

## Research Article

## Measuring Empathy Levels among Undergraduate Students: Evidence from Two Distinctive Year of Study Programs in Accounting

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**Abstract:** This present study aimed at measuring empathy level among undergraduate students in accounting program. Two distinctive study year programs included two-year program and four-year program were gathered for data collection through a modified version of Toronto Empathy Questionnaire. A sample of 67 students who studied in 2-year program had empathetic skill in a high level as similar to a report of empathy level of 105 students in 4-year program. Analysis of independent samples t-test demonstrated that males and females of both groups of accounting students had no statistically significant difference in empathy. Discussions and recommendations for further studies were also conferred.

**Keywords:** Empathy, Empathetic skill, Empathy level, Undergraduate students.

### INTRODUCTION

The word of empathy was originally introduced by a German psychologist named Theodore Lipps in 1880s using the term “*einfulhung*”, which literally means “in-feeling” to describe the emotional appreciation of someone’s feeling (Ioannidou & Konstantikaki, 2008).

Empathy has further been defined as the ability to understand or experience what another individual is feeling (Pascucci *et al.*, 2017). The study on empathy has been focused extensively in the past decades (Baxter, 1995; Courtright, Mackey, & Packard, 2009). Empathy can be divided into two subcategories, which are cognitive empathy and affective empathy. Cognitive empathy refers to when individuals are able to view, experience, and understand others’ feelings and thoughts in a certain way. Affective empathy, in contrast, refers to when individuals can feel a similar emotion to another person or sensations and feelings in response to others’ emotions (McCauley, 2013). Although numerous past studies attempted to measure empathy in different contexts, those studies only placed an emphasis on either cognitive or affective empathy, not both. In fact, empathy is not a unidimensional concept. To have a thorough understanding of empathy, research needs to focus on both cognitive and affective components (Hoffman, 1987; Davis, 1996). The immersion of two coexisting process is required for

developing the understanding of empathy. Individuals need to be able to view emotional signals of another person while retaining their cognitive capability to recognize and respond to these occurrences (Courtright, Mackey, & Packard, 2009).

Empathy is perceived as a key factor for building relationships with others. Empathy can help individuals avoid the process of judging other people, which diminishes genuine communication and that, in turns, leads to improve better interactions (Dean, 2006). Individuals who lack of empathy are considered as an isolated person who may have a problem dealing with other people. In the light of this, empathy can enable an individual particularly students to learn and grow in developing relations with others, which benefits them in a future success (Cooper & Sawaf, 1997). Empathy is essential for students to be more effective in cooperatively working with other people in the workplace after their graduation (Briggs, 2014). Developing empathy in students at early ages is more likely to establish professional success in their future career. Students who have a high level of empathy can develop robust interpersonal skills, which contain problem solving skill, decision making skill, and conflict management skill (Carey, 2017).

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Previous research in college students' empathy examined level of empathy and compared gender differences across various empathy measurement scales and ages, which females were found to have higher level of empathy than males (Courtright, Mackey, & Packard, 2009; McCauley, 2013). In addition to gender, other variables such as major, grade, class level were found to be predictors on empathy among college students (Courtright, Mackey, & Packard, 2005). However, the focus on empathy level measurement and comparison between socio-demographic variables relating to university students in Thailand has been scarce, and needs more attentions (Suavansri, 2008).

The purpose of this present study was to measure empathy level of undergraduate student in accounting program. Also, this study aimed at comparing the difference in empathy level between male and female students with distinctive study year programs.

### Literature Reviews

Numerous studies in empathy level measurement and comparison between gender and other variables relating to students have been conducted extensively in the past two decades. This present study carefully reviewed the most appropriate literatures, which related to college students' empathy to use as a guideline for developing conceptual framework and research hypotheses.

Myry and Helkama (2001) compared students' value based on Schwartz's typology of values and the Spranger-Allport-Vernon typology and empathy. Data were gathered from 138 students who were from three different majors including business, social sciences, and technology using the Schwartz Value Survey and the Mehrabian-Epstein measure of empathy as instruments for data collection. Results of empathy among these students demonstrated that social sciences students had a higher score on empathy than business students who were more empathetic than technology students.

Courtright, Mackey, and Packard (2005) explored empathy among 633 college students who majored in criminal justice and others in the U.S. Empathy levels of students were measure by using Mehrabian's Balanced Emotional Empathy Scale (BEES). Gender, school size and type, grade level, age, and other variables were analyzed to compare differences in level of empathy. Findings revealed that male students in criminal justice major had the lowest level of empathy followed by males in other majors, females in criminal justice, and females in other majors. Also, other variables were found to have an influence on empathy among students.

Chen *et al.*, (2012) scrutinized the trend of empathy for a longitudinal study to identify differences in empathy in accordance with gender and medical specialty preferences. This study was a longitudinal study in which data were gathered from medical students by surveying yearly from 2007 through 2010 using Jefferson Scale of Physician Empathy-Student Version (JSPE-S). Findings showed that preclinical year's students had a higher level of empathy than students in clinical years. Also, female students had a higher empathy scores than male students. In addition, students who had technology-oriented specialties preference had the lowest scores of empathy.

Hasan *et al.*, (2013) conducted a cross-sectional survey to assess empathy level among 264 medical students in Kuwait University Medical School by using the Jefferson Scale of Empathy as a scale measurement. Also, this study measured stress and personality of medical students through the use of the Perceived Stress Scale and the Zuckerman-Kuhlman Personality Scale. Findings showed that empathy scores among medial students in Kuwait were lower than those in medical programs in Western countries. However, when compared to Asian countries, the mean score of empathy was compatible. Results also indicated that empathy scores were significantly correlated with gender, year of study, mother's level of education, household income, satisfactory relationship with mother and stress levels. Moreover, this study found significant difference in empathy according to gender, which female medical students had a higher empathy score than male students.

Williams *et al.*, (2014) gathered data from a sample of 1,111 students from two distinctive universities registered in eight different health professions. The Jefferson Scale of Physician Empathy-Health Profession Students version was utilized to measure level of empathy among these students. Based on the comparison, no statistically significant difference in empathy level between two universities was found. Like other studies, the mean empathy score of female students were significantly higher than male students.

Atan (2017) compared empathy levels of university students who play and did not play sports. Data were gathered from 400 university students evenly separated 200 students for each group by using Dokmen's Empathic Tendency Scale. Results of analysis showed no statistically significant difference between students who do and not do sports. However, this study found that women were more empathetic than men. Also, students who lived with their families and those who had social activities were found to have a higher level of empathy than those who did not.

Pascucci *et al.*, (2017) collected data from 244 medical students and 125 students in other majors in different universities in Italy through the use of Baron

Cohen's empathy quotient test (EQ) to measure the empathy level of medical students and compare the differences in empathy between medical and other university students. Results found no significant differences in empathy between medical students and other students. Also, this study found no significant differences in empathy between first year and last year medical students.

Haque *et al.*, (2018) studied the level of empathy among medical students in Malaysia through the use of Toronto Empathy Scale. This study was a cross-sectional study, which universal sampling approach was utilized as a sample size was small. A sample of 224 medical students was gathered for data collection. Only 241 questionnaires were returned with a completion. To ensure the quality of scale measurement, Cronbach's alpha and convergent validity were conducted. Results indicated that medical students had an average level of empathy. Female students were reported to have a statistically significantly higher score on empathy than male students. However, no significant difference in empathy between the years of study and type of admission was discovered.

Altwalbeh (2018) conducted a cross-sectional study using the Jefferson Scale of Empathy to measure empathy level among 202 undergraduate nursing students in Jordan. Findings displayed that the mean score of empathy level in this study was lower than scores reported in other studies. Like other studies, this study found that female nursing students had a higher empathy score than male students. Also, this study discovered a significant increase in empathy scores by year of study. This study suggested reforming curriculum by placing more emphasis on empathetic skills.

According to these reviewed literatures, this present study proposed the research hypothesis as "there was a statistically significant difference in empathy between male and female students." Specifically, this study was hypothesized that male students had a lower level of empathy than female students.

**METHODOLOGY**

A sample of this study consisted of two distinctive groups of study year program in accounting including 67 students of 2-year program and 105 students of 4-year program. These groups of students were required to complete online version questionnaire on Google classroom. A questionnaire was a self-report empathy instrument, which was modified from the Toronto Empathy Questionnaire developed by Spreng, McKinnon, Mar, and Levine, (2009). This scale measurement composed of 14-item that measures level of empathy among students. This scale was a 5-point scale ranging from 0 = never to 4 = always to rate each statement of this questionnaire. This scale measurement

showed an acceptable internal consistency with the alpha score of 0.632. The alpha score of 0.6 was acceptable, according to Nunnally (1978). To analyze the difference between male and female students in empathy level, independent samples t-test was conducted.

**Findings**

Among 67 students who enrolled as a student of 2-year program in accounting, 11.9 percent of them were male, and 88.1 percent were female. For their age, the minimum age of this group of students' minimum age was 20 years while the maximum age was 23 years. The average of this group was 20.94 years old. For their monthly income, the average income of this group was 3,726.86 baht. For the level of empathy, this group of students demonstrated a high level of empathy (M = 2.92, S.D. = .376).

For 4-year program students, 105 students agreed to participate in this study. Findings showed that 14.3 percent of them were male, and 84.8 percent were female. The minimum age of this group was 19 years whereas the maximum age was 23 years. The mean score for this group's age was 20.94 years old. The average monthly income of this group was 3,165.71 baht. The total mean score on empathy indicated that this group of students had a high empathy level (M = 2.97, S.D. = .351).

To compare difference between male and female students in empathy level for a group of 2-year program students and 4-year program students, independent samples t-test analysis was computed. Table 1 displayed no significant difference between 2-year program male and female students in empathy level (t = -1.398, p = .167). Both males and females had a high level of empathy.

**Table 1: Independent Samples T-Test of Gender in Empathy for 2-Year Study Program Students (n=67)**

	Male (n=8)		Female (n=59)		t	P
	Mean	S.D.	Mean	S.D.		
Empathy	2.75	.446	2.95	.363	-1.398	.167

Table 2 demonstrated the comparison between 4-year program male and female students in empathy level. Results of analysis found no significant difference between 4-year program male and female students in empathy (t = -.620, p = .537). As shown, male and female students in a 4-year program had a high level of empathy.

**Table 2: Independent Samples T-Test of Gender in Empathy for 4-Year Study Program Students (n=105)**

	Male (n=15)		Female (n=89)		t	P
	Mean	S.D.	Mean	S.D.		
Empathy	2.91	.244	2.97	.365	-.620	.537

**CONCLUSIONS, DISCUSSIONS, AND RECOMMENDATIONS**

The purpose of this study was to evaluate empathy levels among undergraduate students in accounting program. Two different years of study programs - two-year program and four-year program were assembled for data collection using a modified version of Toronto Empathy Questionnaire. A sample of 67 students who enrolled in 2-year program had a high level of empathy as similar to an empathy mean score of 105 students in 4-year program. Findings of this present study were inconsistent with the other previous studies in which a statistically significant difference in empathy level between male and female students was found (Chen *et al.*, 2012; Hasan *et al.*, 2013; Williams *et al.*, 2014; Atan, 2017; Haque *et al.*, 2018; Altwalbeh, 2018). However, this present study found no statistically significant difference in empathy between male and female students for both types of year study program. Thus, research hypothesis was rejected.

For limitations of this study, samples were focused solely on accounting students with a different year of study program, thus the next study should extend its investigation to other students in different majors in business program. As the research hypothesis was rejected, using new measurement scales like the Jefferson Scale of Empathy or Mehrabian’s Balanced Emotional Empathy Scale are recommended in a future study. Additionally, other socio-demographic variables should be compared to examine a significant difference in empathy levels.

Although the total mean scores of empathy for both groups of students were at a high level, actions from university administrators need to be taken to ensure the consistent development of empathetic skills until the students get out to work in a real business world. Curriculum development and teaching methods improvement should be reformed to make sure that these aspects are to help students become more empathetic in a near future.

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