THE EFFICACY OF INTEGRATED SFBT INTERVENTION ON SELF- COMPASSION, SELF-DETERMINATION, AND SOLUTION-FOCUSED MINDSET AMONG HIGH SCHOOL STUDENTS IN BANGKOK, THAILAND

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Abstract: This research was conducted to investigate the causal relationship model of how self-determination impact on solution-focused mindset of high school youths in Thailand, being mediated by self-compassion. Thai-translated instruments of the observed variables were developed and the psychometric properties were tested to measure their validity and reliability. Data from 500 high school students in Bangkok area were collected for Study I and Study II. The result from CFA analysis found all the translated instruments to be valid and reliable. In study II, the result of path model analysis showed that self-determination has both direct and indirect influence on solution-focused mindset, with the variable of self-compassion as a mediator. An experiment was conducted in study III to test the efficacy of the integrated SFBT intervention via an intervention group (n=25) vs control group (n=25). The finding showed that the designed intervention program was effective in increasing participants' level of self-determination, self-compassion, and solution-focused mindset.

Keywords: self-determination, SFBT, solution-focused brief therapy, self-compassion

Introduction

There is an ever-growing value disposition on policy makers of today on the youth's self-determination and active engagement on a global scale (United Nations, 2016). Self-determination theory (SDT) plays a key role in explaining the theoretical perspectives on the nature of self-motivation, and how it is regulated in humans (Deci & Ryan, 1985). It has been experimentally proven across domains that promoting self-determined motivation results many

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favorable characteristics while discouraging them yield the opposite (Gagné & Deci, 2005). The extent to which youths can make autonomous decisions and achieve individuation will coincide with the need for self-motivation which can be achieved by self-exploration and value formation. This normally takes its root during this youthful phase in human development (Arnett, 2000). However, not many survive this phase on their own. This is the time when counseling techniques and practitioners constitute relevance for improving strength and competency in the youth to help them cope and make life work in order for them to become self-determined. Solution-focused brief therapy (SFBT) was found to be most apparent and matched with the outcomes in self-determination and self-motivation (Visser, 2010). Self-compassion (SC) was also found to correlate with basic needs satisfaction – a key factor in the SDT (Busch, 2014). Furthermore, SFBT's tenets and techniques have elements pertaining to self-kindness, common humanity, and mindfulness (Neff et al., 2005). Aligning and incorporating the theoretical basis of SC to the employment of SFBT intervention technique can be very beneficial in facilitating youth development, especially in Thailand where the majority is found in Buddhism, in which SC takes its root (Neff, 2003b).

Objectives

The current study attempted to investigate the direct and indirect influences of self-determination and self-compassion on the solution-focused mindset of high school students in Thailand by means of selected measurements. Since the cited instruments have no Thai-translated version for use with Thai populations, another purpose was to test the psychometric properties of the Thai-translated measurements. Finally, the study attempt to examine the efficacy of a planned Integrated SFBT intervention by means of the experimental method that involved an intervention group vs. control group in order to use the theoretical evidence to establish a model that described the relationship between SFBT, SDT, and SC.

Literature Review

Solution-Focused Brief Therapy (SFBT)

The scope of a solution-focused brief therapy and approach has always been to reduce attention to clinical background, past dealings, mistakes, and problems and, instead, focus on clients' strengths and resources. To practice the technique, the practitioner's initial task is to be motivational with regard to their client's autonomy by enhancing their mental images and aspirations to change for a better outcome (Miller & Rollnick, 2002). With that in mind, the practitioner is simply partnering and coming alongside clients, being present to help clients visualize their preferred future. Client communication becomes

a resolution, and techniques such as scaling, coping questions, looking for exceptions to the problem from past experiences, and miracle questions become a necessity to carry along positive conversation in order to affect positive change (de Shazer, 1985). Outcome studies testify that SFBT interventions support mindset change which coincide with 50 years of experimental researches (McKeel, 1996).

Self-Determination Theory

The scope of self-determination theory (SDT) lies in its conceptual framework that, in order for an individual to become intrinsically motivated and thrive with resilience, three innate psychological needs must be encouraged in any type of intervention. According to Vallerand and Losier (1999), the scope and definition includes, first, the desire and self-obligation to be self-originating in regulating one's conduct, which is operationally termed 'autonomy'. Second, the term 'competence' is operationally constructed and means achieving mastery and effectively delivering goal-directed actions. Lastly, 'relatedness' means to meaningfully feel a valid bond or association, or sense of belonging to that particular social environment. The three needs are all essential for self-determination, resulting in self-motivated growth and development thereafter.

Self-Compassion

Compassion is derived from religion and psychology, but the construct is conceptualized in secular terms within the scientific literature (Neff, 2003b). Compassion can be extended towards the self when suffering occurs through no fault of one's own, or when external circumstances of life are simply hard to bear. Self-compassion (SC) is equally relevant when suffering stems from our own mistakes, failures, or personal inadequacies. Busch (2014) summarized that basic components of SC are self-kindness, common humanity, and mindfulness. Self-kindness means to acknowledge one's shortcomings, imperfections, and suffering without criticism and reframes self-criticism with kindness and understanding instead of subjecting it to negative judgment. Common humanity is the ability to face pain, being aware of its existence, and stay with pain without the need to isolate from it or feel ashamed of oneself since it is a universal problem we all face. Finally, the term mindfulness describes a nonjudgmental, balanced awareness of emotions (Neff, 2003a).

Self-determination theory, self-compassion, and solution-focused mindset.

SDT and SC are interlinked. According to Neff et al. (2007b), self-compassionate individuals tend to be more open about life because they

possess autonomy and have less fear of failure and challenges since they can manage their pain and worry better by accepting them as common to all. Neff et al. (2005) also established that self-compassionate individuals possess greater perceived competence. That is, before initiating new things, individuals need SC to help them be free from unmerited self-criticism, isolation tendency, and over-identification with their setbacks.

SFBT techniques coincides with self-determination in that they enable solution building in clients by enhancing autonomy, competence, and relatedness support which, in turn, increase the clients' autonomous motivation (Visser, 2010) There is a considerable amount of both correlational and experimental evidence, especially in school settings, showing that the degree to which youth's motivation is autonomous is associated with positive outcomes that enhance solution findings while the reverse is also true (Ryan & Deci, 2016)

Both SFBT and SC possess a cognitive and mindfulness orientation, which places emphasis on active engagement on the part of individuals which thrives on observing what works and letting go of over-identifying problems, negative emotions and self-criticism. A study showed that self-kindness, a sense of common humanity, and emotional balance necessitate personal growth and goal-initiation (Neely, Schallert, Mohammed, Roberts, & Chen, 2009). Since SC and SFBT both focused on being aware of self without the need to fix posing problems by finding its cause, by integrating SC in SFBT, it can increase the efficacy of the solution-focused mindset building either directly or indirectly.

Integrating different psychological techniques to clients

Based on researcher's extended experience with SFBT and SC, it was observed that SC can be selectively borrowed and integrated into SFBT to help youth become mindful and solution-focused, which the researcher as a counselor had found beneficial in actual practices. The observed results led the researcher on a quest to validate the results by this current research. To integrate self-compassion talk into SFBT, the researcher adopted selective borrowing method (Nichols and Schwartz, 2001 in Smith & Southern, 2005) which involves leaning toward SFBT approach as the core technique but using self- compassion talk occasionally as a substitute technique. This paper proposed that SC would act as a mediate variable of SFBT in increasing solution-focused mindset. Although mediation analysis has never been conducted for the integration of self-compassion talk to SFBT technique, several researches have demonstrated mediate property of integrated variable in improving the original model. For example, a research integrated

mindfulness-practice into cognitive behavioral therapy and the efficacy of mindfulness as a mediator to improve the treatment of mental health (Tovote et al., 2013). There were also studies of the integration of mindfulness-based therapy and solution focused brief therapy. According to Rodriguez (2017), SFBT and the practice of mindfulness, one main facet in SC, both emphasize describing and sensing above analyzing, thinking, and judging. Combining both techniques has proven that it can better help in changing mechanisms underlying psychopathology disorders (Cheisea & Serreti, 2010). With that, the research anticipated that in integrating self-compassion talk into SFBT, the integrative study will help boost the efficacy of the technique in solution building.

CONCEPTUAL FRAMEWORK

Figure 1. ***Direct relationship between self-determination and solution-focused mindset, with their direct relationship being mediated by self-compassion.***

Method/Procedure

This paper was divided into 3 studies. Study I aimed to translate and test the validity and reliability of the Western-based research instrument namely the Solution-Focused Inventory (SFI) and the Basic Psychological Need Satisfaction Scale (BPNS) to be used in Study II and Study III. Study II aimed to investigate the direct and indirect influences of self-determination on solution-focused mindset, with self-compassion as a mediator. Finally, Study III utilized designed experiment to evaluate the efficacy of the integrated SFBT intervention.

Participants.

The sample required for Study I was derived from the population of emerging adults in Bangkok, Thailand, ages ranged from 16 to 18 years, studied in Mattayom 4 to Mattayom 6, and had GPA scores from the last semester ranged between 0.00 to 4.00. 500 participants were involved in Study I and a separated 500 participants were involved in Study II in order for each study to meet minimum sample size required for ‘large- sample’ techniques with a 95%

confidence level of the multivariate analysis techniques. 50 participants (25 persons per group in order to identify a significant difference for the intervention versus control group) from the same demographic background were included in Study III based on the normative standard deviations for multivariate test for a primary outcome measure – the Solution-Focused Mindset at a significance level of .05, a desired power of .8, and a small-to-medium effect size (i.e., Cohen's d=.4).

Research Instrument

A self-administered survey questionnaire translated into Thai undergone World Health Organization's (WHO) four-step guidelines for translation (UNESCAP/WHO, 2006) and followed with pretest to inspect for statistical errors and for readability. The questionnaire consisted of 4 parts namely: (1) Demographic Information including gender, age, educational level, and GPA from the previous semester (2) Basic Psychological Need Satisfaction Scale (BPNS), the 21-item, seven-point Likert-scale measurement originally developed by Gagne (2003). (3) Self-Compassion Scale (SCS), the 26-item, seven-point Likert-scale measurement originally developed by Neff (2003a). The Thai-translated version of SCS had already been developed, tested, and applied in the study by Watcharawadee (2013). (4) Solution-Focused Inventory (SFI), the 12-item, seven-point Likert-scale measurement originally developed by Grant et al. (2012)

Data collection procedure.

In Study I and Study II, the purposive or selective sampling method to match with psychometric theory was conducted on the targeted sample group with the use of self-report structured questionnaires for data collection.

In Study III, the researcher subjected both intervention and control groups to a pretest and posttest, administering the same set of Thai validated measurements which included the Informed Consent section during orientation session, prior and after the intervention program.

Participants were randomly assigned to intervention group (n=25) and control group (n=25) by drawing lots in order to reflect fairness in selection conforming to school policy. The intervention group was subjected to 60-minute three intervening sessions within 6-week consecutive period, plus two days orientation. Sessions focused on solution-focused mindset and self-compassion talk intervention. The details of each session are shown in Table 1.

Table 1 *Details of each session in the integrated SFBT intervention program*

Session	**Content**
1st Session	*Step 1*: Doing one thing different at a time. *Step 2*: Think of exceptions or something that somebody else or you did in the past that made the problem better. *Step 3*: Being mindful and kind to self: Let feelings be your advisor, not your master and think of yourself in terms of your best friend in need of support.
2nd Session	*Step 4*: Change what subjects focus on (from self-judgment to self-kindness). *Step 5*: Imagine a future goal (picture your future self-compassionate talk). *Step 6*: Reframe your story and accept all that you experienced without the need to over-identify and criticize oneself. Notice what your body is telling you and practice mindful breathing, soothing and compassionate touching in light meditation.
3rd Session	*Step 7*: Believe in common humanity and goodness. Know that what happened to you and how you felt were common to all. Relate safely without struggle to those around you without the need to isolate from your surroundings. *Step 8*: Use action talk to get things to go better

For control group, the participants received only reading materials and one-and-a-half-day orientation without actual intervention.

Data analysis.

In Study I, correlated item-total correlation and Cronbach's alpha were computed and executed to test the internal reliability of the translated scales. Confirmatory factor analysis (CFA) was, then, conducted to test the validity of the instruments. CFA, unlike EFA, give permission for the researcher to propose precisely one or more *a priori* models based on past literatures. Due to the well-established measurement constructs of the studied scales, EFA were exempted in this study and the researcher proceeded the factor analysis directly with CFA. Prior to CFA analysis, data were tested in comparison to the criteria assumptions underlying the analysis including *normality, sufficient significant correlations in data matrix,* and *outliers* in order to confirm the reliability of the analysis.

Study II explored the goodness-of-fit on the hypothesized causal relationship model between self-determination and solution-focused mindset, being mediated by the factor of self-compassion by mean of structural equation modeling (SEM) to bring verification in line with the researcher's

understanding of the nature of that construct. Prior to the path analysis using SEM, the data were also subjected to testing in comparison to the criteria assumption underlying the analysis including *linearity, normality, multicollinearity,* and *outliers* in order to confirm the reliability of the analysis. By employing SEM, Goodness-of-fit (GFI), chi-square value, the root mean square error of approximation (RMSEA), as well as additional fit indices, including Tucker-Lewis Index (TLI), Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), and Comparative Fit Index (CFI), were computed in order to confirm that the causal model was properly hypothesized.

Study III utilized 2 x2 MANOVA for repeated measures was conducted on the factors of self-determination, self-compassion, and solution-focused mindset to evaluate the differences between the pretest and posttest of both intervention and control groups. The multivariate tests based on all four multivariate tests of significance were employed to test the mean difference of both groups combined.

Findings/Results

Study I

In order to investigate the internal consistency of the Thai-translated version of SFI scale and BPNS scale, the items representing the two scales were analyzed. Two criteria were used to eliminate items from these factors. First, an item was eliminated if the inclusion of that item resulted in a substantial lowering of Cronbach's alpha (Walsh & Betz, 1985). Second, an item was considered to have an acceptable level of internal consistency if its corrected item-total (I-T) correlation was greater than 0.33 (Hair, Anderson, Tatham, & Black, 1998).

Calculation showed that the Cronbach's Alphas was .92 for the SFI scale and .95 BPNS scale. The items' I-T correlations of all items in SFI scale ranged between .556 and .729 and while the items' I-T correlations of all items in BPNS scale ranged between .469 and .805. Since Cronbach's Alphas and the items' I-T correlations were above the mentioned criteria and the elimination of these items did not result in higher value of Cronbach's Alphas of their respective scale, all 12 items in SFI scale and 21 items in BPNS scale were retained to represent their respective scale.

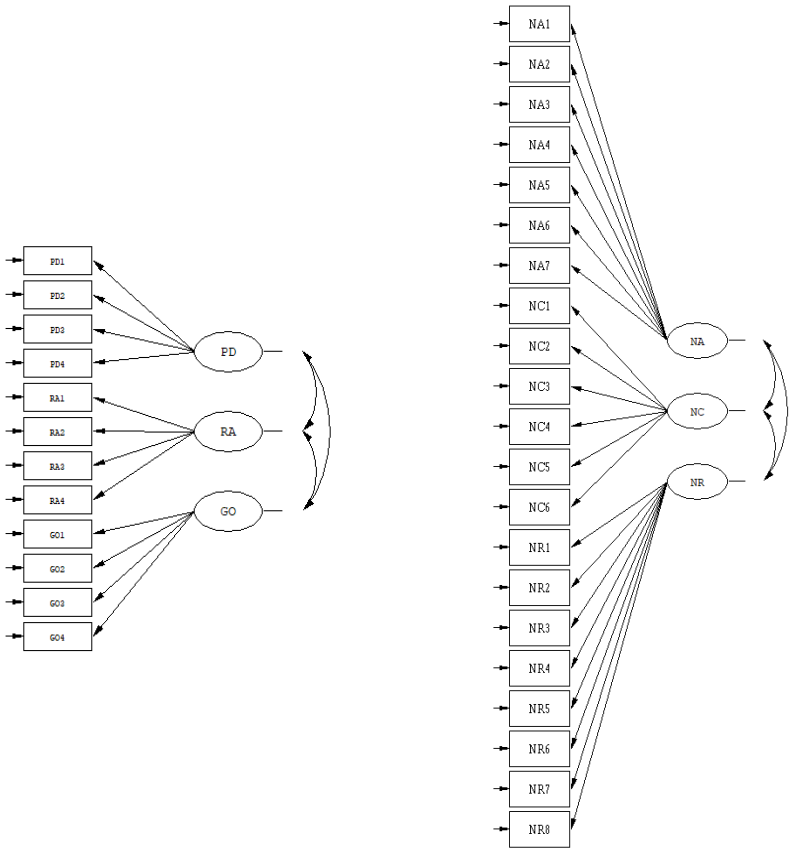

Figure 2. ***Three-Factor Measurement Model Representing the Latent Constructs of SFI and Three-Factor Measurement Model Representing the Latent Constructs of BPNS.***

Confirmatory factor analysis (CFA) was carried out to evaluate the factor structures of the SFI and the BPNS scale. Figure 2 presents the three-factor measurement model representing the latent construct of SFI and Three-factor measurement model representing the latent construct of BPNS respectively. Each of the two latent constructs was represented by their associated computed indicator variables based on their original version of the scales. For both models, all factor loadings were freed, indicators were allowed to correlate with only one factor, and the three factors were allowed to correlate (equivalent to oblique rotation).

After ensuring that the collected data met the assumptions underlying CFA, the χ^2 goodness-of-fit test (via SEM) was employed to test the null hypothesis

that the sample covariance matrix for the model was obtained from a population that has the proposed model structure. Table 2 presents the analysis result for both translated scales.

Table 2 *Goodness-of-fit test result for SFI Factor Model and BPNS Factor Model*

Model	*(N=500)*	*df*	*P*	*GFI*	*NFI*	*IFI*	*CFI*	*RMSEA*
Solution Focus Inventory (SFI)								
Null Model	608.553	51	0.000	0.831	0.932	0.938	0.938	0.148
Factor Model	17.029	17	0.452	0.994	0.998	1.000	1.000	0.002
Basic Psychological Need Satisfaction (BPNS)								
Null Model	1400.839	186	0.000	0.789	0.948	0.955	0.955	0.114
Factor Model	101.863	82	0.678	0.981	0.996	0.999	0.999	0.022

According to the analysis, the chi-square goodness-of-fit value for the factor model of both scales were not statistically significant ($p>.05$) suggesting that the co-variance matrix for the posited factor model of both scales fit the sample co-variance matrix well. Goodness of Fit Index (GFI) as well as the incremental fit indices (NFI, IFI, CFI) for both scales were all above 0.90. The result indicated that both factor models provided a very good fit relative to their respective null or independence model and supported the hypothesized structure of the factor model. Based on MacCallum, Browne and Sugawara (1996) RMSEA acceptable range, the RMSEA value of 0.002 for SFI indicated excellent fit and the RMSEA value of 0.022 for BPNS indicated good fit relative to the population covariance matrix.

Convergent validity of the SFI and BPNS were also analyzed via CFA by determining whether each indicator variable's estimated Standardized loading/coefficient with its underlying latent construct was significant (greater than twice its standard error) (Anderson & Gerbing, 1988). In other words, a standardized coefficient is significant ($p<.05$) if its associated critical ratio (C.R.) value is > +/- 1.96. Result showed that the standardized loadings for the items in SFI scale ranged from 0.527 to 0.824 and the standardized loadings for the items in BPNS scale ranged from 0.225 to 0.872 for BPNS while the associated critical ratio (C.R.) for the items in both measurements were all statistically significant, indicating convergent validity for the two translated scales.

Study II

Structural equation modeling (SEM) was employed to test the path model depicted in the conceptual model in Chapter II. According to this fully identified model, the participants' reported level of self-determination were hypothesized to be both directly and indirectly associated with the criterion variable of solution-focused mindset, being mediated by the self-compassion. After ensuring that the collected data set met the assumptions underlying SEM, the fit of this path model was tested. The overall chi-square goodness-of-fit value was not significant, χ^2 (52) = 64.28, p >.05, suggesting that the co-variance matrix for the posited path model fitted the sample co-variance matrix well. The incremental fit indices (NFI, IFI, TLI, CFI) were all above 0.90 (0.977 to 0.996). The RMSEA value of 0.0218 indicated no error of approximation and indicated that the model significantly fitted the population covariance matrix. Table 3 presents the analysis result for the path model.

Table 3 *χ^2 Goodness-of-Fit Result for the Path Model*

Model	(N=500)	df	p	GFI	NFI	CFI	IFI	RFI	RMSEA
Path Model	64.28	52	0.118	0.979	0.982	0.996	0.996	0.977	0.0218

The participants' reported level of self-determination has a direct and positive relationship with the criterion variable of solution-focused mindset (Gamma=0.42). Meanwhile, self-determination was also found to have an indirect influence on the criterion variable of solution-focused mindset indicating that the higher the participants' level of self-determination, the higher their reported level of self-compassion (Gamma=0.43) and,
subsequently, the higher is their reported level of solution-focused mindset (Beta=0.57). The path model of the fully identified relationship between dependent and independent variables are shown in Figure 3.

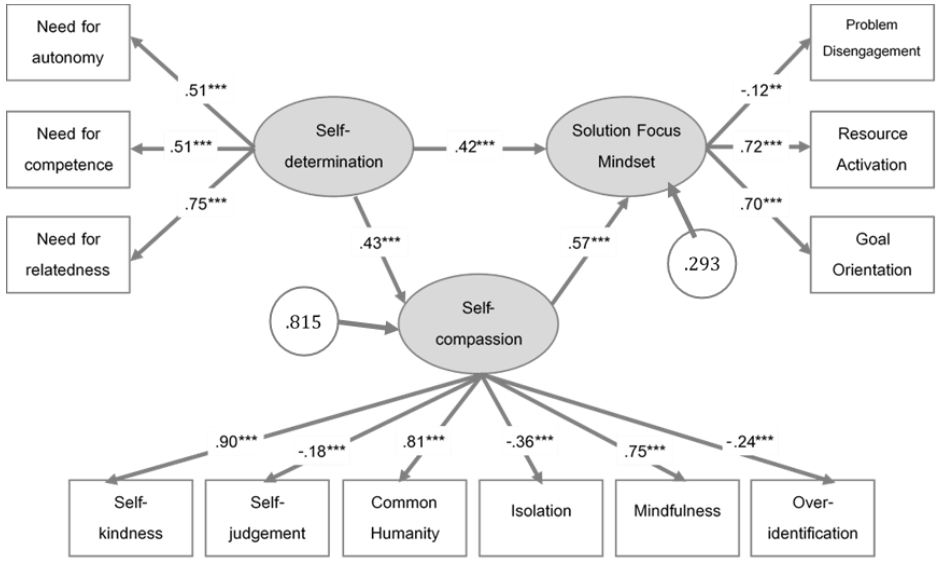

Figure 3. ***Fully Identified Mediation Model Showing the Hypothesized Direct and Indirect Relationships Between Self-Determination and The Dependent Variable of Solution-Focused Mindset, Being Mediated by Self-Compassion.***

Explained variance were calculated by subtracting the value standardized residual (unexplained variance) for each endogenous variable from 1.00 to determine the proportion of variance predicted by the model. These coefficients indicated that self-determination factors accounted for 18.5% of the variances in the participants' reported level of self-compassion. The entire posited model (self-determination and self-compassion) accounted for 70.7% of the variances in the participants' reported level of solution-focused mindset.

Study III

Results of all four multivariate tests of significant (Pillai's, Wilks', Hotelling's, and Roy's) from the *Multivariate Tests of Significance* showed that the main effect for the within-subjects variable of self-determination, self-compassion, and solution-focused mindset were all significant (p<.05). The tests of within-subjects contrasts also indicated that the difference of the mean between the two group conditions was also highly significant for all three variables (p<.05). For the *group interaction*, all four multivariate tests (Pillai's, Hotelling's, Wilks', and Roy's) indicated that these interaction was statistically significant (p<.05), suggesting that the scores of all three variable's made across the pre- and post- intervention were not the same for the intervention and control (non- intervention) groups. The contrast results of all three variables were also significant for the *tests of within-subjects*

contrasts which indicated that the mean difference in each variable scores made between the pre- and post-intervention conditions was different for the intervention and control groups. The multivariate test result for the three variables as well as their group interaction results are shown in Table 4.

Table 4 *The Multivariate Test Result for Self-Determination and Self-Determination*Group*

Multivariate Test		Value	F	Df	Sig.
self-determination	Pillai's Trace	.287	19.353	48	.000
	Wilks' Lambda	.713	19.353	48	.000
	Hotelling's Trace	.403	19.353	48	.000
	Roy's Largest Root	.403	19.353	48	.000
self-determination * group	Pillai's Trace	.084	4.417	48	.041
	Wilks' Lambda	.916	4.417	48	.041
	Hotelling's Trace	.092	4.417	48	.041
	Roy's Largest Root	.092	4.417	48	.041
self-compassion	Pillai's Trace	.154	8.721	48	.005
	Wilks' Lambda	.846	8.721	48	.005
	Hotelling's Trace	.182	8.721	48	.005
	Roy's Largest Root	.182	8.721	48	.005
self-compassion * group	Pillai's Trace	.089	4.704	48	.035
	Wilks' Lambda	.911	4.704	48	.035
	Hotelling's Trace	.098	4.704	48	.035
	Roy's Largest Root	.098	4.704	48	.035
solution-focused mindset	Pillai's Trace	.105	5.625	48	.022
	Wilks' Lambda	.895	5.625	48	.022
	Hotelling's Trace	.117	5.625	48	.022
	Roy's Largest Root	.117	5.625	48	.022
solution-focused mindset * group	Pillai's Trace	.021	1.053	48	.031
	Wilks' Lambda	.979	1.053	48	.031
	Hotelling's Trace	.022	1.053	48	.031
	Roy's Largest Root	.022	1.053	48	.031

Discussion

The Thai translated scales of SFI and BPNS were created and provided with sounded psychometric property as a mean in exploring the level of solution-focused mindset and self-determination within the Thai context, especially among high school youths.

The path analysis result supported the hypothesis that self-determination has both direct and indirect influences on solution-focused mindset, with self-compassion as mediator. The finding in current study calls for attention from parents and practitioners in Thailand to take a step back from the current approaches used in tackling challenges involving youth development such as vocation, school performance, and maladjusted behaviors and turn their attention toward a more strength-based approach to equip youth individuals with autonomous motivation and solution focused mindset.

The analysis results from MANOVA test also showed significance in the interaction effect of the intervention vs control group between the pre- and post-conditions. The result aligned with Visser (2010) proposed comparison between SFBT intervention method and SDT. The finding can serve as a validation of the efficacy of SFBT in enhancing the solution-focused mindset of the client in Thai setting, especially among youths in Thailand. Because of the brief and flexible nature of SFBT, this therapeutic technique has been applied as a practical intervention to solve diverse problems in school (Kelly, 2008). This will especially benefit schools in Thailand that has limited budget or schools where expert youth counseling practitioner are not available. SFBT techniques can be relatively easy to self-taught and apply. Manuals, tips, and materials are available throughout the internet, although training may be required to become specialized (Metcalf, 1995)

Limitations of the Study

With regards to the construct of the measurement model, the validity analysis result of the original scale of Basic Need Satisfaction Scale (BPNS) were not available in the original literature (Gagne, 2003). Additionally, the Thai-translated Self-Compassion Scale developed by Watcharawadee (2013) was not subjected to the validity analysis in the study to confirm the factor structure originally established by Neff (2003a). With these in mind, the usage of the Thai-translated scale may need to be employed with caution and the data responses in the current study derived from the translated scale may also subjected to reliability limitation.

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