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Integrating Motivational Interviewing and Cognitive Behavioral Therapy for Addressing Violent Behavior in Secondary School Students: A Stages-to-Change Intervention Module

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Abstract

The rise in disciplinary issues among school students has become a cause for concern with challenges in managing and curbing negative activities. Employing counselling interventions, particularly the 'Brief Therapy' approach has proven effective in addressing student misbehaviour. This study proposes the development of a counselling intervention module to specifically tackle promiscuous behaviour among high school students. The module integrates Motivational Interviewing, based on the Trans theoretical Model and Stages of Change. Additionally, Cognitive Behaviour Therapy complements Motivational Interviewing to expedite the treatment process. The module construction follows a two-level, nine-step framework. The study aims to deepen understanding of behaviour change processes, ultimately reducing disruptive behaviour. Special attention and mastery of this new approach by counsellors and practitioners are crucial. Moreover, aligning with the Malaysian Education Development Plan 2013-2025 (PPPM), the study contributes to strategic planning in schools, emphasizing the development of students' potential.

Keywords: Cognitive Behaviour Therapy, Motivational Interviewing, Motivation to change

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INTRODUCTION

Past researchers have proposed the implementation of modules as a medium for school students to undergo transformation (Magill et al., 2019; Idris et al., 2020). Therefore, the education system needs to be integrated with a human development approach, treatment interventions, and reinforcement of regulations that align with understanding moral formation, i.e., how individuals can make decisions whether they are good or bad (Handrianto, 2013; Atwood & Friedman, 2020; Kulcsár et al., 2020; Nengsih et al., 2022). Programs that can enhance motivation become crucial in the process of steering towards a better moral compass. The development of such programs should be emphasized by observing the transformational process of behavior towards a more progressive direction (Van-der-Zweerde et al., 2019; Musta`in & Handrianto, 2020; Utami et al., 2021).

The main objective of the study is to measure the impact of the Motivational Interviewing based on Cognitive Behaviour Therapy (MMI-CBT) module (González-Prendes et al., 2019; Karyotaki et al., 2021; Man et al., 2023) in the treatment group and the control group on the dependent variable, which is the level of motivation to change. Thus, the research objectives are to examine whether there is a significant difference in the pre-test and post-test measures of the dependent variable, the overall level of motivation to change, among the large group counseling (LGC), small group counseling (SGC), and control group (CG) among high school students.

RESEARCH METHOD

In the context of this study, the researcher employed a quasi-experimental research design. The selected locations for conducting this study are two secondary schools in the Klang District. The choice of these study locations is based on the rationale that these institutions meet the scope of the intended research. In this study, subjects are purposively sampled in line with the predetermined goals.

The intervention process is conducted in the group counseling rooms at the selected institution serving as the experimental study center. The researcher obtained approval from the Ministry of Education Malaysia and the Selangor State Education Department through the ERAS system and subsequently received permission from the principals of the respective schools to conduct the study. The treatment groups are managed by appointed counselors. The selection of counselors is a necessity to eliminate any potential bias that may occur in the experimental study. According to Chua (2006), bias is a frequently raised issue when a researcher personally administers modules to study participants. Bias in experimental studies is a concern when the actual researcher conducts physical or social testing through interactions with study subjects to influence expected outcomes (Rosenthal and Rubin 1978; Doyen et al., 2012; Brent and Aysu, 2012; Rita & Handrianto, 2021).

As this study involves pre-test and post-test measurements of the dependent variable, data will be analyzed using ANOVA (Analysis of Variance) and MANOVA (Multivariate Analysis of Variance) statistics. MANOVA analysis is conducted considering the presence of more than one dependent variable (Chua, 2009; Handrianto et al., 2021; Rahman et al., 2022). In this study, repeated measures MANOVA is performed to assess pre-test and post-test effects. ANOVA statistical tests are also conducted to examine treatment differences among two or more treatment groups.

RESULTS AND DISCUSSION

Table 1 showed no significant difference in the pre-test data among the three groups: LGC, SGC, and CG. The comparison of mean scores and standard deviations between groups does not show substantial differences. In the context of subject selection involving the level of motivation to change through the TMB test, the minimum score for the LGC group indicates a low score of 2.29. For the SGC and CG minimum scores, they show moderately low scores of 2.40 and 2.56, respectively. Although there is a slight difference between the SGC

and CG groups, based on the TMB interpretation, the minimum scores for LGC, SGC, and CG are in the precontemplation phase, which is the lowest phase in the motivation to change. Therefore, the pre-test minimum scores for all groups for the motivation to change variable are acceptable.

Table 1
Summary of ANOVA Statistical Analysis measuring the differences in mean scores and standard deviations of the main dependent variable among the Large Group Counseling (LGC), Small Group Counseling (SGC), and Control Group (CG) based on the pre-test data of the overall subjects.

Group		**Motivation to Change**
Large Group Counseling (LGC)	Mean	2.2907
	N	33
	Std Dev	.15576
Small Group Counseling (SGC)	Mean	2.3968
	N	33
	Std Dev	.14479
Control Group (CG)	Mean	2.5644
	N	33
	Std Dev	.20176
Total	N	99

Table 2 shows the normality test results for the pre-test data of the motivation to change variable overall, based on the LGC, SGC, and CG groups, using the Shapiro-Wilks statistical assessment. In the context of the motivation to change variable, LGC reports a normality value of w(33) = 0.94, p = .065, SGC w(33) = 0.95, p = .098, and CG w(33) = 0.95, p = .118. The statistical data indicates that the distribution of pre-test data is normally distributed.

Table 2:
Normality testing for the dependent variable based on the groups Large Group Guidance (LGC), SGC (Small Group Guidance), and Control Group (CG)

Variable	**Group**	**Descriptive**			***Shapiro- Wilks***		
		mean	***skewness***	***kurtosis***	**statistic**	**DK**	**Sig.**
Motivation to Change	LGC	2.290	-.753	.289	.939	33	.065
	SGC	2.396	.208	-1.028	.945	33	.098
	CG	2.564	.842	.883	.948	33	.118

Indicator:

LGC (Large Group Guidance)
SGC (Small Group Guidance)
CG (Control Group)

Table 3 shows the Levene's test to examine the equality of variances within each group. The Levene's test results for the motivation to change variable are F(2,96) = .898, p = .411, and for the response variable, F(2,96) = .225, p = .779. These variables exhibit a non-significant distribution of data (p > .05), indicating that the pre-test data for all variables across the treatment and control groups are homogenous. Therefore, the reported study data adheres to the assumptions of the ANOVA test.

Table 3

Pengujian *Levene* pemboleh ubah terikat berdasarkan kumpulan LGC, SGC dan CG

Variable	F	DK1	DK2	Sig.
Motivation to Change	.898	2	96	.411

As indicated in Table 3, the motivation to change variable [F(.898) = .411, p < .05] is deemed significant, and there are observed differences in mean scores among the groups. To elucidate this, Post Hoc Tests (Tukey) were conducted on all three groups to examine these mean differences, as presented in Table 5. Table 4 presents the findings of the study based on the analysis of ANOVA, indicating a significant difference between pre-test and post-test dependent variables, namely the motivation for change (F(21.936) = .000, p < .05) among the KBKB, KBKK, and KK groups. Given the observed significant differences in the motivation for change variable among the treatment and control groups, the Post Hoc Tests (Tukey) were conducted to ascertain specific differences between these groups. The summary of the Post Hoc Tests (Tukey) is outlined in Table 5.

Table 4

A summary of the ANOVA statistical analysis measures the differences in the variables between the groups KRKMT, KRKMS, KKKMT, and KKKMS.

Variable	**Source Variation**	**JKD**	**DK**	**MKD**	**F**	**Sig.**
Motivation to Change	Antara kump.	1.257	2	.628	21.936	.000
	Dalam kump.	2.750	96	.029		
	Jumlah	4.006				

Table 5

A summary of the statistical analysis Post Hoc Tests (Tukey) measures the differences in the variable Motivation to Change among LGC, SGC, and CG

Variable	**Kump. Rawatan/Kawalan (I)**	**Kump. Rawatan/Kawalan (J)**	**Mean Discrepancy (I-J)**	**Std Dev**	**Sig.**
Motivation Change	toLGC	SGC	-.10606*	.04167	.033
		CG	-.27367*	.04167	.000

SGC	LGC	.10606*	.04167	.033
	CG	-.16761*	.04167	.000
CG	LGC	.27367*	.04167	.000
	SGC	.16761*	.04167	.000

As shown in Table 5, the Post Hoc Tests (Tukey) statistical analysis assesses the differences in pre-test mean scores among the involved study groups. In the motivation to change variable, there are minimum differences between LGC and SGC (minimum difference = -.106, $p < .05$), LGC and CG (minimum difference = -.273, $p < .05$), and SGC and CG (minimum difference = -.167, $p < .05$). However, these minimum differences are not substantial among the three groups; they fall within the range of low and moderately low minimum scores and are within the contemplation phase of motivation to change, as required in the study.

Table 6

A summary of the descriptive analysis of pre-test and post-test scores for the dependent variable Motivation to Change among the LGC, SGC, and CG groups.

Variable	**Group**	**Mean**		**Mean Discrepancy**	**Description**
		Pre-test	**Post-test**		
Motivation to change	LGC	2.2907 (.15576)	3.6155 (.09391)	1.3248	Increase
	SGC	2.3968 (.14479)	3.6610 (.08527)	1.2642	Increase
	CG	2.5644 (.20176)	2.3116 (.15037)	-0.2528	D

Note: (.-) = Std. Dev.

As presented in Table 6, the descriptive analysis illustrates the post-test minimum changes in the motivation to change variable among high school students. The study results reveal that the post-test minimum change for the LGC is 1.32, indicating an increase from a low to a moderately high level of motivation to change. For the SGC, there is also an increase in the post-test minimum value by 1.26, reflecting an increase from a low to a moderately high level of motivation to change. In contrast, the CG shows a decrease in the post-test minimum value by -0.25, shifting from a moderately low level of motivation to a low level. These findings suggest that the implementation of MMI-CBT effectively enhances motivation to change. The descriptive data, overall, indicates the presence of MMI-CBT effects on the motivation to change variable among the treatment group compared to the control group.

Table 7

A summary of the MANOVA analysis examining the group effects on pre-test and post-test scores of Motivation to Change among the LGC, SGC, and CG.

Source	**Dependant variable**	**JDK**	**Dk**	**MKD**	**F**	**Sig.**
Between groups	Motivation to Change	26.367	2	13.184	574.119	.000
Total Adjusted		2.204	96	.023		

(*significant level*, k<.05)

Table 7 presents the study findings based on the MANOVA analysis, indicating significant differences between pre-test and post-test dependent variables, namely 'motivation to change' F (2,96) = 574.11 (p < .05) among the LGC, SGC, and CG. Given the significant differences in the motivation to change variable among the treatment and control groups, Post Hoc Tests (Tukey) can be conducted to determine the minimum differences between these groups. A summary of the Post Hoc Tests (Tukey) is provided in Table 5.

CONCLUSION

Overall, based on the MANOVA analysis, the study results indicated significant differences between pre-test and post-test minimum scores in all dependent variables among the treatment and control groups. Additionally, MANOVA testing has shown significant differences in the variable of motivation to change among the Large Group Counseling (LGC), Small Group Counseling (SGC), and Control Group (CG). Furthermore, the findings from the MANOVA testing have also demonstrated significant differences in the motivation to change variable. The implementation of SGC appears to have more effective potential compared to LGC across all the involved dependent variables. In summary, the study results indicated that MMI-CBT effectively influences the measurement of dependent variables by enhancing motivation to change, subsequently affecting the reduction of undesirable behaviors among high school students.

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