

# Developing a Measurement Instrument to Explore Variables that Predict Teachers' Referral Intentions: Using the Theory of Planned Behavior (TPB)

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## ABSTRACT

**Purpose:** Exploring the variables that predict teachers' intent when referring students to mental health professionals is important. The Theory of Planned Behavior (TPB) is a theory of predicting people's intentions of performing a particular behavior; the intent to perform a certain behavior is determined by three factors. (1) attitudes toward the behavior, (2) subjective norms, and (3) perceived control. This study aimed to develop a TPB measurement to investigate what variables predict the intentions of teacher's referral behaviors. **Methods:** A qualitative study following standardized manuals and guidelines for developing a TPB measurement was used. As a qualitative research method, the Consensual Qualitative Research-Modified (CQR-M) was used. According to the findings from the qualitative study, the quantitative measurement to assess teachers' referral intention, attitude, subjective norm, and behavioral control was developed. **Results:** The reliability and validity of the newly developed measurement were tested and verified. **Conclusion:** The newly developed measurement would contribute to a future empirical study that will examine predictors of teachers' referral intention.

**Key Words:** Teachers' referral intention; Attitude; Subjective norm; Behavioral control

## INTRODUCTION

Although students' mental health problems are actually emerging as serious social problems, few studies focus on how to help them in a school scene [1]. When students' mental health is threatened, the teacher is the one who can observe the difficulties in close proximity [2], but teachers are limited in the direct support they can offer. However, teachers can help students by referring students to mental health professionals (e.g., psychologists, counselors, and psychiatrists). Therefore, exploring the variables that predict teachers' intent in referring students to mental health professionals is important.

Students' mental health problems can interfere with other students' learning or the formation of a healthy

classroom atmosphere scene [1]. It can also cause teacher burnout [3]. Despite the importance of examining the variables that predict teachers' intent in referring students to mental health professionals, no measurements are available to specifically target teachers' referral behavior in South Korea. Therefore, we aimed to develop a measurement tool to examine teachers' intention for engaging in referral behavior.

### 1. Theory of Planned Behavior

The Theory of Planned Behavior (TPB) was used as the theoretical foundation for exploring teachers' referral intentions. TPB is a theory of predicting people's intentions to perform a particular behavior [4]. According to TPB

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- This study was supported by the Research Fund of Hankuk University of Foreign Studies.

- This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2017S1A5A8019931).

Received: Mar 10, 2021 / Revised: Apr 1, 2021 / Accepted: Apr 5, 2021

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theory, the intent to perform a certain behavior is determined by three factors: (1) attitudes toward the behavior, (2) subjective norms (how others feel about the behavior), and (3) perceived control (the sense of control associated with performing the behavior). This theory suggests that if teachers believe (1) they have a positive attitude toward referral behaviors, (2) they believe that others have positive attitudes (subjective norms) for referral behaviors; and (3) when they think they can make a referral, their referral intentions will be high.

According to the results of a study on teacher referral intention for students' mental health problems conducted in Korea, compared to the number of students who teachers recognize having mental health problems, teachers actually refer less than 20% of the students to mental health professionals [5]. Teachers reported that the reason for not referring these students were parental disapproval and teacher attitudes toward speaking with mental health professionals [5], which supported the TPB theory.

## 2. Purpose of the Study

This study aimed to develop a TPB measurement to investigate what variables would predict teachers' intentions of the referral behaviors. According to TPB theory, a TPB questionnaire must be developed for a particular behavior and particular context [6]. Despite the existing theoretical review on the importance of teacher referral behavior, scares of empirical and systematic study exist on the role of the teacher as a gatekeeper of students' mental health problems. Thus, this study will enable various empirical studies on teachers' referral behavior, especially in Korea context.

# METHODS

## I. Study 1: Qualitative Study

### 1. Participants

We collected data from 18 teachers in the metropolitan area in Seoul, South Korea with convenience sampling. Teachers' age ranged from 28 to 52 ( $m=36.25$ ), with 10 female and 8 male teachers. Teachers' experience ranged from 3 to 28 years. The participants consented to participated in the study by signing the consent form. The research was conducted in accordance with professional ethics and was approved by Hankuk University of Foreign Studies IRB.

## 2. Procedure

A qualitative study was conducted following Francis' manuals and guidelines in developing TPB measurement tools [7]. As a qualitative research method, the Consensual Qualitative Research (CQR) method of Hill was used [8]. CQR uses open-ended questions, and several researchers arrive at a consensus when developing the domains, core ideas, and cross-analyses in the data analysis. Additionally, an auditor is checking the work of the researchers. CQR also counts the number of participants who answered in each domain which allows for a quantitative perspective.

To develop the TPB measurement for the given population, we created open-ended questions. The open-ended questions used in this study explored the advantages and disadvantages of referral behavior (i.e., attitudes), the significant others who do approve or disapprove the referral behavior (i.e., subjective norm), and the facilitating factors in the referral behavior and the expected obstacle (i.e., perceived behavior control).

## 3. Data Analysis

### 1) Composition of the coding team

The evaluation team consisted of three persons including the author of this paper. Two persons majored in counseling psychology and hold a master's degree. They own a first-level counseling psychologist license, certified by the Korean Association of Counseling Psychology. The auditor is a professor in counseling psychology.

### 2) Categorization

The coding team members individually coded the entire contents, summarized the key concepts by each semantic unit, and categorized common concepts together. Afterwards, the coding team gathered together to present their opinions and agree on the contents that do not agree with one another through discussion. The coding team set the final categories, and the frequency is determined by coding directly through the consensus of the evaluators. The auditor confirmed our categories and domains which provided validity to the results.

### 3) Preparation of preliminary question

Based on the results of qualitative research, we developed quantitative measurement items that reflect the sub-factors of the TPB scale; (a) the attitude toward the referral; (b) how other people (parents, principals, etc.) view

the referral behavior (subjectively, norms), and (c) perceived control over the referral behaviors. Attitudes, subjective beliefs, and perceived behavioral control were developed on the bases of qualitative research results.

## II. Study 2: Quantitative Study

With the developed TPB measurement from the Study 1, a quantitative study was conducted to test the reliability and validity of the scale.

### 1. Participants

The participants were 330 teachers who completed either an online or offline questionnaire. We distributed the online and offline survey via teachers' community. Among the 330 teachers, 88% of the participants were female, and the ages ranged from 22~60 years ( $M=39.70$ ,  $SD=7.45$ ). In terms of students they are teaching, 112 teachers answered that they are in elementary school (33.9%), 102 teachers in middle school (30.9%), and 103 teachers in high school (31.2%). In terms of school location, 19 teachers answered that they work in a school located in a rural area (5.8%), 55 teachers answered that they work in a school located in a suburb (16.7%), and 255 teachers indicated that they are in an urban area (77.3%). Regarding the question of how long they had been teaching ranged from 1~38 years ( $M=13.67$ ,  $SD=7.69$ ).

### 2. Measurement

The newly developed **Korean Teachers' Referral Behavior** scale was tested for reliability and validity, which consists of four subscales of attitude, subjective norm, behavioral control, and intention of referral behavior.

**Attitude.** The researcher developed a measurement tool for attitudes based on the analysis results of the answers to the "belief in the merits and demerits of referral behaviors" in qualitative research, using bipolar adjectives that can be evaluated. For example, referring a mental health professional when talking with an emotionally stressed student was measured as "helpful (1)" and "not helpful (7)". The higher score, the more positive attitude teachers have. The total of 6 items were developed based on the study 1; worthless vs. valuable, good vs. bad, harm vs. benefit, responsible vs. irresponsible, helpful vs. useless, and difficult vs. easy.

**Subjective Norm.** Based on the result of the qualitative study asking who are most likely to approve teachers' referral behaviors and those who do not, specific people

who would approve or disapprove teachers' referral behavior was identified from study 1. Based on the result of the study 1, teachers were asked if the principal and parents would approve teachers' referral behavior, for example, "the principal would encourage me to refer a distressed student to speak with a mental health professional (e.g., counselor, psychiatrist)." The higher score indicates more positive perception of others' view on referral behavior. Questions regarding students' approval about teachers' referral behavior targeting other students and the student himself or herself were added.

**Perceived Control.** To measure perceived behavioral control, we included questions about self-efficacy and control about teachers' referral behavior. An example of a question about self-efficacy is "I am well aware when I should refer a student to speak with a mental health professional (e.g., counselor, psychiatrist)." An example of a question about control is "The choice to refer a student to speak with a mental health professional (e.g., counselor, psychiatrist) is entirely up to me."

**Intention.** The intention items consisted of 3 items that Francis et al. [7] suggested. For example, "I expect to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist)."

#### 1) Stigma Scale for Receiving Psychological Help (SSRPH)

The SSRPH was used to test the construct validity of Korean Teachers' Referral Behavior scale as it assesses the perceived stigma of receiving professional psychological service. Five items measured on a 4-point Likert scale range from 1 indicating strongly disagree to 4 indicating strongly agree. High scores indicate strong stigma about counseling or psychotherapy. The internal consistency of SSRPH was .72. In the present study, the internal consistency of SSRPH was .77.

#### 2) Attitudes Toward Seeking Professional Help Scale-Short Form (ASPPH-SF).

The ASSPPH-SF assessed the attitudes toward seeking professional help (10 items). On a 4-point Likert Scale ranging from 0 (disagree) to 3 (agree), high ASPPH-SF scores indicated positive attitudes toward seeking help. The reliability of the ASPPH-SF was .84, and the one-month test-retest reliability was .80 in a U.S. sample. The reliability coefficient in the present study was .76.

## RESULTS

### I. Study 1: Qualitative Study

The results of the qualitative study were analyzed on the bases of the six domains below. On these bases, we developed core ideas and frequencies in each domain.

### 1. Merits and Demerits of Referral Behaviors

Regarding positive aspects of referring an emotionally distressed student to a mental health professional, seven teachers answered that mental health professionals can provide accurate and professional diagnosis. Six teachers answered systematic/professional treatment as another benefit of referring a student to a professional. Increasing students' self-confidence (n=3), helping keep students' emotional stability (n=2), confidentiality (n=1), freedom from dual relationship (n=1), prescription (n=1), continuous care (n=1), accessibility (n=1), and having experts' opinion (n=1) were mentioned as benefits of referring behavior.

Regarding the negative aspects of referring an emotionally distressed student to a mental health professional, they were afraid of stigmatizing students (n=4) and afraid of parents (n=4) and students' rejection (n=4) when they make a referral. Teachers also reported if referral of a student is their responsibility (n=4). Moreover, confirming about breaching confidentiality (n=3), having records to receive mental health care (n=1), students' unwillingness to participate (n=1), and treatment can be ineffective (n=1) were brought up by teachers as other negative aspects of referring a student.

From these answers, teachers seemed to wonder if referring behavior would be helpful, beneficial, valuable, and good for students. They also thought that a sense of responsibility and courage are necessary when making a referral.

### 2. People who would most likely Approve/Disapprove Teachers' Referral Behaviors

Teachers answered that students would approve that they refer other students (n=6), and the principal (n=4) would most likely approve their referral of an emotionally distressed student to a mental health professional. Other people mentioned included counseling teacher (n=1) and homeroom teacher (n=1), among others.

Teachers answered that parents of students (n=14) would least likely approve their referral of an emotionally distressed student to a mental health professional. Other people mentioned included the principal (n=3) and student (n=3).

Teachers answered that students would approve their

referral of other students, whereas students would disapprove that they refer the student himself or herself to a mental health professional. We distinguished questions regarding students' opinion about teachers' referral behavior targeting other students and the student himself or herself.

### 3. Factors/Barriers that Enable Referral Behavior

Teachers answered that knowing when to refer a student to speak with a mental health professional is important (n=5). Teachers also answered that other teachers' support (n=5) and parents' support (n=3) would facilitate the referral of a student to a mental health professional. In addition, students' difficulty to adjust in a school setting (n=3), students' willingness to seek professional help (n=2), low stigma (n=2), and reliability of mental health professionals (n=2) were brought up by teachers as factors that would enable their referring behavior.

Other people's negative perspective (n=7) and parents' objection (n=5) were the main barriers to refer a distressed student to mental health professionals. Additionally, stigma toward help seeking among people around parents (n=1), students' rejection (n=2), students' unwillingness to seek help (n=2), student-to-student gossip (n=1), and distrust between parents and teachers (n=1) were discussed as barriers for referring behavior.

Based on these answers, teachers seem to think that the referral decision is not up to them owing to other external barriers such as parents' disapproval, stigma toward help seeking, and students' unwillingness to follow through.

Based on the results of the qualitative study, items measuring the three subscales of the TPB to predict teachers' referral intention were developed. Please see Table 1 for the detailed results.

## II. Study 2: Quantitative Study

### 1. Testing Reliability

We conducted the test for reliability and validity of the measurement. The Cronbach's  $\alpha$  of the attitudes, subjective norms, control, and intention were .80, .71, .68, and .89, respectively. Moreover, no items show that Cronbach's  $\alpha$  is increased when we deleted the items.

### 2. Testing Structural Validity

The structural validity of the newly developed TPB measure was tested using confirmatory factor analysis (CFA)

**Table 1.** Frequency Extracted from the Data Analyses

Question	Answer	Frequency
1. The positive aspects about referring an emotionally distressed student to a mental health professional?	Professional diagnosis	7
	Systematic /professional treatment	6
	Students' confidence	3
	Students' emotional stability	2
	Confidentiality	1
	Free from dual relationship risk	1
	Prescription	1
	Continuous care	1
	Accessibility	1
	Expert opinion	1
2. The negative aspects of referring an emotionally distressed student to a mental health professional?	Afraid of stigmatizing students	4
	Not sure if it is my responsibility	4
	Afraid of parents' rejection	4
	Afraid of students' rejection	4
	Possibility of student's personal information leakage	3
	Medical record	1
	Students' unwillingness to participate	1
	Not effective	2
3. People who would most likely approve of referral behavior?	Homeroom teacher	1
	Counseling teacher	1
	Principal/vice-principal	4
	Students (to refer other students)	6
	Can't think of anyone who would approve	1
	Parents	2
	My friend	1
4. People who would least likely approve of referral behavior	Parents	14
	Principal	3
	Student (to refer the student himself or herself)	3
5. What factors or circumstances make it possible to refer a student to a mental health professional?	Teacher's support and interest	5
	Parental support and interest	3
	When a student is in school maladjustment	3
	Students' will	2
	Teachers' ability to identify distressed students	5
	Low stigma	2
	Reliability of mental health professionals	2
6. What factors or situations make it impossible to refer a student to a mental health professional?	Stigma	7
	Parents' objections	5
	Cost issue	3
	Stigma toward help-seeking among people around parents	2
	Students do not want to get professional help	2
	Students lack motivation	2
	Student-to-student rumor	1
	Trust between parents and teachers	1

Including duplicate responses.

with AMOS, a program that reports several goodness-of-fit statistics. The comparative fit index (CFI) indicates the relative fit between the hypothesized model and a baseline model that supposes no relationships among the variables; the CFI ranges from 0 to 1, and values closer to 1.0 indicate a better fit. A normed fit index (NFI) of .90 or

above indicates a well-fitting model. The standardized root means square error of approximation (RMSEA) should be .05 or less in a well-fitting model.

The four-factor model was tested through a confirmatory factor analysis. An initial test of the measurement model resulted in an inadequate fit,  $\chi^2(81)=247.31, p <$

.001, CFI=.88, TLI=.84, RMSEA=.08, SRMR=.07. As suggested by Schumacker and Lomax [9], observed variables were examined for whether their path coefficient from the latent variables was below .5 and if latent variables were well measured by their observed variables. The attitude 6 (i.e., difficult vs. easy) and intention 3 (i.e., I intent to refer a distressed student) were deleted because their path coefficients were below .5. The modified model without the two items produced a good fit:  $\chi^2(56)=150.86, p < .001, CFI=.93, TLI=.90, RMSEA=.07, SRMR=.06$ . The  $\chi^2$  difference test confirmed that the modified model was improved significantly from the original model:  $\Delta\chi^2=25, \Delta df=96.45, p < .001$ . Nonetheless, the modification indices indicated that model fit could be enhanced by adding a covariance between subjective norm 3 (i.e., Students would encourage me to refer he or she to speak with a mental health professional when he or she is distressed) & subjective norm 4 (i.e., Students would encourage me to refer a distressed student to speak with a mental health professional). The added covariance improved the model fit significantly:  $\chi^2(55)=141.27 (p < .001), CFI=.93, TLI=.91,$

RMSEA=.060, SRMR=.058. The factor analysis loading to each item ranged from .50 to .82 (Figure 1). Moreover, the correlations among the subscales were all statistically significant (Table 2).

### 3. Testing Discriminant Validity

To evaluate the discriminant validity of Korean Teachers' Referral Behavior scale, we conducted correlation analyses with Stigma Scale for Receiving Psychological Help (SSRPH) and Attitudes Toward Seeking Professional Help Scale-Short Form (ASPPH-SF) (Table 3). All the four subscales of Korean Teachers' Referral Behavior scale were positively correlated with SSRPR, and it shows that stigma toward help-seeking behavior is associated with attitude, subjective norm, behavioral control and intention of referral behavior. The two subscales of Korean Teachers' Referral Behavior scale (i.e., attitude and intention) were positively correlated with ASPPH, which shows that attitude toward help-seeking is related to attitude toward referral behavior and referral intention. These results

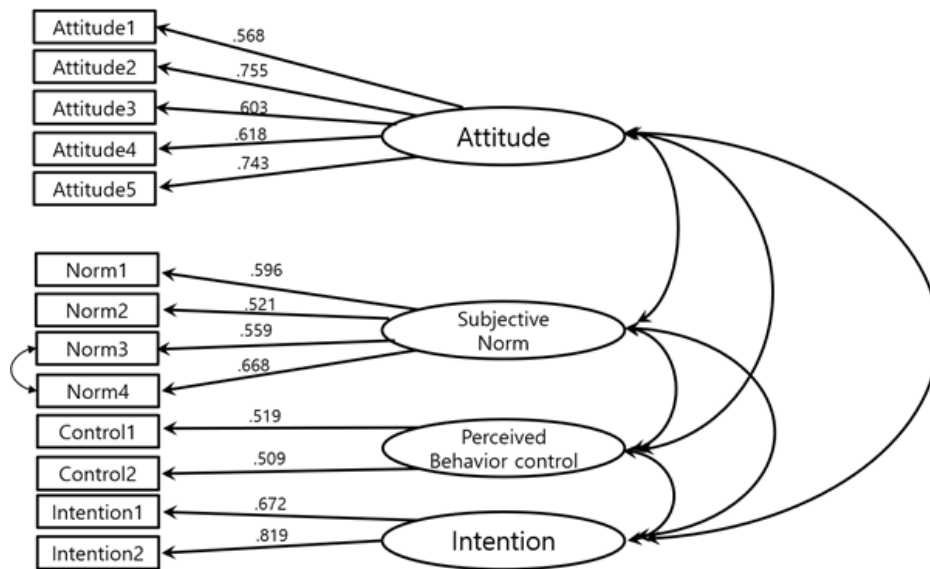


Figure 1. Factor loadings for KT-TPB.

Table 2. Results of Confirmatory Factor Analysis

Model	$\chi^2$	df	$\Delta\chi^2$	$\Delta df$	CFI	SRMR	TLI	RMSEA
Model 1. Hypothesized four-factor model	247.31	81			.88	.07	.84	.08
Model 2. Delete attitude 6 and intention 3	150.86	56	25	96.45	.93	.06	.90	.07
Model 3. Final four-factor model	141.27	55	1	9.59	.93	.06	.91	.06

CFI=Comparative Fit Index; SRMR=Standardized Root Mean Square Residual; TLI=Tucker Lewis Index; RMSEA=Root Mean Square Error of Approximation.

**Table 3.** Correlations among Subscales of Korean Teachers' Referral Behavior Scale, SSRPH, and ASPPH

Variables	SSRPH	ASPPH
	<i>r</i>	<i>r</i>
Attitude	.70**	.28**
Subjective norm	.43**	.08
Control	.31**	.05
Intention	.34*	.20**

\* $p < .05$ , \*\* $p < .01$ ; SSRPH=Stigma scale for receiving psychological help; ASPPH=Attitudes toward seeking professional help.

show discriminant validity of the subscales of Korean Teachers' Referral Behavior scale measurement.

## DISCUSSION

This study developed Korean Teachers' Referral Behavior scale to assess Korean teachers' attitude, subjective norm, behavioral control, and intention of referral behavior. The reliability and validity of the scale was confirmed. This study also showed how to develop context specific TPB measurement in given cultural context.

The results of the study would contribute to a future empirical study that will examine predictors of teachers' intention. TPB has been used to predict people's behavior assuming that intention to perform a specific behavior would be determined by attitude, subjective norm, and behavioral control [4]. With the development of a measurement tool to access teachers' intention, attitude, subjective norm, and behavioral control in referring distressed students to mental health professionals, further research to examine predictors of teachers' intention to refer would be possible. The results of these follow-up studies would provide further information about whether teachers' attitudes, subjective norms, and behavioral controls should be considered when understanding teachers' referral intention. Previous study examining teachers' intention to refer students with ADHD showed cross-cultural differences in predictors of teachers' intention [10], and it would be important to develop culture-specific measurement to explore the issue. Also, research has been conducted on teachers' referral behavior regarding students with ADHD (Lee, 2014), but no measurement tool has been developed for teachers' referral behavior regarding general mental health issues. Compared to children and adolescents with externalizing problems, students with internalizing problems are less likely to get teachers' referral because their issues are less obvious and often unseen.

In addition, this study will contribute to proposing interventions that take into account the socio-cultural specificity of Korea. For example, headache, which is one of the symptoms that elementary school students often complain to health teachers [11], may be related to mental stress. Considering the findings that many Asian cultures express mental stress as somatization symptoms, especially in the case of teachers working with elementary school students who are not good at verbalizing their emotional stress, need to recognize the warning signs and provide appropriate assistance. Also, depression in adolescence is frequently observed mental health problem [12], and enabling empirical studies regarding teachers' referral behavior would contribute to prevent mental health issues in schools. Lastly, this study demonstrated how to implement guidelines in developing TPB measurements, which exemplify developing the TPB questionnaire for the given context and population.

The nature of our convenience sample has limits on generalization of our findings. We collected the data from online and offline survey through teachers' communities, but these teachers may not represent the whole teacher population. Also, discriminant validity of the scale needs to be tested with more measurements assessing similar or opposite constructs in the future. Currently, there are no published measurement regarding teachers' referral behavior, therefore we could not use more instruments assessing similar constructs in testing discriminant validity.

## CONCLUSION

The newly developed Korean Teachers' Referral Behavior scale, consisting of four subscales of attitude, subjective norm, behavioral control, and intention of referral behavior, was tested. Results showed that the Korean Teachers' Referral Behavior scale is a valid and reliable measurement.

## CONFLICTS OF INTEREST

The authors declared no conflict of interest.

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### Appendix 1. Korean Teachers TPB measurement (KT-TPB)

<b>(a) Attitude</b>		
1. For me, referring a distressed student to speak with a mental health professional (e.g., counselor, psychologist) is		
Worthless	1---2---3---4---5---6---7	Valuable
Good	1---2---3---4---5---6---7	Bad
Harm	1---2---3---4---5---6---7	Benefit
Responsible	1---2---3---4---5---6---7	Irresponsible
Helpful	1---2---3---4---5---6---7	Useless
<b>(b) Subjective Norm</b>		
1. Parents of students would encourage me to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist)		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
2. Principle would encourage me to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist)		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
3. Students would encourage me to refer he or she to speak with a mental health professional (e.g., counselor, psychologist) when he or she is distressed		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
4. Students would encourage me to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist)		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
<b>(c) Perceived Behavioral Control</b>		
1. I am well aware when I should refer a student to speak with a mental health professional (e.g., counselor, psychiatrist)		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
2. The choice to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist) is entirely up to me.		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
<b>(d) Intention</b>		
1. I expect to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist)		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree
2. I would want to refer a distressed student to speak with a mental health professional (e.g., counselor, psychologist)		
Strongly disagree	1-----2-----3-----4-----5-----6-----7	Strongly agree

### Appendix 2. Demographics of Participants

Variables	Categories	n (%)
Gender	Female	290 (88.0)
	Male	40 (12.0)
School level currently teaching	Elementary school	112 (33.9)
	Middle school	102 (30.9)
	High school	103 (31.2)
School location	Urban	255 (77.3)
	Suburb	55 (16.7)
	Rural	19 (5.8)
Total		330 (100.0)