engagement in meaningful professional development experiences. For example, budget constraints often limit the availability of training opportunities, preventing agents from attending workshops, conferences, and courses that could enhance their skills and knowledge (Donaldson et al., 2019). Time constraints and heavy workloads were identified as significant barriers as agents may struggle to balance their responsibilities in their respective counties and their opportunities for ongoing education (Thomas et al., 2018). Another challenge that comes with broad-scale professional development opportunities is the ability for educational opportunities to be tailored to specific county needs. Extension covers a wide range of diverse content areas and clientele demographics, so professional development opportunities are generally most beneficial when tailored to unique contexts (Benge et al., 2021). Agents may find it difficult to locate training programs that align with their specific areas of expertise and the unique needs of their communities. This misalignment can lead to frustration and hinder the engagement in additional professional development programs beyond those required (Benge et al., 2021).

To understand the current state of Extension professional development, the current study sought to identify the factors influencing agents' intention to participate in supplemental professional development opportunities. For the purposes of the study, supplemental professional development was operationally defined as additional professional development opportunities that are not mandated or required for the agent. According to the theory of planned behavior, behavioral beliefs, normative beliefs and perceived behavioral control influence the intentions of an individual's behavior (Ajzen, 1991; Francis et al., 2004).

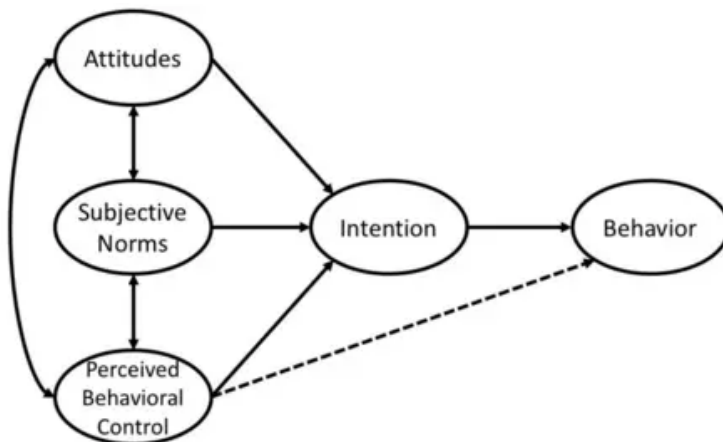
Conceptual Framework

Icek Ajzen is credited with establishing the theory of planned behavior (TPB) in 1985 (Figure 1). The theory was developed to address the limitations of the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) related to lack of behavioral control (Ajzen, 1991). An individual's intention to perform or not perform a behavior is central to both the theory of reasoned action and the theory of planned behavior.

Intentions are presumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior. Generally, the stronger the intention to engage in a behavior, the more likely it is to be performed (Ajzen, 1991). A positive regard toward a specific behavior may be an indication that an individual will participate in that behavior, but intention plays an important role in the decision to actually carry out the behavior. According to Ajzen, while intention is the major predictor of behavior, there are additional factors that can affect an individual's actual control or ability to perform some behaviors. These factors may include "time, money, skills, cooperation of others" among other influences (Ajzen, 1991 p. 182). According to the theory of planned behavior, behavioral beliefs, normative beliefs and perceived behavioral control all influence the intentions of an individual's behavior (Ajzen, 2011; Francis et al., 2004).

Figure 1

Theory of planned behavior model adapted from Ajzen (2005).



The theory of planned behavior has frequently served as the theoretical frame within which to examine which factors influence an individual's decision to pursue behaviors of interest. In the context of Extension, this might be agents adopting a new agricultural awareness website (Brain et al, 2009), using knowledge gained during a nutrition class to cook healthier meals (Koenings & Arscott, 2013), or behaviors related to Extension personnel themselves (Thomas et al., 2018). In a qualitative study utilizing the theory

of planned behavior, researchers examined attitudes and perceptions of Tennessee Extension personnel toward professional associations (Thomas et al., 2018). The study identified three themes as relevant to personnel participating in associations, (1) networking/connection, (2) value, and (3) membership costs. These themes were relevant to both members and nonmembers of Extension professional associations (Thomas et al., 2018). Furthermore, Lamm et al. (2012) conducted a quantitative study guided by the theory of planned behavior to determine the factors influencing members of the National Association of Extension 4-H Agents to serve in leadership roles within the association. The study found that “a sense of belonging and inclusiveness with the general membership can greatly improve the quality of the leadership experiences these individuals have, reinforcing their desire to affiliate and identify with being part of an association at the national level” (Lamm et al., 2012, p. 1).

While the theory of planned behavior can help provide insight and guide studies investigating factors that influence the behaviors of Extension professionals and their clientele, it has also received criticism. Many of the theory’s critics accept the basic components of reasoned action but suggests it lacks sufficiency (Ajzen, 2011). A common criticism is that it is too “rational, not taking sufficient account of cognitive and affective processes that are known to bias human judgments and behavior” (Ajzen, 2011, pp. 1115-1116). Other critics say the theory doesn’t adequately take into account the range of emotions an individual is capable of as well as characteristics such as self-direction (Ajzen, 2011).

Purpose and Research Objectives

The purpose of the current study was to examine Extension professionals’ perception of, and intention to participate in, supplemental professional development. The following research objectives informed the study:

1. Describe Extension professionals’ intent to participate in supplemental professional development.
2. Identify Extension professionals’ attitude towards supplemental professional development, subjective norm associated with supplemental professional development, and perceived behavioral control over supplemental professional development.
3. Identify the relationship between attitude, subjective norm, perceived behavioral control, and intention to participate in supplemental professional development.
4. Identify how attitude, subjective norm, and perceived behavioral control predicts intention to participate in supplemental professional development among Extension professionals.

Methodology

Instrument Development

The questionnaire for this study was developed using guidance from Constructing a Theory of Planned Behavior Questionnaire (Ajzen, 2002). Specifically, behavioral outcomes, normative referents, and control factors were identified by an extensive content analysis of the literature related to Extension professional development as consistent with guidance from Bannigan and Watson (2009) and Fisher et al. (2001). Content analysis is a technique researchers use to indirectly study human behavior through analyzing their communications (Fraenkel et al., 2019). “Document analysis is a low-cost way to obtain empirical data as a part of a process that is unobtrusive and nonreactive” (Bowen, 2009, p. 38). The results of the content analysis process were used to inform the study data collection questionnaire. Deductive content analysis methods similar to those used by Jung et al. (2022) were used to code the data collected from relevant research articles focused on Extension professional development (e.g. Benge et al., 2021; Benge et al., 2011; Lamm et al., 2021; Thomas et al., 2018).

Content validity of the instrument was assessed based on an expert panel review followed by a pilot test (Carroll et al, 2022). The expert panel conducted a critical review of the instrument for content, completeness, readability and other aspects (Bannigan & Watson, 2009). The panel consisted of an expert from Extension, an expert on facilitation and a psychometrics/test development expert. The instrument for this study was piloted with a representative sample of Extension Agents in Georgia. Characteristics considered when selecting the pilot group included: (1) diversity in experience level, (2) program area (4-H, Family and Consumer Sciences, Agricultural and Natural Resources) assignment, and (3) geographical location. Data from the pilot test were analyzed using SPSS to establish face and content validity (Ajzen, 2002). Pilot data were not included in the full data analysis.

Within SPSS each questionnaire item was scored and analyzed, any reverse coded items were updated prior to analysis (Francis et al., 2004). Each item was inspected for potential data entry errors and to ensure data normality. As outlined by Francis et al. (2004), the reliability of direct measures was assessed using internal consistency. The questionnaire asked participants to rate their level of agreement using a five-point Likert-type scale with items regarding participation in supplemental professional development experiences. The attitude scale included six bipolar pairs with each statement containing five possible responses coded with values 1-5. A Cronbach's alpha of 0.90 was observed. The subjective norms scale included two items on a five-point Likert-type scale where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. A Cronbach's alpha of 0.62 was observed. Although below preferred thresholds, the value was deemed acceptable based on existing guidance within the literature (Kopalle & Lehmann, 1997; Schmitt, 1966; Taber, 2018). The perceived behavioral control scale included three items on a five-point Likert-type scale where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. A Cronbach's alpha 0.55 was observed, below the traditional threshold for acceptability (Tavakol & Dennick, 2011); however, the scale was deemed acceptable and retained based on guidance within the literature regarding previously established scales (Peters, 2014). The intent to participate in supplemental professional development scale consisted of three items on a five-point Likert-type scale where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. A Cronbach's alpha 0.86 was observed.

Data Collection

The targeted population of participants in this study was University of Georgia Extension Agents. Participants were required to serve in one or more of the 159 counties in Georgia. Study participants had a wide range in age (23 to 68 years old) and number of years in Extension (less than one year to 35 years). Based on recommendations from the Tailored Design Method (Dillman, 2014), pre-survey emails were sent by each of four District Extension Directors containing information regarding the study, including the potential risks and benefits of participation. The questionnaire was administered through the online survey platform Qualtrics. Potential participants were then contacted in March 2023, through email communication sent through each of the four district agent email listservs with an invitation to participate in the online questionnaire. Those who provided informed consent to participate in the study were invited to complete the online questionnaire. To encourage participation, a series of four reminder emails about the study were sent through the listserv as well.

Demographically, participants were asked to identify their years of service in Extension, professional role, assigned program area, membership in Extension professional associations, participation in supplemental professional development programs, highest degree completed, gender, age, race and ethnicity, marital status, and number of children.

The survey yielded 126 usable responses out of 300, representing a 42% response rate. The demographics collected by the survey are shown in Table 1. The majority of agents who responded were female (63.5%), married (71.4%), between 30 and 49 years old (54%) and had two or less children (81.8%).

Participants' lengths of time working in Extension varied from 3 months to 35 years with the majority of respondents working for Extension less than 10 years (57.1%). The majority of respondents had Agricultural and Natural Resources (ANR) (46.8%) and/or 4-H (46%) program area appointments. 77% of respondents had a Master's degree as their highest level of education with 50% having membership in Epsilon Sigma Phi (ESP) and/or Georgia Association of Extension 4-H Youth Development Professionals. Of the 126 responses analyzed, the majority (38.1%) had not participated in any supplemental professional development programs.

Table 1*Demographics of respondents*

<i>Characteristic</i>	<i>f</i>	<i>%</i>
Gender		
Female	80	63.5%
Male	39	31.0%
Prefer not to say	5	4.0%
Non-binary / third gender	2	1.6%
Marital Status		
Married	90	71.4%
Never married	24	19.0%
Prefer not to say	7	5.6%
Widowed	2	1.6%
Divorced	2	1.6%
Separated	1	0.8%
Age		
20 to 29	25	22.1%
30 to 39	35	31.0%
40 to 49	26	23.0%
50 to 59	21	18.6%
60 and over	6	5.3%
Years worked in Extension		
0 to 5	47	35.7%
6 to 10	27	21.4%
11 to 15	15	11.9%
16 to 20	15	11.9%
21 to 25	11	8.7%
26 to 30	4	3.2%
31 to 35	2	1.6%
Number of Children		
None	43	34.1%
One	23	18.3%
Two	37	29.4%
Three	8	6.3%
Four	6	4.8%
Five or more	3	2.4%
Prefer not to say	6	4.8%
Program Area Appointment		
Agriculture and Natural Resources	59	46.8%
4-H	58	46.0%
Family and Consumer Sciences	18	14.3%
No program area appointment	2	1.6%

<i>Characteristic</i>	<i>f</i>	<i>%</i>
Highest Level of Education		
Bachelor's Degree	25	19.8%
Master's Degree	97	77.0%
Professional degree	1	0.8%
Prefer not to say	3	2.4%
Membership in Professional Associations		
GAE4-HYDP	63	50.0%
ESP	63	50%
GACAA	54	42.9%
ANREP	25	19.8%
GEAFCS	19	15.1%
Other	17	16%
Participation in Professional Development Programs		
None	48	38.1%
Other	38	30.4%
Extension Academy	25	19.8%
Extension Facilitation Program	11	8.7%
ExTEND	10	7.9%
LEAD21	0	0.0%
AGL	1	0.8%

Data Analysis

To address the study objectives, descriptive and correlational statistical analysis were completed on the data. Data were analyzed to determine the predictive capacity of the model supplemental professional development participation intent using multiple linear regression. Frequency counts for individual items within the questionnaire are presented in Tables 2-5. Following frequency count analysis, Cronbach's alpha was calculated for each sub-scale as a measure of internal consistency, results are presented in Table 6. A correlation matrix representing the nature of the relationships between sub-scales is presented in Table 7. Lastly, a summary of the multiple linear regression analysis is presented in Table 8 and Table 9.

Results

The majority of respondents agreed or strongly agreed with statements regarding their intention to participate in supplemental professional development opportunities (Table 2). Respondents agreed ($n=73$) or strongly agreed ($n=23$) that they intend to participate in supplemental professional development opportunities beyond those currently required for their role in Extension.

Table 2

Intent to participate in supplemental professional development

<i>Statement</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
I expect to...	1	6	20	79	19
I want to...	0	11	16	71	27
I intend to...	0	8	20	73	23

Items associated with respondent attitude regarding supplemental professional development are displayed in Table 3. Items marked with (R) were reverse coded in SPSS based on their wording within the instrument. When asked about participating in supplemental professional development opportunities, most participants selected a 4 or 5 indicating a positive response. When asked to identify between the wrong thing to do and the right thing to do, most respondents either selected 5 (n=51) or 4 (n=44) indicating their opinion that it is the right thing to do.

Table 3*Attitude regarding supplemental professional development*

<i>Statement</i>	1	2	3	4	5
	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
The wrong thing to do: The right thing to do	4	9	18	44	51
Worth my professional time: Not worth my professional time (R)	12	10	11	40	44
Good practice: Bad practice (R)	2	7	20	46	49
Pleasant: Unpleasant (R)	5	19	28	33	38
Worth my personal time: Not worth my personal time (R)	9	25	29	25	28
Necessary: Unnecessary (R)	3	19	25	35	40

The subjective norm items associated with supplemental professional development are displayed in Table 4. Most of the participants (n =68) agreed that it is expected of them to participate in additional professional development opportunities.

Table 4*Subjective norm regarding supplemental professional development*

<i>"...participate in professional development experiences beyond those currently required for my role in Extension"</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
I feel under social pressure to...	7	44	36	34	4
It is expected of me that I...	0	12	26	68	19

Items associated with perceived behavioral control scale are displayed in Table 5. Items marked with (R) were reverse coded in SPSS based on their wording within the instrument. When responding to the statement, a majority of the participants agreed (n=71) or strongly agreed (n=24) that they are confident they can participate in supplemental professional development opportunities beyond those currently required for their role in Extension. Table 6, provides a summary of scale scores ranked in mean order from highest to lowest.

Table 5*Perceived behavioral control regarding supplemental professional development*

“...participate in professional development experiences beyond those currently required for my role in Extension”

	Strongly disagree <i>f</i>	Disagree <i>f</i>	Neutral <i>f</i>	Agree <i>f</i>	Strongly agree <i>f</i>
I am confident that I can...	2	8	19	71	24
It is up to me whether I...	4	15	28	64	14
It is difficult for me to...(R)	12	34	34	41	4

Table 6*Descriptive statistics*

	N	Minimum	Maximum	Mean	SD
Intention	124	1.67	5.00	3.89	0.70
Attitudes	108	1.50	5.00	3.82	0.92
Perceived Behavioral Control	124	1.67	5.00	3.45	0.69
Subjective Norms	125	2.33	5.00	3.40	0.55

Correlation between each of the 3 scales were calculated. Correlation coefficients and statistical significance between items are provided in Table 7. Levels of statistical significance are noted below and interpreted according to Davis's (1971) convention. Intention (.607) and perceived behavioral control (.282) had a substantial association with attitude variable observed, indicating strong positive correlations that are statistically significant at the 0.01 level.

Table 7*Correlation matrix of theory of planned behavior scales*

	1.	2.	3.	4.
1. Intention	-			
2. Subjective Norms	-.077	-		
3. Perceived Behavioral Control	.509**	-.308**	-	
4. Attitude	.607**	-.077	.282**	-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Multiple linear regression analysis was undertaken to analyze the amount of variance in intention based on the predictor variables of attitudes, subjective norms, and perceived behavioral control, (Table 8). The adjusted R² value was 0.454, indicating 45.4% of the variance in the dependent variable (intention) was explained by the predictors in the model.

Table 8*Model summary of multiple linear regression analysis predicting intention*

	R	R ²	Adjusted R ²	Std. Error of the Estimate
1. ^a	.685 ^a	0.470	0.454	0.485

^a Dependent variable: intention. Predictors: Constant, Attitudes, Subjective Norms, Perceived Behavioral Control

Results of the multiple linear regression analysis are presented in Table 9. The results indicated that attitudes (Beta = 0.365) and perceived behavioral control (Beta = 0.325) both had p values of less than 0.00, indicating a statistically significant positive correlation with the dependent variable intention.

Table 9*Parameter estimates from multiple linear regression analysis predicting intention to participate in supplemental professional development programs (N = 126).*

Model	Variable	Unstandardized Coefficients		Standardized Coefficients	t Statistic	P Value
		B	Standard Error	Beta		
	Constant	1.188	0.399		2.979	0.00*
	Subjective Norms	0.07	0.065	0.081	1.07	.287
	Perceived Behavioral Control	0.325	0.074	0.345	4.393	0.00**
	Attitudes	0.365	0.053	0.516	6.866	0.00**

Note. * $p < .05$; ** $p < .01$. ^a Dependent variable: intention.

Conclusions, Discussion, and Recommendations

The purpose of this study was to identify what factors motivate University of Georgia Extension personnel to participate in supplemental professional development opportunities utilizing Ajzen's (1985) theory of planned behavior. Ajzen believed individuals' behavioral intentions are influenced by their attitudes, subjective norms, and perceived behavioral control (Asare, 2015). The theory suggests these factors play a crucial role in determining human behavior. While there are some individual differences between respondents, the results from the study were consistent with Ajzen's theory. Although these results offer a comprehensive understanding of the research subject, it is crucial to acknowledge the limitations encountered in the course of this study which may affect the generalizability and interpretation of the findings. Therefore, this conclusion section aims to not only summarize the key findings but also to reflect on these limitations and suggest avenues for future research and practical implications for the field of Extension.

Implications and Recommendations for Practice

Extension agents serve diverse clientele with everchanging needs which requires them to be equipped with broad skillsets. Professional development through new employee training, supplemental training, and professional associations is a common way for agents to gain the skills needed to carry out their work. Many factors may affect why agents decide to participate or not participate in supplemental professional development opportunities beyond those required for their professional role (Donaldson et al., 2019; Thomas et al., 2018).

Regarding the TPB constructs, the results reveal that participants generally held positive attitudes and high intentions towards participating in supplemental professional development opportunities. This positive outlook suggests that agents value such opportunities, which can be leveraged by administrators and programmatic leaders to design and promote relevant programs. In the context of TPB, a person's attitude represents their overall evaluation or favorability toward performing the behavior (Ajzen, 1985). Generally, this factor reflects the individual's positive or negative feelings about the behavior. Perceived Behavioral Control refers to the individual's perception of how easy or difficult it is to perform the behavior. It includes factors related to self-efficacy, perceived barriers and resources that may facilitate or hinder the execution of the behavior. The result of this study indicated that both attitudes and perceived behavioral control have an impact on agents' intention to participate in supplemental professional development opportunities, which is consistent with TPB.

Based on the results from this study, Extension administrators and professional development personnel looking to encourage participation in training programs may want to focus on how professional development can lead to the acquisition of skills and content area expertise (attitude), development of a professional network (subjective norm), and the support of Extension administration to undertake such developmental opportunities (perceived behavioral control). Therefore, it may be advisable to engage agents in the training development process to ensure the professional development opportunities offered are ones of personal and professional interest. For example, developing training in direct response to stated desires may be more effective than offering supplementary training which may be deemed as irrelevant or uninteresting.

In particular, the results of the study indicate that attitude and perceived behavioral control are the most significant factors. Therefore, a recommendation would be to ensure that extension professionals understand they have the support of the administration to participate in supplemental training, particularly when it is indirectly beneficial to clientele or other stakeholders. For example, an agricultural agent who wants to complete facilitation training should be encouraged to do so as it will provide opportunities for the extension professional to build skills which are complementary to their role. Similarly, the importance of attitude also emerged. From this perspective a recommendation might be for individual state extension systems to conduct a survey of personnel to better understand how they think about participating in training programs. Based on this data, administration may be better prepared to address specific concerns or attitude challenges. For example, if professionals in a specific focus area express a generally negative attitude to training, it may be helpful to further investigate as there may be deeper root causes which need to be examined. Finding opportunities to engage extension professionals and help them to better understand the importance of training opportunities may result in a more well prepared and effective workforce better suited to addressing the needs of their stakeholders.

Since attitudes and perceived behavioral control were observed to contribute to agents' intention to participate in supplemental professional development opportunities, Extension administrators should be aware of potential barriers that may exist. For example, in counties that do not have local funding dedicated to pay for registration and travel to professional development opportunities, Extension administrators may consider providing bridge funding or scholarships to support agents' participation. Additionally, those offering professional development opportunities for agents should consider how easy or hard it might be for agents to participate. Is the program being offered at a time of the year that is appropriate for the intended audience? Are there other mandatory or important events taking place at the same time? Is the program and registration process accessible to agents? Asking these questions when planning opportunities may help mitigate and manage barriers that may exist for potential participants.

Implications and Recommendations for Theory

The results of the study provide several noteworthy implications for the Theory of Planned Behavior and its application in understanding Extension personnel and professional development. The rate of participants who had not participated in any supplemental professional development programs (38.1%) highlights the importance of examining the barriers and enablers to participation in such programs. These data suggest there may be significant unexplored factors inhibiting participation, which might be addressed to encourage greater involvement in professional development initiatives.

Cronbach's Alpha coefficients for each TPB sub-scale revealed somewhat inconsistent and unanticipated results. The perceived behavioral control and subjective norms scales had lower observed levels of internal consistency than previously reported in the literature. This result may indicate that these scales may require further refinement or modification particularly within this specific context.

While the findings of this study provide insights into the factors that impact Extension professionals in a single state deciding to participate in supplemental professional development opportunities, it is recommended to replicate this study with Extension personnel in other states as well. Replicating the study with additional audiences will help determine if the findings are consistent among Extension personnel throughout the United States. If consistent, it may indicate there is a possibility to recommend consistent/uniform suggestions for Extension administrators nationwide. An additional recommendation is to conduct a longitudinal study with the same participants to see if behavior was associated with intent. Specifically, using personnel records and objective measures of performance, such as records of participation in supplemental professional development, may provide further insights regarding the applicability of TPB in this context.

Limitations

Although the present study provides a novel overview of Extension agent supplemental professional development participation, it is important to acknowledge associated limitations. First, the present study is limited to a single state, accordingly, findings may not be generalizable to Extension personnel in other regions or states, so generalizability is limited to the specific population studied. Additionally, while there was a total of 126 respondents with an overall response rate of approximately 42%, interpretation of the data should be done with care. Another limitation of the study was the data collection mode, specifically the potential for response bias. Extension personnel who are more interested in the research topic or who have stronger opinions on the subject may be more likely to respond to the survey. This can result in a biased sample, as the responses may not accurately reflect the views of all Extension personnel. Electronic surveys such as the one utilized in this study also rely on self-reported data, which may not always be accurate. Respondents might misrepresent their attitudes, behaviors or experiences. Lastly, as previously acknowledged, the internal consistency on both the attitude and perceived behavioral control index variables was lower than anticipated and desired. An associated recommendation would be to create a more robust and comprehensive set of statements to quantify the underlying variables of interest.

Conclusion

In conclusion, the study's results offer insights into the application of Ajzen's (1985) Theory of Planned Behavior in the context of Extension agents' participation in supplemental professional development opportunities. The attitudes and perceived behavioral control of Extension agents had a significant impact on shaping their intentions. Understanding these factors and their interactions can inform the design of targeted interventions and policies to enhance professional development participation within Extension organizations.

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