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Structural Validity of the International Survey of School Counselor's Activities (ISSCA) When Applied with Counseling and Guidance Personnel in Primary Schools in Hong Kong

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Abstract

This paper reports results of a recent exploratory study using the International Survey of School Counselor's Activities with two separate but equivalent samples of guidance professionals from primary schools in Hong Kong. An exploratory factor analysis using data from one sample (n = 76) identified 7 factors representing guidance and counseling roles: counseling services; practice improvement; services to parents; prevention programs; advocacy and systemic improvement; educational and career planning; and, discipline and administration. Confirmatory factor analysis using data from the second sample (n = 76) supported this 7-factor solution. A previous international study involving school-based counselors from 10 countries had identified five underlying dimensions to the counselor role. The difference between the factor structure in the original international study and that in Hong Kong may be due to cultural factors and different counseling practices. Future research is needed with a larger sample for further confirmation.

Keywords: International Survey of School-Based Counselor's Activities, school-based counseling, guidance professionals, primary school, Hong Kong

In order to identify factors that influence the development of school-based counseling practices, Martin, Lauterbach, and Carey (2015) conducted a comprehensive review of the literature and identified 11 macro factors. These were reported to be cultural influences, national needs, larger societal movements, extant models of school counseling, laws and educational policy, characteristics of the public education system, the counseling profession, research and evaluation, related professions, involvement of non-government organization, and local stakeholder perceptions. The review by Martin et al. (2015) provided a useful framework for international comparative research into school-based counseling.

In order to facilitate collection of data on counseling, Carey, Fan, He, and Jin (2020) developed an instrument titled the *International Survey of School Counselor's Activities* (ISSCA) that could be used to identify specific activities of school counselors in different countries. The instrument contains 40 items that are regarded as core questions, but more items can be added to address any special conditions present in a particular setting. An exploratory factor analysis of ISSCA-40, using data from 2,913 practicing school-based counsellors from 10 countries identified five factors underpinning the scale and representing key roles of a counselor: counseling services, administrator role, advocacy and systemic improvement, prevention programs, and educational and career planning.

The purpose of the present study was to examine whether school-based counseling roles and practices in primary schools in Hong Kong correspond with the five-factor model. It was felt that this information would add usefully to the growing body of literature database on guidance and counseling practices worldwide (Carey et al., 2020).

The items in ISSCA-40 were first appraised to determine their suitability for assessment of school guidance personnel roles and activities in Hong Kong. It was felt that if the instrument is suitable, Hong Kong data could be compared with similar information from overseas countries.

School Guidance and Counseling in Hong Kong

Hong Kong had been a British colony from 1842 until 1997, when China resumed sovereignty. The education system was modelled very much on the British system (and was quite advanced in many respects), but the focus was mainly on academic learning rather than student well-being. The government in Hong Kong did not introduce formal student guidance services in schools until the 1970s.

In 1990, the concept of Whole School Approach was recommended (Education Commission, Hong Kong, 1990) as the desired model for guidance and discipline in primary and secondary schools. It was agreed that supporting students' emotional well-being and personal development must be a shared responsibility across all staff. Since that time, student guidance services have expanded greatly, with personnel encouraged to collaborate to provide students with a comprehensive service that covers academic counselling, student well-being, emotional development, discipline, and career planning (Yuen, Chan, Lau, Gysbers, & Shea., 2007; Yuen, Leung, & Chan, 2014).

Under the Whole School Approach, some personnel have additional responsibility for guidance in primary schools. These include school guidance teachers (SGT), school social workers, guidance and discipline teachers, and the Special Educational Needs Coordinator (SENCO). These people are encouraged to work collaboratively to offer a comprehensive program for students. The aim is to unite efforts of all parties in helping students overcome any developmental or personal problems they might have and thus maximize their development and life adaptation.

Method

Participants

Questionnaires with an invitation letter were mailed to the Guidance and Counseling Team, the Guidance and Discipline Team, and the Special Educational Needs Coordinator (SENCO) in 506 primary schools in Hong Kong. Schools were requested to return the completed questionnaires directly to the researchers in the self-addressed envelopes provided. By the due date, 152 questionnaires were received, comprising 96 from School Counselling and Guidance Teams, 24 from Guidance and Disciplinary Teams, and 32 from SENCOs. The sample was then split into two sub-samples for analysis purposes. Each sample contained the same proportions of different types of guidance and counselling personnel, and different lengths of service. Data from one sub-sample were used to identify through exploratory factor analysis (EFA) the number of factors underpinning ICCSA-HK, and data from the other sub-sample were used for confirming the factor structure through confirmatory factor analysis (CFA).

The participants were predominantly female (82.9%) and more than a half of all participants (54.8%) had studied Social Work as their major. The number of years serving as counseling and guidance personnel in primary schools ranged from 1 to 25 with a mean of 8.1 and a median of 6 (see Table 1).

Measure

The original ISSCA was developed by Fan et al. (2019). The writers of this paper were invited to join an international study and develop a Chinese version of ISSCA for research in Hong Kong.

The original ISSCA described 40 activities within the role of a school-based counsellor, and respondents were required to rate each activity on a 4-point Likert-type scale where 1 (*very inappropriate*); 2 (*inappropriate*); 3 (*appropriate*); 4 (*very appropriate*). A sample item was "The School Counselor engages children and adolescents in one-on-one counselling in order to support their mental health (dealing with anxiety, depression, suicidal ideations or addiction)."

The Hong Kong Chinese version of ISSCA (ISSCA-HK) was developed from the English version. The instrument was first translated into Chinese and then back translated by the researcher and a team of bilingual translators. A questionnaire was then constructed containing ISSCA-HK together with a section to collect demographic data and counselors' self-perceived performance. Data collected on guidance personnel related to gender, age, years of experience in school guidance work, years of experience in teaching, amount and type of training in school guidance, and grade levels of students served.

Data Analysis

One sub-sample was processed using exploratory factor analysis with promax rotation. Promax rotation was adopted since the extracted factors were assumed to be correlated and the rotation would yield a simple structure (Yong & Pearce, 2013). The second sample was processed using confirmatory factor analysis to verify the factor structure of the ISSCA-HK. Model fit was determined using IBM SPSS Statistics AMOS 21 and was based on Comparative Fit Index (CFI), Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), and Root Mean Square Residual (RMR). For adequate model fit, both CFI and GFI should be higher than 0.9, RMSEA should be lower than 0.05, and RMR should be as small as possible.

Results

Exploratory Factor Analysis

The exploratory factor analysis (EFA) results indicated that the data were appropriate for factor analysis since the value of Kaiser-Meyer-Olkin (KMO) was 0.802, and Bartlett's Test of Sphericity indicated statistical significance (χ^2 = 2491; df = 780; $p < 0.0001$). Usually, Kaiser's criterion (Eigen values > 1) and scree plot are used to decide how many factors to retain in EFA. As pointed out by Yong and Pearce (2013), the scree plot is unreliable if the sample size is less than 200, so scree plot was not used in the present study. The Eigen values of the first nine principal components were found to be: 14.580, 4.672, 2.165, 1.849, 1.801, 1.493, 1.335, 1.197, and 1.047. Both the sixth and the ninth factors were rejected because they had less than three items per factor (see Table 2). The seven factors accounted for 68.8% of the total variance.

The results are different from those in the international study by Carey et al. (2020), which had identified five dimensions of school-based counselling. The discrepancy between the two EFA studies may indicate different cultural influences, school systems, and traditional counseling practices existing in various countries and cultures.

Table 2 indicates that the Hong Kong version of the *International Survey of School Counselor's Activities* (ISSCA-HK) embraces seven factors. Each factor can be classified as below to reflect particular roles and responsibilities undertaken by counselors and guidance personnel.

1. *Counselling Service*s: Items 1, 4, 5, 7, 11, 12, 14, 30 (e.g., Item 1 "The School Counselor engages children and adolescents in one-on-one counseling in order to support their mental health—e.g., dealing with anxiety, depression, suicidal ideations, and/or addiction.")
2. *Practice Improvement*: Items 35, 38, 39, 40 (e.g., Item 39 "The School Counselor monitors the efficacy of their own work and uses this information to improve practice.")
3. *Services to Parents*: Items 22, 23, 24 (e.g., Item 24 "The School Counselor consults with parents regarding problems they are experiencing to enable them to have a more constructive relationship with their children and be more effective in parenting.")
4. *Preventive Work*: Items 16, 19, 20 (e.g., Item 16 "The School Counselor plans and delivers effective primary classroom-based preventions programs for children and adolescents to support their mental health—e.g., stress management.")
5. *Advocacy Work:* Items 27, 28, 29, 31, 32, 33, 34 (e.g., Item 28 "The School Counselor advocates for all students so that they will have access to needed supports and programs.")
6. *Career and Educational Planning*: Items 3, 10, 17, 18 (e.g., Item 10 "The School Counselor engages children and adolescents in group counseling in order to facilitate their career development.")
7. *Discipline & Administration*: Items 15, 21, 26, 37 (e.g., Item 15 "The School Counselor determines the appropriate disciplinary sanctions for students who have misbehaved.")

Cronbach's Alpha values of the seven subscales of ISSCA-HK are 0.913, 0.793, 0.670, 0.816, 0.867, 0.839, and 0.657 respectively. ISSCA-HK can therefore be considered as a reasonably reliable instrument. Based on the factor structure of ISSCA-HK shown above, seven subscales were computed. Data were processed using EFA, and the results are shown in Table 3.

Again, the data were appropriate for exploratory factor analysis with the Kaiser-Meyer-Olkin (KMO) value being 0.787 and Bartlett's Test of Sphericity showing statistical significance (χ^2 = 242; *df* = 21; $p < 0.0001$). The EFA generated two factors indicating a possible second-order structure with the first higher-order factor consisting of Counselling Services, Practice Improvement, Services to Parents, and Preventive Work. Hence, this factor is named as Services to Students and Parents. The second higher-order factor is composed of Advocacy Work, Career and Educational Planning, and Discipline and Administration, and is thus called Administration, Career Planning, and Discipline Work.

Confirmatory Factor Analysis

The second-order structure was verified by the Confirmatory Factor Analysis (CFA) applied to data from the second sample. Confirmatory Factor Analysis (CFA) was performed using AMOS v.21, and the goodness of fit indices were: CMIN = 26.160; *df* = 13; *p* = 0.016; CMIN/*df* = 2.012; RMR = 0.013; RMSEA = 0.116; GFI = 0.909; CFI = 0.942. Thus, adequate model fit was established, and the second-order structure is shown in Figure 1.

Figure 1 reflects that school counseling activities in Hong Kong can be divided into two categories: (a) direct counseling services offered to students and parents (counseling services to students, preventive work, services to parents, and practice improvement work), and (b) counseling-supportive activities (such as administration, advocacy work, and activities promoting students' career and educational planning).

Discussion

In order to facilitate international comparative studies of school-based counselling, Martin et al. (2015) developed a framework based on an 11-macro-factor model. With a similar goal in mind, Carey et al. (2020) constructed the 40-item *International Survey of School Counselor's Activities* (ISSCA-40) that identifies specific roles and responsibilities of school counselors. Carey et al. (2020) also identified five dimensions of counselors' roles based on data from 2,913 practicing counselors from 10 countries.

The application of a Chinese version of ISSCA in Hong Kong revealed a 7-factor model that better describes school-based counseling roles in local primary schools. The difference in number of factors between the studies may reflect specific policies and practices in Hong Kong, particularly the adoption of the Whole School Approach. For example, other systems overseas may not involve all teachers, school social workers and other staff working so closely together to deliver integrated guidance and counseling services. The difference also highlights the need to compare factor structure of ISSCA-40 across contexts and countries.

The Chinese version of ISSCA appears to be a suitable instrument for obtaining data on guidance and counseling roles and duties in this setting. The instrument has adequate construct and content validity, and adequate internal consistency (reliability) to make it a useful tool.

Limitations

The size of the two samples used for the analysis was rather small for both EFA and CFA purposes. For this reason, future research is necessary to confirm the findings of the present study.

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Table 1.

Characteristics of participants

Counseling & Guidance Personnel	**Gender**	**Highest Education Attainment**	**Major of Study**	**No. of years serving as Counseling & Guidance Personnel**
School Counseling & Guidance Team representative (N = 96)	Male: 13 (13.5%) Female: 83 (86.5%)	Sub-degree: 11 (11.5%) Degree: 57 (59.4%) Master degree: 28 (29.2%)	Counseling: 13 (14.0%) Social Work: 71 (76.3%) Psychology: 1 (1.1%) Others: 8 (8.6%) Missing=3	From 1 to 25 years Mean= 7.599 Median= 6.000
Disciplinary Team representative (N = 24)	Male: 9 (37.5%) Female: 15 (62.5%)	Degree: 14 (58.3%) Master degree: 10 (41.7%)	Counseling: 10 (43.5%) Social Work: 7 (30.4%) Psychology: 1 (4.3%) Others: 5 (21.7%) Missing: 1	From 1 to 23 years Mean= 9.688 Median= 7.000
Special Education Needs Coordinator (N = 32)	Male: 4 (12.5%) Female: 28 (87.5%)	Sub-degree: 1 (3.1%) Degree: 17 (53.1%) Master degree: 14 (43.8%)	Counseling: 5 (16.7%) Social Work: 2 (6.7%) Others: 23 (76.7%) Missing: 2	From 1 to 23 years Mean= 8.536 Median= 6.000
TOTAL (N=152)	Male: 26 (17.1%) Female: 126 (82.9%)	Sub-degree: 12 (7.9%) Degree: 88 (57.9%) Master degree: 52 (34.2%)	Counselling: 28 (19.2%) Social Work: 80 (54.8%) Psychology: 2 (1.4%) Others: 36 (24.7%) Missing: 6	From 1 to 25 years Mean= 8.115 Median= 6.000

Table 2.

Results of Exploratory Factor Analysis of ISSCA-HK with Promax Rotation: Pattern Matrix

	Factors								
Items	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Item 1	**0.722**								
Item 2									0.836
Item 3			**1.043**						
Item 4	**1.038**								
Item 5	**1.064**								
Item 6						0.597			
Item 7	**0.535**			0.458					
Item 8									
Item 9									
Item 10			**0.982**						
Item 11	**0.666**								
Item 12	**0.701**								
Item 13									
Item 14	**0.603**								
Item 15					**0.687**				
Item 16								**0.581**	
Item 17			**0.538**						
Item 18			**0.755**						
Item 19	0.508							**0.681**	
Item 20							0.400	**0.408**	
Item 21					**0.438**				
Item 22		0.405					**0.518**		
Item 23							**0.418**		
Item 24							**0.724**		
Item 25						0.794			
Item 26					**0.739**				
Item 27		**0.906**							
Item 28		**0.701**							
Item 29		**0.848**							
Item 30	0.597								
Item 31		**0.441**							
Item 32		**0.620**							
Item 33		**0.847**							
Item 34		**0.368**							
Item 35				**0.630**					
Item 36									
Item 37					**0.709**				
Item 38				**0.810**					
Item 39				**0.723**					
Item 40				**0.498**					

Note. Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization; Rotation converged in 14 iterations; Factors: 1 = Counselling Services, 2 = Advocacy Work, 3 = Career & Educational Planning, 4 = Practice Improvement, 5 = Discipline & Administration, 6 = Deleted Items, 7 = Services to Parents, 8 = Preventive Work, 9 = Deleted Items.

Table 3.

Results of Exploratory Factor Analysis of Seven Subscales of International Survey of School Counselor's Activities (ISSCA-HK) with Promax Rotation

Extracted Factor	**Component 1**	**Component 2**
Counseling Services	0.978	
Practice Improvement	0.494	
Services to Parents	0.669	
Preventive Work	0.928	
Advocacy Work		0.595
Career and Educational Planning		0.657
Discipline and Administration Work		0.956

Note. Extraction Method: Principal Component Analysis; Rotation Method: Promax with Kaiser Normalization; Rotation converged in 3 iterations

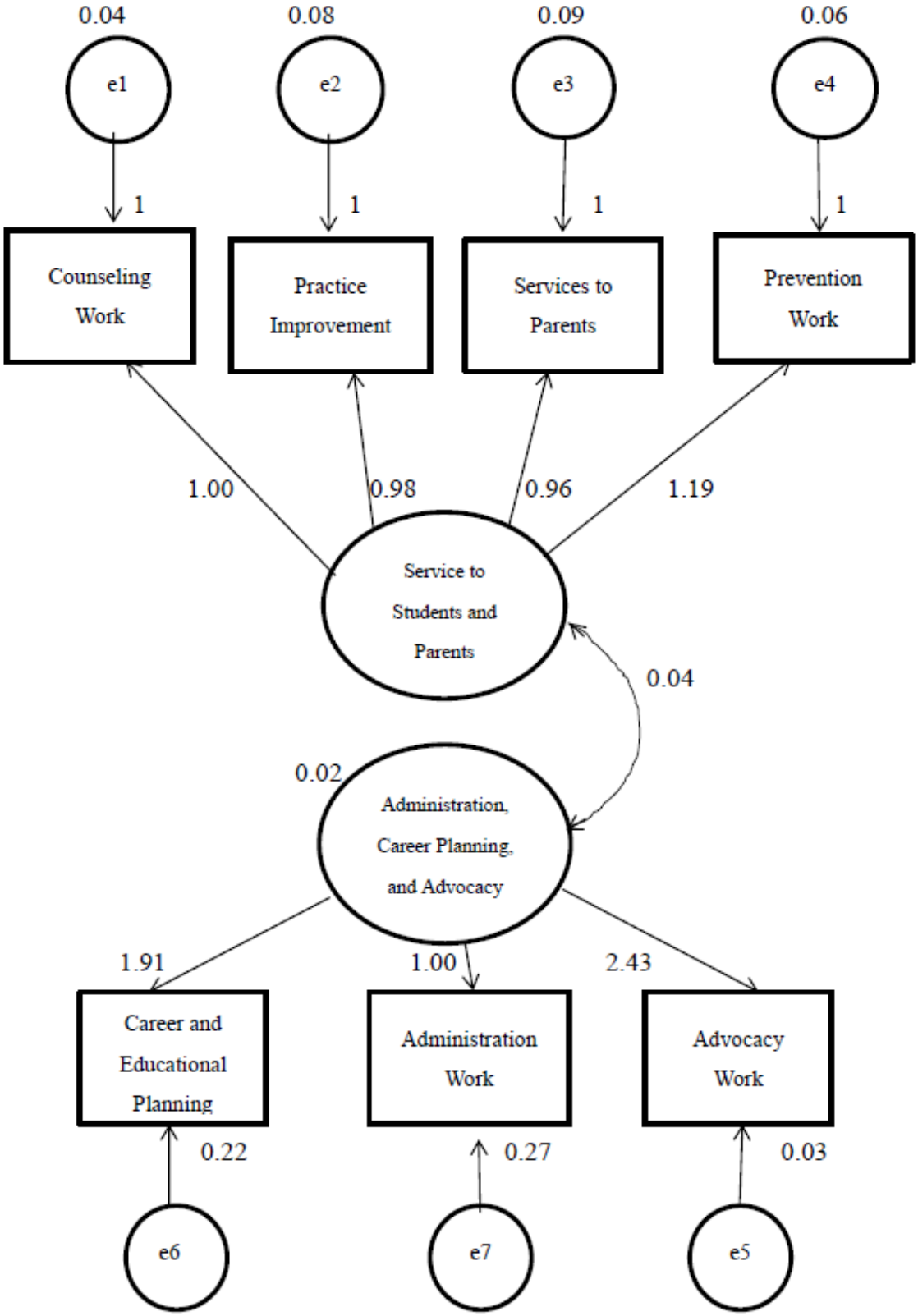

Figure 1. Two-Factor Measurement Model of International Survey of School Counselor's Activities (ISSCA-HK) with Seven Subscales.

Note. CMIN = 26.160; df = 13; p = 0.016; CMIN/df = 2.012; RMR = 0.013; RMSEA = 0.116; GFI = 0.909; CFI = 0.942.