

Teaching Self-Efficacy of a Selected Group of Secondary Health Education Teachers

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ABSTRACT

The purpose of this study was to test the Health Teaching Self-Efficacy Scale (HTSES) with a group of secondary health education teachers. In addition, comfort levels with various subject areas and years of teaching experience data were also gathered. All secondary health teachers in a selected Midwestern state were recruited via email to participate in the current study. Their responses were collected via an on-line survey created using Qualtrics software. Means of responses ranged from 3.46 (complementary and alternative medicine) to 4.69 (alcohol). Self-efficacy scores ranged from 3.09 to 4.87. Both were on a 1-5 scale. Somewhat surprisingly, correlation analysis revealed little to no relationship between years experience and comfort level with the chosen content areas. Additional research needs to be conducted to find ways, not to measure teaching self-efficacy, but to improve teaching self-efficacy.

INTRODUCTION

Bandura (1977) identifies self-efficacy as a person's belief that they are capable of successfully accomplishing a task, even if that task is challenging and takes persistence to complete. This theory also states that self-efficacy is further developed through experiences of mastery in tasks which a person finds challenging. Recent research has supported that perceived self-efficacy in teaching is essential (Kingery, Ballard, & Pruitt, 1990; Henson, 2001; Klassen & Chiu, 2010). Henson (2001) states that a teacher's belief he or she has the ability to influence student learning goes a long way in making it true. Individual educators have varying levels of perceived self-efficacy depending on the specific subject matter which they are teaching. Perceived self-efficacy affects not only what *and how* an educator teaches, it also influences students' learning and retention rates. Research also shows that educators with high perceived self-efficacy hold their students to a higher standard and are adamant that their students remain on task in the classroom (Ashton, Webb & Doda, 1983).

It is the specific goal of *health* educators that students leave their classrooms with the knowledge and life skills required to increase quantity and quality of life. Therefore, a health education teacher's role is not only one of educator, but also as a facilitator of behavior change (Edwards, Higley, Zeruth, & Murphy, 2007; Fahlman, Singleton & Kliber, 2002). Some health educators report feeling unprepared to adequately complete these tasks (Kingery, Holcomb, Jibaja-Rushth, Pruitt & Buckner, 1994).

Bandura (1977) states that "people fear and tend to avoid threatening situations they believe exceed their coping skills, whereas they get involved in activities and behave assuredly when they judge themselves capable of handling situations that would otherwise be intimidating" (p.194). Depending on what experiences educators have been exposed to and have participated in during their formal education and beyond, these experiences may influence educators to teach only the specific subjects with which they feel comfortable and neglect information which they have not been exposed to or find difficult. In regards to health education, Kingery et al. (1994) state that health educators are lacking in the specific health-related skills

needed and knowledge of behavior modification strategies that result in lasting behavior change, and therefore, have a low perceived level of self-efficacy in their ability to accomplish this task effectively.

As stated previously, a high level of perceived self-efficacy is largely derived from a person's mastery of past experiences (Bandura, 1977; Skaalvik & Skaalvik, 2007). Many recent studies have shown that years of experience correlate positively with teacher's perceived self-efficacy and overall job satisfaction (Klassen & Chiu, 2010; Fives & Buehl, 2010; Kingery et al., 1994). As educators spend more time in the profession, participate in more continuing education opportunities, and have more classroom experience, they tend to develop improved methods and modes of teaching and are more comfortable with the subject matter they teach (Bogler & Somech, 2004). This improvement is enhanced even further if educators purposefully drive themselves to continue learning and growing in the specific niche of their profession and push themselves past their comfort zones to continually participate in new experiences and develop new levels of mastery. Increased teaching experience has also been found to increase positive perception of teaching as a profession in general (Chan, Lau, Nie, Lim & Hogan, 2008).

PURPOSE

The purpose of this study was to test the *HTSES* with a group of secondary health education teachers in a select state from the Midwest. Data was also gathered and analyzed to assess the correlation between the comfort levels with various subject areas and years of teaching experience. This information will add to and benefit the existing body of knowledge on effectively assessing teachers' levels of self-efficacy.

METHODS

Subjects

All secondary health teachers in a selected Midwestern state were recruited via email to participate in the current study. A total of 80 eligible teachers completed the survey. Their responses were collected via an on-line survey created using Qualtrics software. The Institutional Review Board deemed this study to be exempt. Human subjects' procedures

concerning voluntary participation, anonymity, and confidentiality were followed. Males comprised 42.7% of the population and 57.3% of the participants were female. Participants ranged in age from 23 to 61 years old and had between 1 and 33 years of health education teaching experience at the secondary level.

Instrument

The *Health Teaching Self-Efficacy Scale (HTSES)* developed by Kingery, Ballard, and Pruitt was used for the current study (1990). The *HTSES* has been shown to have high internal consistency (.96) and test-retest reliability (.82). Initial use revealed it to be unidimensional. However, a study by Peterson and Gabaney (2001) yielded five separate factors when the scale was used with elementary education student teachers. A subsequent study done solely with secondary health education teachers by Hutchins, Melancon, and Ehrnwald (2009) also found that the *HTSES* was multi-dimensional. The five sub-factors were identified as direct instruction, indirect instruction, health instruction, health content and field trips. Factor analysis found the reliability coefficients for the sub-factors ranged from .81 to .98 for the scale (Peterson and Gabaney, 2001). Data from the current study was grouped using these same sub-factors. This 35 item instrument utilized a 5-point Likert scale with 1 = "not sure at all I can do this" and 5 = "completely sure I can do this". The instrument has been shown to be valid and reliable with school health teachers (Kingery et al., 1994). Additionally, teachers were asked to indicate their level of comfort within several content areas of health education. Responses to these items ranged from 1="very uncomfortable" to 5="very comfortable". Years of experience teaching health education was also gathered. (See tables 1, 2, and 3).

Analysis

Qualtrics software was used to collect data and determine the mean, variance and standard deviation for each of the 35 prompts. Item prompts were grouped into three major and two minor factors that resulted from work done by Peterson and Gabaney in 2001. A similar analysis was done with comfort level with the content areas of health education. Age and years experience were reported as continuous variables.

RESULTS

Means and Standard Deviations

Means, standard deviations, and variances were calculated for each of the survey items from the HSTES and from the various content areas. Health teaching self-efficacy was highest for "provide statistical data on health risks" (mean = 4.87). Health teaching self-efficacy was lowest for "visit health food/product outlets" (mean = 3.09) (see table 4). In terms of content, teachers indicated they were most comfortable teaching about physical activity (mean = 4.81), alcohol (mean = 4.69), and tobacco (mean = 4.68) (See table 5).

Correlations

Pearson's *r* testing revealed no significant relationships between years of experience and comfort level with the various content areas. The strongest correlations were negative and ranged from -.30 (alcohol, and drugs) to -.32 (Complementary and Alternative Medicine). These findings suggest that experience did not affect comfort levels with this group of health teachers.

CONCLUSIONS

This study found that teachers surveyed in this Midwestern state were most comfortable teaching major content areas in health education and were least comfortable teaching the content areas of sexuality and aging. It also shows there was no correlation between years of teaching experience and comfort levels teaching various content areas with this group of participants. Additionally, the current data indicates that the ability to use certain strategies is related to the confidence not only to teach, but also the confidence to organize materials and plan fieldtrips.

RECOMMENDATIONS

This study showed no correlation between years of teaching experience and comfort levels with teaching the specific content areas for this group of participants. However, participants did report decreased feelings of self-efficacy with teaching certain content areas. Strides need to be made to improve educators' levels of self-efficacy with teaching these content areas. Previous studies (Bogler & Somech, 2004; Fahman et al, 2002; Kingery, Ballard, & Pruitt, 1990) suggest that it may be beneficial to offer more professional development activities to both pre-service and in-service teachers.

Professional development is imperative to increase perceived self-efficacy in teaching methods used and subjects taught. A study by Fahlman et al. (2002) showed that health education students' self-efficacy increased as they took more comprehensive personal health classes (classes that incorporated a greater number of content areas of health education) and increased even further if they took a class with a specific focus on *teaching* a variety of content areas. This shows the needs to teach a variety of content areas and address various aspects of health education through a number of teaching strategies. Some teachers may need support to teach certain topics or use certain strategies. Hoy and Spero (2000) state that no matter how self-efficacy is evaluated, it seems to rise during teacher preparation and fall shortly after the student becomes a certified teacher. This is most likely due to the loss of support when a student becomes an official teacher and has a classroom of his or her own.

Professional development opportunities offered for in-service training need to focus on professional growth and increased self-efficacy in both teaching methods and specific subject-related information (Bogler & Somech, 2004; Kingery, Ballard, & Pruitt, 1990). According to Bandura (1977) the early years of teaching are vital because these are the most malleable. It would be beneficial if there were opportunities for educators to work and learn side by side, sharing ideas and learning from each others' teaching styles and processes. This creates a "cultural cohesion" that fosters a sense of community, trust, and respect among new and more seasoned educators in the school setting (Chan, Lau, Nie, Lim, & Hogan, 2008).

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TABLE 1: Descriptive Statistics for Factor 1 Items. (n=80)

Factor 1 (Direct Instruction)	Mean (SD)	Variance
2. Emphasize the amount of control students have over their own health.	4.85 (.92)	.85
3. Use diagrams, overheads, and other visual symbols to convey health information.	4.50 (1.21)	1.45
4. Use still photographs to evoke subjective responses.	4.85 (.72)	.10
5. Use film/video to support or reinforce health concepts.	4.61 (.63)	.50
6. Provide statistical data on health risks.	4.87 (.48)	.23
7. Encourage self-responsibility for health.	4.70 (.48)	.23
8. Invite guest speakers to present information on health topics.	4.41 (.79)	.62
10. Tell realistic stories about the positive or negative consequences of certain health practices.	4.21 (.91)	.99
14. Visit health services facilities.	3.09 (1.32)	1.75
16. Provide opportunities for discussion on health topics.	4.33 (.97)	.93
17. Provide each student with individualized feedback about his/her performance in attempting a health task.	4.44 (.48)	.23
18. Provide role playing opportunities about resisting peer pressure.	4.46 (.44)	.19
20. Encourage students to repeat positive rather than negative phrases to themselves.	4.72 (.73)	.11
21. Encourage students to be persistent in their attempts to practice healthy behaviors.	4.72 (.53)	.28
23. Discuss ways to overcome barriers to changing their health practices.	4.23 (.88)	.77
24. Assess the health behaviors of students using self-monitoring, self-reporting, or other techniques.	3.90 (1.34)	1.79
26. Have students set realistic goals to change health behaviors.	3.80 (1.45)	2.10
27. Have students sign behavior change contracts.	4.67 (.42)	.18
28. Suggest health goals which are long term, flexible, and reasonable.	4.25 (.53)	.28
32. Provide rewards to each student who is successful in reaching a particular health goal.	4.44 (.53)	.28
33. Encourage students to praise one another for their successes, and to avoid insulting or ridiculing those who are less successful.	4.43 (.70)	.49
34. Encourage students to choose partners who will encourage them to reach their health goals.	4.49 (.71)	.50

TABLE 2: Descriptive statistics for Factor 2 items. (n=80)

Factor 2 (Indirect Instruction)	Mean (SD)	Variance
9. Bring student health model (positive health role model) into the classroom.	4.72 (.32)	.10
12. Provide health information using health fair exhibits.	4.43 (.97)	.93
13. Provide information using bulletin boards.	3.19 (1.54)	1.36
19. Provide role playing opportunities about problem solving.	4.48 (.48)	.23
22. Have students identify barriers to changing their health practices.	4.66 (.48)	.23
29. Allow students to become successful at one health task before urging them to attempt a harder health task.	3.94 (1.32)	1.73
35. Encourage students to tell their family members about their health goals so family members can provide encouragement.	4.00 (1.25)	1.56

TABLE 3: Descriptive statistics for Factor 3 items. (n=80)

Factor 3 (Health Instruction)	Mean (SD)	Variance
11. Prepare exhibits showing the effects of health behaviors.	4.00 (1.25)	1.56
25. Assess the health status of students using weight scales, skinfold calipers, blood pressure cuffs, or other devices.	4.60 (0.70)	.49
30. Chart each students' progress toward a health goal.	4.00 (1.15)	1.33
31. Attribute the success or failure of students to their level of effort in attempting a specific health task.	4.10 (1.29)	1.66

TABLE 4: Descriptive statistics for Factor 4 and 5 items. (n=80)

Factors 4 and 5 (Health Content and Field Trips)	Mean (SD)	Variance
1. Provide specific information about the actual risks or benefits of particular health related behaviors.	4.36 (.92)	.85
15. Visit food/health product outlets.	3.09 (.54)	.78

TABLE 5: Comfort Levels within the Different Content Areas of Health Education. (n=15)

Content Areas	Mean (SD)	Variance
Consumerism	4.60 (.95)	.90
Pollution	4.40 (.83)	.68
Tobacco	4.68 (.70)	.68
Alcohol	4.69 (.70)	.49
Drugs	4.50 (.94)	.95
Nutrition	4.61 (.74)	.55
Aging	4.21 (.79)	.63
Complementary and Alternative Medicine	3.46 (.98)	.96
Physical Activity	4.81 (.65)	.43
Weight Management	4.53 (.72)	.52
Psychological Health	4.00 (.93)	.86
Communicable and Chronic Disease	4.35 (.90)	.82
Growth and Development	4.43 (.71)	.60
Stress	4.53 (.22)	.52
Sexuality	4.23 (.48)	.24