



What do We Know about Self-understanding, Career Exploration, and Career Planning and Management of Students with Special Educational Needs?

Inclusive
Education

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Part A



Self-determination, perceived social support and mental health of student with SEN

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Self-determination, perceived social support and mental health of SEN students



Presentation outline

- ☐ Research background and gaps
- ☐ Research questions
- ☐ Methodology
- ☐ Results
- ☐ Key research findings
- ☐ Limitation and future direction of research
- ☐ Reference

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Research background

- The transition period from high-school to post-school education or employment is a time of significant changes and challenges that requires psychological adjustment for many adolescents.
- Many decisions regarding further education, career choices, and living arrangement have to be made in the transition period.
- Post-school transition for young people with disabilities is often more complicated than that of their peers without disabilities.
- Students' self-determination, perceived social support, and mental health matter to their transition goals (Agran, Blanchard, & Wehmeyer, 2000).



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Research gaps

Previous studies suggested that both personal and environmental factors significantly influenced self-determination. However, three identified major research gaps require further investigation.

1)The majority of studies that focused on disability groups usually include no comparison group of No n-SEN students.

2)Most studies specified their investigations to one or two types of disabilities.



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Research gaps

- 3) Most studies are conducted in the Western culture, less in the Chinese culture. It is worthwhile exploring how personal factors (mental health) and environmental factors (social support) influence self-determination in the Chinese context.



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Key Research Questions

- ❖ To what extent environmental factors (e.g. student's perceived social support) relate to personal factors (mental health and self determination) among students' with special educational needs(SEN)?
- ❖ What similarities and differences will be revealed between SEN and Non-SEN students in terms of the relationships of the variables tested in this study?

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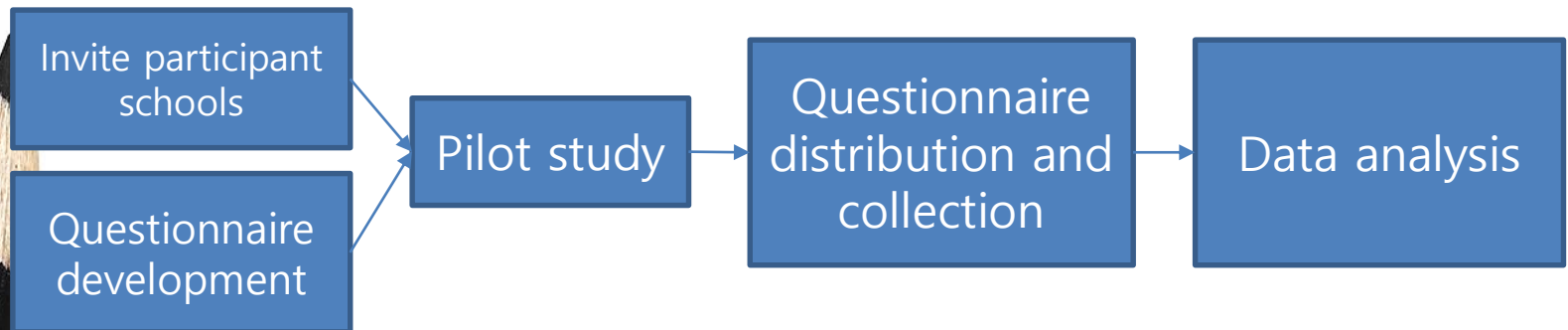
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Methodology

Participant:

All students of Hong Kong secondary schools , from senior secondary grade 4 to grade 6, including SEN students and Non-SEN students were surveyed.

Procedure





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Instruments

1. The American Institutes for Research (AIR) Self-Determination Scale (Wolman et al., 1994) .
2. The Chinese version of the General Health Questionnaire (GHQ-C; Shek, 1989) .
3. The Chinese version of the Zimet's multidimensional scale of perceived social support (MSPSS-C; Chou, 2000) .

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Results

1. Demographic information

□ 114 SEN students and 578 Non-SEN students returned the questionnaires.

Among them,

➤ 53.1% are males, 43.4% are females, 3.5% of them didn't indicate gender information;

➤ 82.5% are S6 students.

Ages of students ranged from 14 to 22 (*Mean* = 17.81, *SD* = 1.11).

□ Seven major types of SEN are reported (i.e, HI, VI, PD, ASD, CD, ADHD, SpLD).

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Results

2. Instrument reliability

❖ The Cronbach's alpha for the three scales and their subscales ranged from .88 to .96 , indicating adequate to satisfactory of these scales for research purposes.



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Results

3. Confirmatory Factor Analysis

❖ The model fit indices for the two-factor self-determination model, the two-factor mental health model, and the two-factor social support model obtained through CFA have been summarized in Table 1.

❖ The acceptable values for these fit indices are:

χ^2/df (<1.50 to <.5.00); RMSEA (<.06 to < .10), SRMR (< .08); GFI, AGFI, CFI, NFI, and NNFI (around.90)

(Byrne, 1989; Bentler & Bonnett, 1980; Browne & Cudeck, 1993; Hu & Bentler, 1999).

❖ These three models were acceptable for SEN students and Non-SEN students.

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Table 1 Summary of the CFA result of Scales

Scales		χ^2/df	RMSEA	SRMR	CFI	NNFI
SEN	SDS	501.443/247	0.095	0.105	0.843	0.825
	GHQ	95.972/50	0.090	0.060	0.924	0.900
	PSS	98.677/52	0.089	0.042	0.961	0.950
Non SEN	SDS	818.374/239	0.065	0.083	0.918	0.906
	GHQ	118.045/46	0.052	0.031	0.976	0.965
	PSS	189.283/50	0.048	0.015	0.992	0.988

Note: SDS = Self-Determination Scale, GHQ = General Health Questionnaire, PSS = Multidimensional scale of perceived social support



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Results

4. Comparison between SEN students and Non-SEN students

❖ SEN students had statistically significant lower self-determination ($t = -.230, p = .022$) and social support ($= -.231, p = .021$) compared to Non-SEN students. (table 2).

❖ A further examination revealed that SEN students also had significantly lower scores of the two sub-dimensions of self-determination: self-determined capability ($t = -2.108, p = .035$) and self-determined opportunity ($t = -1.989, p = .048$).

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Results

4. Comparison between SEN students and Non-SEN students

❖ SEN students scored statistically lower at the dimension of peer support ($t = -2.266$, $p = .024$), while no significant difference at the dimension of family support ($p = .174$).

❖ Furthermore, the data showed that no significant differences of SEN and Non-SEN students' scores of general mental health (in terms of anxiety absence and anxiety presence, respectively).

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Results

4. Comparison between SEN students and Non-SEN students

Table 2 Means and standard deviations, and mean differences between SEN and Non-SEN students

Variables	SEN students		Non-SEN students		<i>t</i>	<i>p</i>
	n=114		n=578			
	Mean	SD	Mean	SD		
Self-determination	3.15	.624	3.29	.591	-.2298	.022*
Capability	3.29	.672	3.43	.616	-2.108	.035*
Opportunity	3.01	.773	3.16	.740	-1.989	.048*
General mental health						
Anxiety absent	1.88	.487	1.89	.480	-.256	.798
Anxiety present	1.16	.620	1.17	.664	-.111	.911
Social support	4.61	1.248	4.90	1.247	-2.305	.021*
Peer support	4.66	1.416	4.98	1.364	-2.266	.024*
Family support	4.49	1.275	4.68	1.449	-1.365	.174



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Results

5. Correlation pattern

- ❑ The correlation pattern of scores from SEN students is similar with that of Non-SEN students. (table 3a and table 3b).
- ❑ SEN group has **stronger variable correlations** than that of the Non-SEN group (except the correlation between peer support and family support).



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Table 3a Correlations among the variables (SEN students, n =114)

	Peer Support	Family Support	Mental Health
Peer Support	1		
Family Support	.509***	1	
Mental Health	.347***	.373***	1
Self Determination	.405***	.535***	.394***

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3b Correlations among the variables (Non-SEN students, n =578)

	Peer Support	Family Support	Mental Health
Peer Support	1		
Family Support	.525***	1	
Mental Health	.316***	.277***	1
Self Determination	.355***	.466***	.297***

* $p < .05$, ** $p < .01$, *** $p < .001$



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Results

Multiple regression analysis:

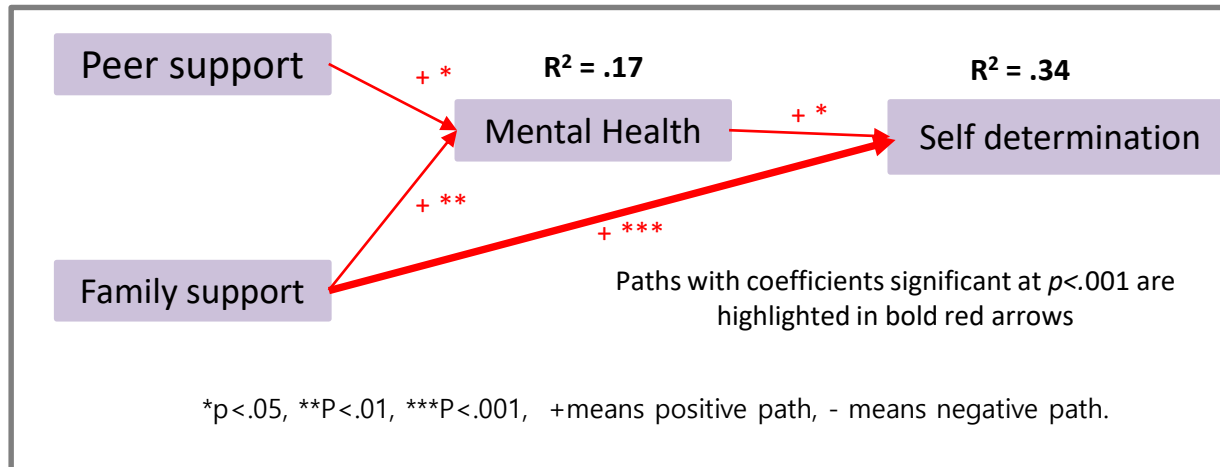
Similarity and differences between SEN and Non-SEN students

- ❖ Controlling for mental health and family support, peer support is a non-significant predictor of self-determination in SEN student group which is different from that of Non-SEN student group.
- ❖ Mental health is a stronger predictor of self-determination in Non-SEN student group than that in SEN student group.
- ❖ The mediating role of mental health is stronger between peer support and self-determination in Non-SEN student group than that in SEN student group (figure 1 and figure2).

Part A

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Figure 1 A combined path model for **SEN students** (N=114)

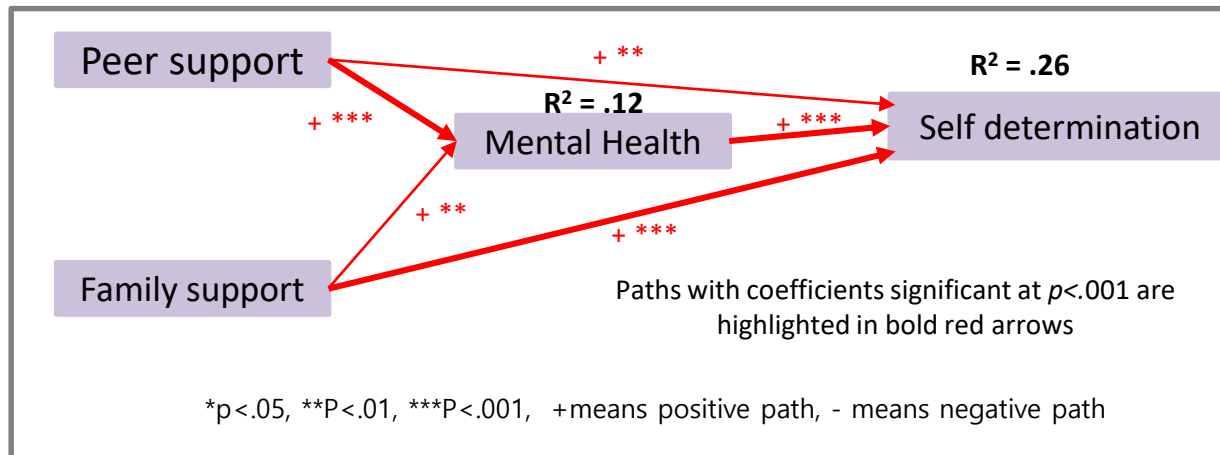


Note.

a) 34% variance of self-determination could be explained by SEN students' mental health, family support and peer support. Controlling for mental health and family support, peer support is a non-significant predictor of self-determination, while family support appears to be the most significant predictor of self-determination.;

b) 17% variance of mental health could be explained by peer support and family support to SEN students.

Figure 2 A combined path model for **Non-SEN students** (N=578)



Note.

a) 26% variance of self-determination could be explained by Non-SEN students' mental health, family support and peer support;

b) 12% variance of mental health could be explained by peer support and family support to regular students.



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Key research findings

- Overall, SEN students perceived significantly lower self-determination and social support compared with Non-SEN students.
- Although not statistically significant, SEN students perceived lower General mental health compared with Non-SEN students.
- Social support (family and peers) was identified as significant predictors to both groups of students' mental health.
- Family support and mental health appear to be significant predictors of SEN students' self-determination, but not peer Support.



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Limitation and future direction of research

- ❑ *Cross-sectional data:* This study is cross-sectional in nature. Longitudinal studies are needed to generate a deeper understanding of the relationships between these variables tested in this study.
- ❑ *Small sample size:* Only N = 114 SEN students finished and returned their questionnaires compared to N = 578 Non-SEN students. This is one reason why multiple regression analysis is adopted in the current study. To test SEM model(s), a relatively large sample size of SEN students will be needed in future studies.



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Reference

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Part A

The end of Part A

~ Thank you ~



Part B Career Exploration, and Career Planning and Management of SEN Students

Project introduction

The Longitudinal Impact of Career Planning Education on Career Development of Students with and without Special Educational Needs in Inclusive Education of Hong Kong

生涯規劃教育對香港融合教育中有特殊需要學生和普通學生職業發展的長遠影響



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Key Objectives

- ❖1. Compare SEN and Non-SEN senior secondary students' cognitive-person gains from career planning programs in terms of their career decision self-efficacy, career outcome expectations, career-related goals, career planning and career exploration;
比較SEN和Non-SEN高中學生從生涯規劃教育課程中學到的關於他們的職業決定自我效能，職業結果預期，職業目標，生涯規劃和職業探索等方面的自我認知。
- ❖2. Examine SEN and Non-SEN senior secondary students' perceived career supports on these key cognitive-person variables in career development process;
檢視SEN和Non-SEN高中生在他們的職業發展過程中感知到的與主要自我認知變量相關的職業支援。
- ❖3. Identify the developmental changes of both cognitive-person gains and perceived career supports and barriers to career development needs of SEN students and Non-SEN students;
鑒別SEN和Non-SEN高中生職業發展過程中自我認知，職業支援和障礙等方面的變化。
- ❖4. Review the effectiveness of career planning programs for SEN students and Non-SEN students to offer recommendations for policy-making and instructional practice.
評估SEN和Non-SEN 學生生涯規劃教育的效能，為相關政策制定和教學實踐提供建議。



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Areas to be examined

- a) career decision self-efficacy;
職業決定自我效能
- b) career outcome expectations;
職業結果預期
- c) career planning and career exploration;
生涯規劃和職業探索
- d) career goals;
職業目標
- e) career supports.
職業支援



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Aims of this Pilot study

- ❖ **Validate the scales 驗證量表**
- ❖ **Provide a general picture of SEN students and Non-SEN students in the following aspects:**
 - **Career Adapt-Abilities**
 - **Career Outcome Expectation**
 - **Career decision Self-efficacy**
 - **Career development self-efficacy**
 - **Career influence**



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Instruments

- **Career Adapt-Abilities Scale (Maggiori et al., 2015).**
職業能力調適量表
- **Outcome Expectation Scale (Betz and Voyten, 1997).**
職業結果預期量表
- **Career decision Self-efficacy scale-short form (Jin et al. 2012).**
職業決定自我效能量表-簡短版
- **Career development self-efficacy instrument (Yuen et al., 2005).**
職業發展自我效能量表
- **Career influence inventory (Fisher and Stafford, 1999).**
職業影響量表



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Participants

5 senior secondary school student of Hong Kong (S4-S6), including SEN students and Non-SEN students.



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Pilot study results: Demographic information

❖ 47 SEN students and 133 Non-SEN students, from 5 secondary schools returned the questionnaire.

❖ Note: 1) Participant were mainly from Secondary 4 (S4).
2) Participant of Non-SEN students were mainly from 1 school (school 3 n=105).

Among them,
56.4% were males, 43.3% Females,
73.3% were S4 students.

Ages of students ranged from 13 to 21 (*Mean* = 15.9, *SD* = 1.22).

Ten major types of SEN were reported (i.e, HI, VI, ID, PD, ASD, CD, ADHD, SpLD, EBD, SD).



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Pilot study results: Instrument reliability

❖ The Cronbach's alpha for the five scales and their subscales ranged from .81 to .96 , indicating adequate to satisfactory of these scales for our research purposes.



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Pilot study results

3 analysis have been conducted

- ❖ Compare **correlation patterns** of the 5 scales between SEN student group and Non-SEN student group.
- ❖ Compare **scale means** between SEN student group and Non-SEN student group.
- ❖ Compare **scale means between different grades** (S4, S5 & S6) of SEN students.



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Pilot study results

1. Scale correlation

❑ The correlation pattern of scores from SEN students is similar with that of Non-SEN students. Significant positive relationship can be found between these scales.

❑ SEN students has **stronger variable correlations** than that of Non-SEN students except the correlation between output expectations scale (OES) and career influence inventory (CII).

❑ Career decision self-efficacy scale-short form (CDSESF) was highly correlated with career development self-efficacy instrument (CDSI) in SEN group ($r=.783$) and Non-SEN group ($r=.712$).

Note: Due to the different and low sample size between the groups of SEN students and Non-SEN students, the correlation patterns main not stable.



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Pilot study results

Scale correlations (Non-SEN students)

	CAAS	OES	CDSESF	CDSI	CII
Career adapt abilities scale (CAAS)	1				
Output expectations scale (OES)	.372 ^{**}	1			
Career decision self-efficacy scale-sh ort form (CDSESF)	.495 ^{**}	.487 ^{**}	1		
Career development self-efficacy inst rument (CDSI)	.455 ^{**}	.504 ^{**}	.712 ^{**}	1	
Career influence inventory (CII)	.367 ^{**}	.572 ^{**}	.438 ^{**}	.381 ^{**}	1

^{**}. Correlation is significant at the 0.01 level (2-tailed).



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Pilot study results

Scale correlations (SEN students)

	CAAS	OES	CDSESF	CDSI	CII
Career adapt abilities scale (CAAS)	1				
Output expectations scale (OES)	.693 ^{**}	1			
Career decision self-efficacy scale-short form (CDSESF)	.709 ^{**}	.650 ^{**}	1		
Career development self-efficacy Instrument (CDSI)	.634 ^{**}	.567 ^{**}	.783^{**}	1	
Career influence inventory (CII)	.612 ^{**}	.571 ^{**}	.600 ^{**}	.737 ^{**}	1

^{**}. Correlation is significant at the 0.01 level (2-tailed).



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Pilot study results

2. Comparison between SEN students and Non-SEN students

- ❑ No significant difference ($p > .05$) were found between SEN students and Non-SEN students in terms of career adaptabilities scale (CAAS), output expectations scale (OES), career decision self-efficacy scale-short form (CDSESF) and career development self-efficacy instrument (CDSI), even though the mean scores of SEN students were higher than that of Non-SEN students.
- ❑ Mean value of career influence inventory (CII) of Non-SEN students was a little bit higher than that of SEN students, but no significant difference, $p > .05$.

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Pilot study results

2.Comparison between SEN students and Non-SEN students

	Non SEN (N=133)		SEN (N= 47)		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Career adapt abilities scale (CAAS)	35.6	7.678	36.4	10.239	-.506	.613
Output expectations scale (OES)	17.5	3.489	17.9	3.921	-.627	.532
Career decision self-efficacy scale-short form (CDSESF)	15.8	3.319	16.6	3.746	-1.220	.224
Career development self-efficacy instrument (CDSI)	50.0	11.388	52.7	12.827	-1.360	.175
Career influence inventory (CII)	40.7	8.075	40.0	9.223	.535	.593



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Pilot study results

3. Comparison between student from different grades

❖ In SEN students group, significant difference ($p < .05$) between grades (S4, S5 and S6) was found in terms of output expectations scale (OES).

➤ Students from S5 have significant higher mean score than that of S4.

➤ Even mean score of S6 students was higher than that of S4 students while lower than that of students from S5, no significant difference was found.

❖ No such comparison was conducted in Non-SEN students group, due to the small sample size in S5 ($N=14$) and S6 ($n=9$).

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Pilot study results

3.Comparison result between different grades within SEN students group

	S4 (N=23)		S5 (N=12)		S6 (N=12)		<i>F</i>	<i>p</i>
	Mean	SD	Mean	SD	Mean	SD		
Career adapt abilities scale (CAAS)	33.9	9.429	38.9	12.139	38.5	9.415	1.310	.280
Output expectations scale (OES)	16.4	3.824	19.6	3.315	18.9	3.919	3.445	.041
Career decision self-efficacy scale-short form (CDSESF)	15.7	3.472	17.8	3.271	17.0	4.492	1.481	.238
Career development self-efficacy instrument (CDSI)	51.5	14.497	54.4	9.756	53.3	12.878	.215	.807
Career influence inventory (CII)	38.0	9.934	42.2	8.761	41.6	8.084	1.002	.376



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Pilot study results

3. Career output expectation scale-Post hoc test result

		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
S4	S5	-3.149 [*]	1.328	0.022	-5.824	-0.473
	S6	-2.482	1.328	0.068	-5.157	0.194
S5	S4	3.149 [*]	1.328	0.022	0.473	5.824
	S6	0.667	1.522	0.663	-2.401	3.734
S6	S4	2.482	1.328	0.068	-0.194	5.157
	S5	-0.667	1.522	0.663	-3.734	2.401

*. The mean difference is significant at the 0.05 level.



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Key Findings of the Pilot study

- ❖ SEN group has **stronger variable correlations** than that of Non-SEN students group except the correlation between output expectations scale(OES) and career influence inventory (CII).
- ❖ **Career decision self-efficacy scale-short form** (CDSESF) was highly correlated with **career development self-efficacy instrument** (CDSI) in SEN students group and Non-SEN students group.
- ❖ **Comparison by grade levels: SEN students**
 - ❖ students in S5 have higher mean scores of the 5 scales than that of S4 and S6 students.



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Limitation and further work

- ❖ The sample size is small and mainly from S4.
- ❖ Even though the data was collected from 5 schools, the Non-SEN group was mainly from one school.
- ❖ The results of the pilot study only show limited findings of the study.

Further work

- Time one survey data collection **has been finished recently** and data analysis is under processing.
- A series of focus group interviews and time two survey data collection will be conducted in the coming year in semester one and semester two, respectively.



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Welcome to join in this on-going research project!

If you have interest to know more about our project, please feel free to contact :

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Thank you!!

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