THE USE OF A MOTIVATIONAL INTERVIEWING INSTRUMENT TO ENHANCE ACADEMIC SELF-EFFICACY AND ACADEMIC MOTIVATION OF UNDERGRADUATE STUDENTS AT ASSUMPTION UNIVERSITY

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Abstract: The efficacy of the Brief Academic Motivational Instrument (BAMI) as an intervention in enhancing the academic self-efficacy and academic motivation of university students was tested. The BAMI is a paper based semi-structural Motivational Interviewing (MI) tool that aims to increase student motivation to change studying habits. Participants consisted of 40 undergraduate students, their age ranged from 18 to 32 years old (mean age 21.23), recruited through convenience sampling at Assumption University, Thailand. Participants were randomly assigned to the BAMI experimental group (n=20) and the non-intervention control group (n=20). All participants completed pre and post questionnaires, which the participants self-reported their academic self-efficacy and academic motivation. The investigator went through the BAMI with the experimental group participants after the pretest. All posttests were collected via internet survey 10 days after the pretest. MANOVA for repeated measures analysis was conducted to test the efficacy of the BAMI intervention against a no intervention control group. The results indicated there were no significant differences in academic self-efficacy and academic motivation between the experimental and control group at the posttest, suggesting that the BAMI intervention was ineffective. The insignificant results could be influenced by the timing of the data collection, nature of the sample population, cultural differences, prescreening ineffectiveness, the small sample size and possible language concerns. Further research needs to be conducted in order to further evaluate the effectiveness of the BAMI or similar devices for increasing academic self-efficacy and academic motivation.

Keywords: Motivational Interviewing, Academic Self-Efficacy, Academic Motivation, University students, Brief-Academic Motivational Instrument (BAMI).

Introduction

School counselors identified underachieving students as one of the most challenging to work with because these students are capable of succeeding academically, but are

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unmotivated (Bleuer, 1987). Educators and researchers have been examining the contributing factors of motivation and methods of increasing motivation. When motivation is present, engagement is also observed. Active engagement in school is critical to a student's academic success; students with higher engagement are better adjusted to school and achieve higher academic grades (Wang & Peck, 2013). Cognitive engagement is otherwise referred to as Self-Regulated Learning (SRL).

The Motivational Interviewing (MI) counseling technique was first introduced in 1983 by William Miller, and has proved to be successful in facilitating positive change with alcoholics (Miller & Rollnick, 2002). MI is a collaborative counseling technique, where the counselor helps the client to clarify his or her ambivalence, values and goals, and further strengthens the client's self-efficacy to change. Its applications have been extended to the academic settings, such as a basis for decreasing behavioral concerns which interfere with academic success (Frey et al., 2011), as an intervention to enhance academic achievement of middle school and college students (Duffy & Rimmer, 2009; Strait, 2011), motivating underachieving high potential adolescents (Richer, 2012), reducing students' school truancy (Enea & Dafinoiu, 2009) and, facilitating reeducation with problematic behavior of disaffected students (Kittles & Atkinson, 2009).

With research supporting MI as a way to facilitate change in students, it may be helpful as a brief intervention for school counselors to successfully help increase learning in unmotivated or underachieving students.

Objectives

The purpose of this study is to assess the efficacy of a modified version of the Self-Administered Motivational Instrument (SAMI), known as the Brief Academic Motivational Instrument (BAMI), as a Motivational Interviewing (MI) tool to enhance the academic motivation and academic self-efficacy of students. Through this MI based tool, the investigator hopes to encourage students to reflect on their study choices, find solutions to change, consider possible obstacles they may encounter and solutions to remove those obstacles.

Literature Review

An overview of academic motivation, Self-Regulated Learning (SRL), academic self-efficacy and Motivational Interviewing (MI) will be reviewed. In addition, recent empirical researches on the integration of MI in the academic setting are reviewed followed by the research question, hypothesis and conceptual model of this investigation.

Academic Motivation plays a large role in the prediction of achievement and learning; thus research has been conducted in this area in the hope of understanding the underlining motivation processes. According to Pintrich and Zusho (2002), "academic motivation refers to internal processes that instigate and sustain activities aimed at achieving specific academic goals." The social cognitive model suggests that motivation is dynamic and multidimensional; this separates it from the traditional motivation model being quantified on a single spectrum with motivated and not motivated on opposite ends. Rather, other facets of student motivation need to be

considered, such as "self-efficacy, attributions, intrinsic motivation, and goals (Linnenbrink & Pintrich, 2002, p. 313)."

In self-determination theory, Deci & Ryan (1985) noted that the most basic distinction of the types of motivation are intrinsic and extrinsic motivation (Ryan & Deci, 2000). Intrinsic motivation refers to "doing something because it is inherently interesting or enjoyable" with curiosity and personal satisfaction without receiving external tangible materials; whereas extrinsic motivation involves being motivated by an external factor such as rewards and punishments (Linnenbrink & Pintrich, 2002). The self-determination theory portrayed extrinsic motivation as varying in different degrees of autonomy. Some school assignments may not be interesting for students but are essential for building the foundation of knowledge, it is therefore important for educators to increase extrinsic motivation that allow students to value and self-regulate their own learning, while minimizing the need to use external pressure to make them comply (Ryan & Deci, 2000).

Self-Regulated Learning (SRL) is referred to as self-control in the context of learning. The two important factors in self-regulation are choice and control. Thus, self-regulation research encourages students to take responsibility, be active participants of their learning, and interact with the material that they are absorbing through their actions (Schunk and Ertmer, 2000). Zimmerman (2000, p. 14) defines self-regulation as the "self-generated thoughts, feelings and actions that are planned and cyclically adapted to the attainment of personal goals." SRL is described as the degree in which individuals think strategically before, during and after learning a task. This is a continuous processes involving three phases: forethought, performance and self-reflection (Cleary & Zimmerman, 2013). Research findings have supported that SRL has positive correlations with academic success, especially in higher education where learning takes place in unstructured environments (Zimmerman & Martinez-Pons, 1986). Zimmerman and Martinez-Pons (1986, p. 618) compiled research regarding SRL and constructed 14 categories of SRL strategies, and illustrated this process in Zimmerman's cyclical feedback loop model of self-regulation (Zimmerman & Cleary, 2009). According to Zimmerman's (2000) cyclical feedback loop model, self-regulation is composed of three phases: 1) forethought phase, 2) performance control phase and 3) the self-reflection phase; these three phases interactively influence and explain the process of self-regulation. In order to sustain a high level of SRL engagement, motivational factors also need to be present, such as self-efficacy, intrinsic motivation and mastery motivation (Cleary & Zimmerman, 2013).

Self-efficacy is one of the key factors in SRL and also plays an important role in academic motivation. According to Bandura's (1977b, 1986, 1997, 2001 as cited in Schunk & Mullen, 2013) social cognitive theory, human behavior is formed from a reciprocal interaction between the three factors: personal (e.g. cognition, emotions, beliefs, and skills), behavioral and social and environmental factors. Self-efficacy is defined as the "perceived capabilities for learning or performing actions at designated levels (Bandura, 1997)" and is a key personal factor in the social cognitive theory that influences motivation and engagement (Schunk & Mullen, 2013). Self-efficacy influences achievement behaviors, such as task choice, effort, persistence, and use of effective learning strategies (Schunk & Pajares, 2009 as cited in Schunk & Mullen,

2013). The development of self-efficacy is built on the following four sources: (a) mastery experiences, (b) vicarious experiences, (c) forms of social persuasion, and (d) physiological indexes (Bandura, 1977). Self-efficacy fits under the self-motivation beliefs in the forethought phase of the SRL model. The effects of self-efficacy beliefs involve motivation (task choice, effort, and persistence), learning, self-regulation, achievement and "emotional reaction" (Zimmerman, 2000, p. 86). Perceived self-efficacy is one type of motivational process; a higher sense of self-efficacy can positively affect learning, achievement, self-regulation and motivation (Usher & Pajares, 2007). In a meta-analytic study conducted by Multon, Brown, and Lent (1991) investigated the relationship of self-efficacy beliefs to academic outcomes and persistence showed that among a wide range of participants and experimental methods and designs, there was a significant correlation between self-efficacy beliefs and academic achievement.

Motivational Interviewing (MI) is described as a person-centered and a directive counseling technique where the therapist engages in a discussion with the client to explore and resolve ambivalence, thereby enhancing the individual's intrinsic motivation to change. Miller and Rollnick (2002) described the spirit of MI as being collaborative, evocative, and respectful of the client's autonomy; they believed that a person who is highly motivated to change would hold the three components of being willing to change, have the ability or knowledge to change, and feels ready to change. A counselor who uses the MI counseling technique will keep its four principles in mind: 1) expressing empathy, 2) developing discrepancy, 3) rolling with resistance, and 4) supporting self-efficacy (Enea & Dafinoiu, 2009; Miller & Rollnick, 2002).

The MI theory takes into account Prochaska and DiClemente's (1982) transtheoretical model of change, and tries to help the client to prepare for change during the sessions. The model of change describes change as a process that evolves through several stages. Prochaska and DiClemente (1982) identified five central processes of change, which MI bases itself on; this includes two phases. Phase 1, the pre-commitment phase, include (a) the pre-contemplation stage, (b) the contemplation stage, and (c) the preparation stage. Behavioral change starts in Phase 2, the post-commitment phase, with (d) the action stage and behavior is sustained at (e) the maintenance stage.

MI has been used in the academic setting, for example, Strait et al., (2012) used MI as a counseling technique in a randomized experiment with the aim of improving academic achievement of middle school students (sixth to eighth graders). A total of 103 students were either assigned to the MI counseling group *(n*= 50) or a waitlist group (*n*= 53). Every student in the MI counseling group participated in one MI session equivalent to the duration of one middle school period, which was 45 minutes. A standardized protocol was provided for the trained MI interviewers. The results showed that in comparison with the treatment and control group, the treatment group showed a significant improvement in class participation, but no significant differences in homework completion and academic self-efficacy were observed. Regarding academic performance, a significant effect in the treatment group was only found in Math while the subjects, Language Arts and Reading, did not show a significant improvement but they showed an increasing trend in improving. The study

reflects the benefits of one session of MI as a brief intervention. However, the mixed results should be interpreted with caution.

In a dissertation by Daugherty (2008), the efficacy of a Motivational Enhancement Therapy (MET) intervention was investigated with 110 college students who had difficulties in the Introductory Psychology class. These students were randomly assigned to attend three sessions of the MET intervention or the Treatment as Usual (TAU) advice sessions from peer coaches over the duration of the semester. The MET sessions were aimed at increasing academic performance through improving self-regulated learning involved in academic motivation. The results suggested that the MET intervention was able to help failing students perform better in their class; students assigned to the MET experimental group showed significant improved performance on their total course work, exam, and quiz scores. By the end of the semester, the MET group had more students who obtained passing grades (grade C or better) than the TAU group students, 51% to 35% respectively. The results of this study showed that the MET intervention can help students achieve their academic goals and enhance their academic performance. The investigator mentioned that the positive results from this randomized experiment suggest that once students are able to resolve their ambivalence towards studying and decide their desirable goal outcome, they are more prone to commit to behavior change by regulating their effort and self-regulation needed to work towards their academic goals.

The Self-Administrated Motivation Instrument

The *Self-Administrated Motivation Instrument (SAMI)* was developed by Duffy and his associates (Duffy, Houston, & Rimmer, 2012; Duffy, McCaig, McGrandles, Rimmer, & Martin, 2013; Duffy & Rimmer, 2008, 2009) as a low-cost intervention based on MI, which can be completed within 30 minutes. The SAMI was developed to improve students' motivation towards learning by improving their approaches to study in colleges and universities (Duffy & Rimmer, 2008). It captures the principles of MI, and invites students to evaluate their learning styles and decision-making, by engaging them to reflect and generate their own argument or reasons to improve their study approaches. Duffy and Rimmer (2009) distributed the SAMI to 329 nursing students at a Scottish university. The age range of the participants was between 18 and 50, with the largest group being 31 to 40 of years (approximately 37 percent). The results showed that the students who completed the SAMI increased their strategic approaches to study and had a higher chance of obtaining higher grades compared to those who did not. An effect size of 0.32 was found for strategic scores suggesting quantitatively significant effects on academic achievement and an increase in the strategic approach to learning (Duffy & Rimmer, 2008). The SAMI has been used and found to have positive impacts on deep and strategic approaches to study (Duffy & Rimmer, 2009).

In helping school counselors to promote academic importance, the SAMI, which bases itself on MI could be useful as a low cost brief intervention to address students' study habits. The empirical data supporting MI in academic motivation and performance enhancement provided can serve as a brief intervention option for school counselors addressing students' academic motivation toward studying.

Conceptual Framework

The conceptual framework of this present investigation is the Brief Academic Motivational Instrument (BAMI) and this should have an impact on academic self-efficacy and academic motivation among Assumption University students. (See *Figure 1*).

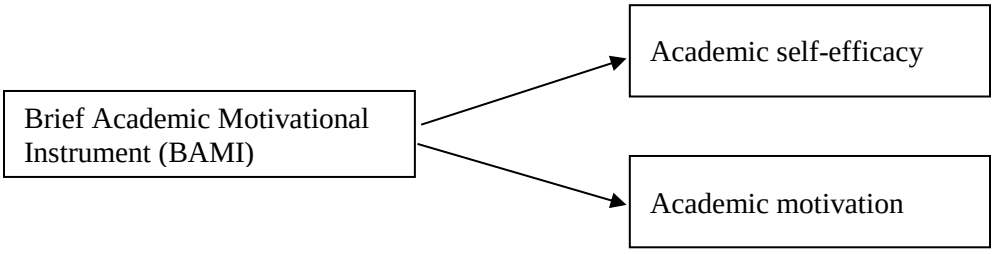

Figure 1: Conceptual Framework of The Present Investigation

Method

As the conceptual model explains, the current investigation employed a mixed 2 (BAMI/control) x 2 (within-subjects: pretest and posttest) repeated measures design to investigate the effectiveness of the BAMI in increasing academic self-efficacy and academic motivation. The experimental group participants are given the intervention, the BAMI; while the control group participants received no intervention. The dependent measures administered at pretest and posttest in this experiment are: (1) Self-efficacy for learning & performance subscale from the Motivated Strategies for Learning Questionnaire (MSLQ) and the (2) academic motivation scale-revised.

Participants

The sample consisted of 40 participants of whom 20 (50%) were randomly assigned to the BAMI experimental group, and 20 (50%) were randomly assigned to the non-intervention control group. The participants' ages ranged between 18 to 32 years (mean age 21.23), 12 males (30%) and 28 females (70%). In terms of their level of education, 13 (32.5%) of the participants were classified as 'sophomore,' 17 (42%) were classified as 'Junior,' 9 (22.5%) were classified as 'Senior,' and 1 (2.5%) did not state his or her level of education.

Measures

Academic self-efficacy scale

Academic self-efficacy was measured by the self-efficacy for learning & performance subscale of the Motivation Strategies for Learning Questionnaire (MSLQ). The MSLQ is a self-report scale developed by Pintrich et al. (1991), and was developed from a social-cognitive theoretical perspective, which consisted of two primary categorized scales: the motivation scale and learning strategies scale. The self-efficacy for learning & performance from the motivational subscales has eight items

(r= .41; α = .93) and is measured with a 7-point Likert scale of 1 (*not at all true of me*) to 7 (*very true of me*). The greater the accumulated score, the higher the academic self-efficacy the participant demonstrates.

Academic Motivation Scale-Revised

The *Academic Motivation Scale-Revised* was modified from the Academic Motivation Scale (AMS) developed by the researchers Lockwood, Jordan, and Kunda (2002), for the application of this investigation. The original focused on future planned behavior, while in this investigation the AMS-Revised has modified each question from the AMS into two questions, one focusing on how the participant has studied since the beginning of the semester, and the other focusing on how the participants plans to study for the rest of the semester. For example the original item, "I plan to put more time into my schoolwork," was modified to "rate how much time you have put in your school work so far this semester" and "now rate how much time you plan to put in your school work for the rest of the semester." Negatively-worded items are reverse-scored (items 12, 18 and 22) There are a total of 32 items in the AMS. This measurement used an 11-point Likert scale of 1 (*not at all true of me*) to 11 (*very true of me*).

Brief Academic Motivational Instrument (BAMI)

The *Brief Academic Motivational Instrument* (BAMI) was adapted by the investigator of this study from the *Self-Administrated Motivational Instrument* (SAMI) (Duffy & Rimmer, 2008) because of several reasons. First, the pretest of this study included five participants and the investigator found that there were questions and phrases from the SAMI that the participants did not understand. In addition, the SAMI questionnaire was quite lengthy, so the participants seemed to have lost interest during answering the SAMI. In addition, the SAMI did not increase as much reflection as anticipated, judging by the fact that the written responses from the participants on the questionnaire was brief. Therefore, the investigator decided to omit seemingly repetitive questions that increased reflection in the SAMI to make the BAMI shorter.

The Brief Academic Motivational Instrument (BAMI) was adapted by the investigator of this study from the Self-Administrated Motivational Instrument (SAMI) (Duffy & Rimmer, 2008). It allowed students to evaluate their current investigation habits and elaborate on the advantages and disadvantages of remaining their current status quo and improving it. The instrument comprised of four sections, which included: (1) Rating of the students' perceived current and potential academic performance on a Likert scale of 0 (*not very well)* to 9 (*very well*) and reflection of the difference between the ratings of the two scores. (2) Identifying their problems with studying, evaluating the advantages and disadvantages of maintaining the status quo, and of changing their study approach, (3) Evaluating obstacle(s) in making changes, generating possible solution(s), and (4) Elaborate what they would anticipant as their accomplishment or reward, if they succeed in the plan.

This instrument is a brief intervention to improve students' motivation to study. This instrument was administered to the experimental group as a semi-structured interview to the participants and was completed within 20-30 minutes depending on

the participant.

Procedure

Data collection was conducted using convenience sampling at the Bang Na Campus of Assumption University, participants were university students. Prescreening questions included (1) if the participant had a GPA of lower than 3.0 and (2) if he or she wanted to improve their grades. If the participant answered 'yes' to both questions, the investigator would then ask if he or she was interested in joining the investigation. The participants were assigned to either the control or experimental group by alternative order. All students completed the *Self-Efficacy and Academic Motivation-Revised* scales. A free gel pen was given as an incentive to join. Five days after the intervention was administered with the experimental group participants, a summary was sent to them via email so the participants could refer back to the interview content. Ten days after the pretest was administered, a follow up email for the posttest was sent to the students, and the students completed the posttest online through Google form survey.

Results

Reliability Analysis of Scales Employed

Reliability analysis was conducted on the two scales of academic self-efficacy and academic motivation. The factor of academic self-efficacy is represented by 8 items pre-intervention and 8 items post-intervention, and the factor of academic motivation is represented by 26 items pre-intervention and 30 items post-intervention. The computed Cronbach's alpha coefficients for all two pre- and post-scales were high and ranged from .90 to .95. After discarding items identified as 'unreliable' (i.e., those with corrected item-total correlation <.33 and whose deletion would increase the scale's overall Cronbach's alpha), each of the two factors of academic self-efficacy and academic motivation (pre- and post-) was then computed by summing across the (internally consistent) items that make up that factor and their means calculated.

MANOVA for repeated measures (pre- versus post-intervention) for the variables

In order to investigate whether the changes in the dependent (within-subjects) variables of academic self-efficacy, and academic motivation from pre- to post-intervention are similar or significantly different for the experimental and control groups, a series of 2 (experimental, control) x 2 (pre- versus post-intervention) MANOVA for repeated measures were conducted. (See Appendix M).

Academic self-efficacy

Results from the multivariate tests of significance indicated that the main effect for the within-subjects variable of *academic self-efficacy* is not significant (p>.05), based on all four multivariate tests of significance (Pillai's, Wilks', Hotelling's, Roy's). From the cell means, the results indicated that the participants scored lower on this variable in the post-intervention condition (M=4.66) than in the pre-intervention condition (M=4.85), averaged across the two groups (experimental, control). However, this difference is not statistically significant, which is confirmed by the tests of within-

subjects contrasts which contrasted the *academic self-efficacy* scores obtained across the pre- and post-intervention conditions. The contrast compares the *academic self-efficacy* scores made in the pre-intervention condition (*M*=4.85) with those made in the post-intervention condition (*M*=4.66), and is not statistically significant, *F* (1, 38) =1.037, *p*>.05.

For the *academic self-efficacy*group* interaction, all four multivariate tests (Pillai's, Hotelling's, Wilks', Roy's) indicate that this interaction is not statistically significant (*p*>.05), suggesting that the *academic self-efficacy* scores made across the pre- and post-intervention are similar for the experimental and control groups. The contrast is not significant, *F*(1.38)=.029, *p*>.05, which indicates that the mean difference in the *academic self-efficacy* scores made between the pre- and post-intervention conditions is similar for the experimental and control groups.

Academic motivation

Results from the multivariate tests of significance indicated that the main effect for the within-subjects variable of *academic motivation* is not significant (*p*>.05), based on all four multivariate tests of significance (Pillai's, Wilks', Hotelling's, Roy's). From the cell means, the results indicated that the participants scored higher on this variable in the post-intervention condition (*M*=.27) than in the pre-intervention condition (*M*=.22), averaged across the two experimental and control groups. However, this difference is not statistically significant. This is confirmed by the tests of within-subjects contrasts, which contrasted the *academic motivation* scores obtained across the pre- and post-intervention conditions. The contrast compares the *academic motivation* scores made in the pre-intervention condition (*M*=.22) with those made in the post-intervention condition (*M*=.27), and is not statistically significant, *F* (1, 38) =.341, *p*>.05.

For the *academic motivation*group* interaction, all four multivariate tests (Pillai's, Hotelling's, Wilks', Roy's) indicate that this interaction is not statistically significant (*p*>.05), suggesting that the *academic motivation* scores made across the pre- and post-intervention are not dependent on the type of treatment groups (i.e., experimental versus control). The contrast is not significant, *F* (1, 38) =.113, *p*>.05, which indicates that the mean difference in the *academic motivation* scores made between the pre- and post-intervention conditions is similar for the experimental and control groups.

Discussion

The BAMI was modified from the Self-Administrated Motivational Instrument (SAMI), which has shown significant results in changing the deep and strategic learning approaches in Duffy & Rimmer's (2008) study. This could suggest that the BAMI was not an effective modification of the SAMI, or the possibility of Type II errors that may have led to false insignificant results. First, the cultural differences with the SAMI adaptation made in the BAMI may have contributed to its ineffectiveness; the SAMI was administered to mostly nursing students (*N*=325; age ranged between 18 and 50) compared to the present investigation (*N*=40; age ranged between 18 and 32). The age difference may suggest a difference in maturity and motivation among the samples.

Second, cultural difference in seeking social support suggested by Kim, Sherman, & Taylor's (2008) study found that Asian and Asian Americans were more reluctant to ask explicitly for help from people who they are close to in comparison to European Americans. Another study found that Asians and Asian Americans were more likely to view disclosure as an additional source of stress when they are asked to engage in it (Taylor et al., 2007 as cited in Kim, Sherman, & Taylor, 2008). This may suggest a difference in social support seeking habits in the Asian culture, and that revealing about their distress, for example, perhaps revealing about what they felt about the score discrepancy between their perceived current and potential academic performance may have been uncomfortable and stressful for the participants.

Third, additional screening may be needed for selecting participants, because the theory behind MI is that people are ambivalent about their behavior. However, in the present investigation, 60% of the participants (12 participants) in the BAMI experimental group mentioned that they were not bothered by the score discrepancies between their perceived current and potential academic performance which may suggest an absence of ambivalence to do better academically; these participants may be those who are in the pre-contemplation stage of the change process. This further suggests the participants do not view having a GPA of below 3.0 as being severe, for example, one student mentioned during the interview that his or her goal was to remain in the GPA range of 2.4 to 2.5.

Fourth, some problems that were mentioned by participants regarding their studying approaches frequently narrowed down to procrastination, amotivation, and being preoccupied with friends or social media. Some solutions they generated fitted into the 14 categories of SRL strategies Zimmerman & Martinez-Pons proposed (1986), such as time management, rehearsal and goal setting. This present investigation gives a brief idea of what kinds of SRL strategies the participants came up with by themselves as solutions to improve their studying approaches.

Fifth, in Duffy & Rimmer's (2009) study, the experiment was administered in the beginning of the semester with a larger sample size (N=325) compared to the current investigation (N=40); if the present investigation was able to recruit a comparable sample size, it may have led to significant results in this study. In addition, the insignificant findings of the current investigation's intervention may have been caused by the timing of the data collection, which was conducted a week before the midterm exams. As the literature review suggested earlier, motivation is subject to context and situation, which varies between domains (Linnenbrink & Pintrich, 2002). The midterm exams may have acted as a contextual event for self-evaluation and reflection for both the experimental and control group participants, and would then effect the way they plan to study for the rest of the semester.

Sixth, English is the medium of instruction at Assumption University, and a pretest using five students was conducted prior to the data collection to test English comprehension of the study's future participants and to adjust the phrasing in the semi-structured interview. However, in this current investigation, the investigator was able to offer language assistance in English, Mandarin and Thai, by explaining the meaning of the question in the language the student was most comfortable in, however the Thai proficiency of the investigator is not as proficient as her English

and Mandarin, so the conversation may have been limited with Thai speaking students.

Lastly, a major part of MI is to reflect or paraphrase the participant's comments as a means to encourage participants to elaborate what they are saying in order to clarify ambivalence and strengthen change talk. One major alteration of the Brief Academic Motivational Tool (BAMI) from the Self-Administered Motivational Tool (SAMI) (Duffy & Rimmer, 2008) was to include the investigator in interviewing the participants instead of distributing the interview as a self-administered tool. With face-to-face interviews, it also enables the investigator to learn more about the underlying feelings and thoughts participants may have in hopes of increasing change talk to amplify their motivation to change. The construction of a positive therapeutic relationship is a major factor in treatment success (Miller & Rollnick, 2002, p. 311). In order for the participants to benefit from the intervention, an environment where the participants feel they are engaging positively with the counselor is essential. There is a possibility that the investigator was unable to build a therapeutic relationship that provided empathy that facilitated self-efficacy in such a short time during the brief intervention.

This study was an attempt to investigate enhancing academic self-efficacy and academic motivation among low performing students using motivational interviewing. However, it is important to note that replication of this study with a larger sample size, better pre-screening of participants, and timing of the study to avoid possible confounds noted above would be necessary to draw more definitive conclusions about the effectiveness of a paper based motivational interviewing tool.

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