

## **Interrelationships Among Teacher Care, Students' Life Skills Development, and Academic Achievement: Implications for School Guidance Work**

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This is a report of a study examining the interrelationships among teacher care, students' life skills development, and academic achievement of Hong Kong junior secondary students. Specifically, the study aimed to examine: (a) the relationships between teacher care and the four domains of students' life skills development, namely academic, personal, social, and career and talent development; (b) the relationship between teacher care and students' academic achievement; and (c) the student gender difference in the effect of teacher attitudes on students' life skills development. A cross-sectional survey was conducted to collect data through self-reported questionnaires. Data from a total of

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15,113 student questionnaires and 635 teacher questionnaires were collected successfully from 86 secondary schools. Findings indicated that teacher care is a significant factor contributing to all domains of students' life skills development and to their academic achievement. Comparing the student gender difference on the influence of teacher care, findings reflected that the impact of teacher care on male junior secondary students is less significant. This article reports these findings with practical implications for school counseling professionals, teacher educators, and school administrators.

*Keywords:* teacher care; life skills development; academic achievement; school guidance work

A number of school-related variables have been identified as factors influencing the development of adolescents. Some aspects that have been assessed include variables such as class size, ethnicity, percentage of students receiving free school meals, and truancy (Ehrenberg, Brewer, Gamoran, & Willms, 2001; Lytton & Pyryt, 1998; McCallum & Demie, 2001; Rutter, Maughan, Mortimore, & Ouston, 1979; Sutton & Soderstrom, 1999). Other than these distal variables, a substantial body of research suggests that teacher care is one very important variable associated with different aspects of student development. Teachers' authentic care and commitment to students' success, and fostering students' trust in their judgment and abilities, are essential components of a learner-centered orientation in teaching (Foster, 2008).

### **Effects of Teacher Care on Students' Development**

Teacher care refers to "teacher activities and practices that promote student interaction, collaboration and active participation" (Kim, Solomon, & Roberts, 1995, p. 4). According to Bulach, Brown, and Potter (1998), teachers' caring behaviors include: maintaining eye

contact with students, teaching students at their ability level, creating an environment where students feel safe, calling students by their names, and greeting students when they enter the classroom. Sociobiological theorists believe that the concept of “care” is connected with discourses on nature, altruism, ethics, and mothering, and consider that “care” is culturally associated with the female role (Vogt, 2002). In the field of education, “care” also evokes connotations of “female” service (Vogt, 2002). According to Nias (1989), teachers’ personal investment, commitment, relationship, motivation, and satisfaction, as well as their primary teaching functions, have been conceptualized as a “culture of care” (Nias, 1999). Researchers have observed that female teachers place more emphasis on the caring role within teaching (Hubbard & Datnow, 2000; Nias, 1999; Vogt, 2002), and that the effect of teacher care is particularly significant in primary schools (Book & Freeman, 1986; Vogt, 2002).

The effect of teacher care on student performance is often profound (Benard, 1995). Extensive studies have identified the positive impact of perceived teacher care on students’ school-related behaviors (Cornelius-White, 2007; Goodenow, 1993; Kojima & Miyakawa, 1993; Vogt, 2002), and students’ tendency to credit their adult success to caring teachers they met during their school years (Blum, 2005). Some studies have consistently identified that teacher care is positively linked to students’ learning attitude (Finn, 1989; Goodenow, 1991; Rosenfeld, Richman, & Bowen, 2000; Solomon, Battistich, Watson, Schaps, & Lewis, 2000; Teven & McCroskey, 1997; Wentzel, 1997), school attendance (Cornelius-White, 2007; Goodenow, 1993; Kojima & Miyakawa, 1993), academic achievement (Gill-Lopez, 1995, Klem & Connell, 2004), resisting risk behaviors (Voisin et al., 2005), and their connectedness to school (Bulach et al., 1998; Finn, 1989; Goodenow, 1991; Solomon et al., 2000). There is also extensive literature supporting the importance of personalization and caring adults in

schools. Adolescents often attribute their safe passage through the tumultuous years of adolescence to the influence of non-parental adults such as teachers as natural mentors (Anderson, 1991; Zimmerman, Bingenheimer, & Notaro, 2002). Besides, Dynarski and Gleason (2002) also pointed out that students would be less likely to drop out if they were connected to adults, or placed in a personalized setting in schools.

### **Life Skills Development of Adolescents**

The term “life skills” refers to “non-academic abilities, knowledge, attitudes, and behaviors that must be learned for success in society” (Junge, Manglallan, & Raskauskas, 2003, p. 166). With reference to the British Columbia Life Skills Programme, life skills are associated with the development of employability skills (Butterwick & Benjamin, 2006). The British Columbian program is based on the Employability Skills Profile (ESP) developed by the Conference Board of Canada (1992). The ESP outlines three domains of “life skills”: academic skills, personal management skills, and teamwork skills. In the program, life skills are defined as “specific skills, attitudes and values ... positioned as key to future success” (Butterwick & Benjamin, 2006, p. 76).

The Comprehensive Guidance Program (CGP) framework developed by Gysbers conceptualizes life skills to include competences in academic development, career planning and exploration, and personal-social development (Gysbers & Henderson, 2000). In Hong Kong, since the implementation of the CGP in 2002 (Lee, 2003), these three components of life skills have been stressed in all schools. Based on Gysbers’s framework and Bandura’s self-efficacy theory (Bandura, 1997), a culturally specific instrument for assessing Hong Kong adolescents’ self-efficacy in life skills development has been developed (Yuen, Lau, et al., 2003). Within this instrument, the concept of “life skills” embraces four components: academic development, personal

development, social development, and career and talent development (Yuen, Hui, et al., 2006).

### **The Context — Is “Teacher Care” Considered as an Important Component in Education?**

Although teacher care is a well-documented variable supporting students' positive development, this construct is always underestimated in Hong Kong, a modern city with a traditional Chinese cultural origin (Kwan & Ip, 2009). It has been well documented that Chinese culture regards education as the most effective avenue to social and economic advancement and the improvement of the person (Ho, 1986; Salili, Zhou, & Hoosain, 2003; Stevenson & Lee, 1996). Education becomes the most reliable avenue toward social mobility (Pong & Chow, 2002). Therefore, a “good examination result,” to a certain extent, becomes the main goal for education. This examination-driven culture of the education system in Hong Kong was well expressed by the colonial administration in 1982. A penal report stated clearly that “a child may go through as many as eight sets of examinations which go beyond diagnostic classroom assessment and which are all significant in opening up or closing off options for the student not only in education but ultimately in life” (Llewellyn, 1982, p. 39). Thus, the emphasis on examinations and testing creates all kinds of pressure on students (Pong & Chow, 2002; Tam & Chan, 2009). It is not surprising that the system and those involved in it, including parents, school administrators, as well as teachers, fail to address deeper issues regarding the quality of pedagogical practices in schools (Pong & Chow, 2002), and overlook the importance of “teacher care” in students' learning process, which is often considered as a “luxury” product.

Based on this unique nature of the learning environment in Hong Kong, it is important to examine whether teacher care affects students'

academic achievement, and to what extent this construct influences students' life skills development.

Many Western studies, particularly in North America, have examined school and family factors contributing to students' academic achievement. Local studies focusing on the effects of teacher care on students' life skills development and their academic achievement remain limited, however. The findings of this study may have strong implications for policymakers, school administrators, school counseling professionals, and teachers.

As indicated above, from a sociological perspective, teacher care is a gender-associated construct in which the impact on females is more significant. For this reason, this study also set out to discover if there were gender differences on the effects of teacher care on both students' life skills development and their perception of academic achievement.

### **Purpose of the Study**

This study aimed to examine the interrelationships among teacher care, students' life skills development, and academic achievement of Hong Kong junior secondary students. The research questions and hypotheses are listed below:

**Question 1:** What are the relationships between teacher care and the four domains of students' life skills development, namely academic, personal, social, and career and talent development?

**Hypothesis 1:** Teacher care is positively correlated with these four domains of students' life skills development.

**Question 2:** What are the relationships between teacher care and students' academic achievement in three core subjects: Chinese, English, and Mathematics?

**Hypothesis 2:** Teacher care is positively correlated with students' academic achievement in the three core subjects.

**Question 3:** Is there any gender difference in the effect of the teacher's caring attitude on students' life skills development?

**Hypothesis 3:** The effect of the teacher's caring attitude on life skills development is greater for female students than for male students.

## **Method**

### ***Data***

This study is part of a large-scale research project on the life skills development of adolescents in Hong Kong. Approximately 20% of Hong Kong schools were randomly selected from the Education and Manpower Bureau's master list of secondary schools in Hong Kong. Ninety-six schools were invited to participate in this study. Among them, 86 schools consented to take part. The overall participation rate for schools was 89.6%. Classes of students in each school were selected randomly to complete the questionnaire. Classroom teachers were invited to administer the instrument to the target students during time set aside for this purpose. In total, 15,113 student questionnaires were collected. The final sample comprised 7,507 boys (50.4%) and 7,392 girls (49.6%). A total of 214 respondents did not provide information on their gender. Sample data included 42.5% of secondary year 1 students, 30.3% of year 2 students, and 27.2% of year 3 students. Using a similar sampling strategy, approximately 30% of secondary school teachers from 86 schools were invited to complete the questionnaire individually and return it to the research team by mail. In total, 635 teacher respondents returned the questionnaire. The sample comprised 201 male respondents (32.3%) and 421 female respondents (67.7%), with a mean length of teaching experience of 12.37 years ( $SD = 8.057$ ).

## **Measures**

Teachers' perception of teacher care in schools was assessed by the 4-item Teacher Care Inventory (TCI), developed from a study examining the implementation of Comprehensive Guidance and Counseling Program in Hong Kong (Chan, Yuen, Lau, & Shea, 2007; Yuen, Shea, Lau, & Chan, 2007). The initial item pool of this instrument was developed based on the literature review and information obtained from a focus group interview comprising 10 secondary school teachers. These items were further reviewed by an expert panel of school guidance professionals and secondary school teachers. Following the consultation, items were shared with research team members and their feedback was again solicited and items were further revised. Thereafter, an exploratory factor analysis was conducted and a 4-item TCI was developed. Detailed descriptions of the research procedures used in constructing these items were reported by Yuen, Chan, Lau, Gysbers, and Shea (2007) and Yuen, Shea, et al. (2007).

Students' life skills development was assessed by the Life Skills Development Self-Efficacy Inventories (LSD-SI) developed by Yuen's research team (Yuen, Gysbers, Lau, Chan, & Shea, 2007). The instrument comprises 4 main scales covering academic, personal, social, and career and talent skills. Each of the four main self-efficacy scales contains a number of 6-item, smaller subscales representing different clusters of skills or behaviors. The stem for the items was "I am confident I can ...." Respondents were asked to indicate, using a 6-point Likert Scale, how much confidence they had in performing the mentioned tasks, with 1 representing "extremely not confident" to 6 representing "extremely confident." The draft questionnaire was piloted on a group of secondary year 1 and 3 students ( $n = 1,106$ ). The wording of some items was revised based on feedback. Items in all subscales were shown to be internally consistent and the hypothesized factor

structure was supported through confirmatory factor analysis (Yuen, Gysbers, et al., 2007; Yuen, Hui, et al., 2006). Students were also requested to self-report their academic achievement for three major academic subject areas (Chinese, English, and Mathematics) in the most recent school examinations. A 5-level achievement scale (A to E) was used, in which “A” represented the highest achievement level.

### ***Analysis***

In the data analysis process, the level of teacher care in a school was calculated based on teachers' responses to the TCI. Schools were categorized into three different levels. A tripartite split on the sample was conducted using the mean value of teacher care. The group labeled as “low-level teacher care” consisted of cases with teacher care value of less than 33.33 percentile (teacher care score at 33.33 percentile = 17.5); the group of “medium-level teacher care” consisted of cases with teacher care value between 33.33 and 66.67 percentile (17.5 and 18.75); and the group of “high-level teacher care” included cases with teacher care value higher than 66.67 percentile. A variable representing the level of teacher care was then added to the student data file for further analysis.

The internal consistency reliability and item statistics of response to the TCI were first examined, and the factor structure of the LSD-SI was computed. After examining the validity and reliability of the instrument used in this study, the relationships between teacher care and the four domains of students' life skills development were examined through Univariate Analysis of Variance (ANOVA). The analyses of variance of all subscales were also conducted to examine the relationships between all subscales with teacher care. ANOVA were employed in male and female students separately to examine any gender difference in the effects of teacher's caring attitude on students' life skills development. Similarly, ANOVA was conducted on male and female student data

separately to examine the relationships between teacher care and students' academic achievement in Chinese, English, and Mathematics.

## Results

### *Reliability Analysis and Goodness-of-Fit of the Instruments*

The reliability of responses to the four items of TCI is presented in Table 1. The item-total correlations of the four items ranged from .487 to .642. The internal consistency of the inventory, as computed by Cronbach's alpha, is acceptable ( $\alpha = .763$ ). From the data, it was felt that all items were clustered appropriately with good internal consistency.

A confirmatory factor analysis was employed to examine the factor structure of the LSD-SI (Yuen, Gysbers, et al., 2007). Table 2 reports the psychometric properties of the inventory. The main scales (domains) and subscales yielded acceptable internal consistency indexes (Cronbach's

**Table 1. Item Means, Standard Deviations and Item-Total Correlations of the TCI**

Item	<i>M</i>	<i>SD</i>	Item-total correlation
Teachers easily recognize students with more serious learning and behavioral difficulties.	4.60	.788	.487
Teachers and students build up relationships of mutual trust and respect.	4.75	.772	.611
Teachers acquire adequate skills and experience in running classroom guidance activities and are able to lead the class guidance activities.	4.29	.903	.525
Teachers play an active role in building up students' self-esteem and adaptive behaviors in class.	4.47	.789	.642

Note: Cronbach's alpha for the instrument = .763

alphas) and goodness-of-fit indexes, with CFI ranging from .860 to .996, SRMR ranging from .013 to .063, and RMSEA ranging from .026 to .079. However, the subscale “avoiding drugs, drinking and smoking” under the “social development” domain was shown to be problematic in the present study. The goodness-of-fit index of this subscale was marginal (CFI = .699; SRMR = .127; RMSEA = .198).

**Table 2. Psychometric Properties of the LSD-SI**

Domain & subscale	No. of items	Reliability ( $\alpha$ )	CFI	SRMR	RMSEA	(90% CI)
<b>Personal development</b>	24	.936	.867	.047	.053	.052–.055
<i>Positive self-concept</i>	6	.864	.986	.020	.044	.036–.052
<i>Problem solving</i>	6	.810	.938	.042	.076	.068–.084
<i>Self-management</i>	6	.714	.954	.032	.048	.041–.057
<i>Self-reflection</i>	6	.814	.935	.045	.079	.071–.087
<b>Social development</b>	48	.967	.860	.063	.044	.043–.045
<i>Communication skills</i>	6	.789	.988	.023	.034	.026–.042
<i>Respecting and accepting others</i>	6	.847	.982	.024	.049	.043–.058
<i>Family responsibility</i>	6	.894	.990	.018	.042	.036–.050
<i>Boy-girl relationship</i>	6	.867	.964	.038	.075	.067–.083
<i>Conflict management</i>	6	.854	.986	.022	.044	.036–.052
<i>Coping with bullying</i>	6	.854	.984	.023	.047	.039–.055
<i>Leadership</i>	6	.893	.992	.015	.038	.030–.046
<i>Avoiding drugs, drinking and smoking</i>	6	.779	.699	.127	.198	.191–.206
<b>Academic development</b>	24	.948	.906	.042	.050	.048–.051
<i>Applying study skills</i>	6	.814	.985	.022	.040	.032–.048
<i>Time management</i>	6	.877	.996	.013	.026	.018–.035
<i>Creative and critical thinking</i>	6	.853	.992	.017	.032	.024–.040
<i>Involvement in learning</i>	6	.809	.937	.042	.079	.071–.087
<b>Career and talent development</b>	18	.947	.925	.040	.056	.054–.058
<i>Talent development</i>	6	.873	.984	.023	.051	.043–.059
<i>Work habits and values</i>	6	.854	.984	.025	.047	.039–.092
<i>Career exploration</i>	6	.875	.971	.028	.068	.060–.076

### ***The Effects of Teacher Care on the Four Domains of Students' Life Skills Development***

In response to Research Question 1, ANOVA was employed to examine the effects of different levels of teacher care on the four domains and subscales of students' life skills development. Results presented in Table 3 show the means of different levels of teacher care,  $F$  score, partial eta-squared and post-hoc test for effects of level of teacher care on the four domains and all subscales of the LSD-SI. Among the four domains, findings suggested that the effects of teacher care on all of them were significant. The confidence level on the effect of teacher care on social development ( $F = 27.6, p < .001, \eta^2 = .004$ ) was comparatively higher than other three domains (personal development:  $F = 6.2, p < .01, \eta^2 = .001$ ; academic development:  $F = 18.0, p < .001, \eta^2 = .003$ ; career and talent development:  $F = 10.7, p < .001, \eta^2 = .002$ ). However, it should be noted that the partial eta-squared obtained from this study was small (ranging from .001 to .008) in almost all scales.

Of the 19 life skills development subscales, data revealed that the effects of teacher care on the four subscales of the "personal development" domain were significant. Tukey's post-hoc test showed that students studying in schools with high-level teacher care would tend to have higher self-efficacy in self-concept, problem solving, self-management, and self-reflection. The confidence level on the effect on self-reflection ( $F = 9.1, p < .001, \eta^2 = .001$ ) was the highest. Data also indicated that the effects of teacher care were significant ( $p < .001$ ) on all eight subscales of "social development."

### ***The Effects of Teacher Care on Academic Achievement***

In relation to Research Question 2 about the effects of teacher care on the four subscales of "academic development," findings revealed that

the effects were significant on all subscales. Tukey's post-hoc test indicated that students studying in high-level teacher care environments would tend to have higher ability in applying study skills ( $F = 10.0$ ,  $p < .001$ ,  $\eta^2 = .001$ ), time management skills ( $F = 3.8$ ,  $p < .05$ ,  $\eta^2 = .001$ ), creative and critical thinking ( $F = 9.6$ ,  $p < .001$ ,  $\eta^2 = .001$ ), and involvement in learning ( $F = 58.0$ ,  $p < .001$ ,  $\eta^2 = .008$ ) than students studying in low-level teacher care environments. Among these students studying in high-level teacher care environments, the confidence level on the effect of teacher care was high, except for the area of "time management" ( $p < .05$ ).

In line with the above findings, among the three subscales of "career and talent development," the effects of teacher care were found to be significant on all subscales. Tukey's post-hoc test indicated that students studying in high-level teacher care environments would tend to have higher talent development ( $F = 12.9$ ,  $p < .001$ ,  $\eta^2 = .002$ ), better work habits and values ( $F = 11.7$ ,  $p < .001$ ,  $\eta^2 = .002$ ), and more career exploration ( $F = 5.3$ ,  $p < .01$ ,  $\eta^2 = .001$ ) than students studying in low-level teacher care environments.

### ***The Effect of Student Gender on Effects of Teacher Care on Students' Life Skills Development***

Regarding Research Question 3, the effect of student gender on effects of teacher care on the four domains and all subscales of the LSD-SI was examined. Table 4 illustrates findings from a series of ANOVA conducted for male and female students respectively. There was a clear gender difference between the effects of teacher care on the student group. The effects of teacher care were not significant on three domains of life skills development, including "personal development" ( $F = 1.363$ ,  $p > .05$ ,  $\eta^2 = .000$ ); "academic development" ( $F = 2.987$ ,  $p > .05$ ,  $\eta^2 = .001$ ); and "career and talent development" ( $F = 2.693$ ,

**Table 3. Effects of Teacher Care on the Four Domains and All Subscales of Students' Life Skills Development: Mean, F Score, Partial Eta-Squared and Post-hoc Test**

Domain & subscale	Level of teacher care	Mean	F	$\eta^2$	Post-hoc
<b>Personal development</b>	High (3)	102.2	6.2**	.001	1 < 3
	Medium (2)	101.4			
	Low (1)	100.7			
<i>Positive self-concept</i>	High (3)	25.8	7.1**	.001	1 < 3
	Medium (2)	25.4			
	Low (1)	25.3			
<i>Problem solving</i>	High (3)	25.3	4.3*	.001	1 < 3
	Medium (2)	25.1			
	Low (1)	25.0			
<i>Self-management</i>	High (3)	25.4	5.3**	.001	1 < 3
	Medium (2)	25.3			
	Low (1)	25.0			
<i>Self-reflection</i>	High (3)	25.7	9.1***	.001	1 < 2, 3
	Medium (2)	25.5			
	Low (1)	25.2			
<b>Social development</b>	High (3)	214.2	27.6***	.004	1 < 2 < 3
	Medium (2)	211.1			
	Low (1)	208.0			
<i>Communication skills</i>	High (3)	25.3	22.5***	.003	1 < 2 < 3
	Medium (2)	24.9			
	Low (1)	24.5			
<i>Respecting and accepting others</i>	High (3)	27.6	54.6***	.008	1 < 2 < 3
	Medium (2)	27.2			
	Low (1)	26.6			
<i>Family responsibility</i>	High (3)	25.9	15.2***	.002	1 < 2 < 3
	Medium (2)	25.6			
	Low (1)	25.2			
<i>Boy-girl relationship</i>	High (3)	27.5	10.2***	.001	1, 2 < 3
	Medium (2)	27.1			
	Low (1)	26.9			
<i>Conflict management</i>	High (3)	26.2	16.5***	.002	1 < 2 < 3
	Medium (2)	25.9			
	Low (1)	25.6			
<i>Coping with bullying</i>	High (3)	25.3	26.7***	.004	1 < 2 < 3
	Medium (2)	24.7			
	Low (1)	24.4			

**Table 3 (cont'd)**

Domain & subscale	Level of teacher care	Mean	F	$\eta^2$	Post-hoc
<i>Leadership</i>	High (3)	24.9	10.5***	.001	1, 2 < 3
	Medium (2)	24.6			
	Low (1)	24.3			
<i>Avoiding drugs, drinking and smoking</i>	High (3)	30.6	42.2***	.006	1 < 2 < 3
	Medium (2)	30.2			
	Low (1)	29.6			
<b>Academic development</b>	High (3)	104.0	18.0***	.003	1 < 2 < 3
	Medium (2)	102.6			
	Low (1)	101.3			
<i>Applying study skills</i>	High (3)	25.1	10.0***	.001	1, 2 < 3
	Medium (2)	24.8			
	Low (1)	24.6			
<i>Time management</i>	High (3)	24.7	3.8*	.001	1, 2 < 3
	Medium (2)	24.4			
	Low (1)	24.3			
<i>Creative and critical thinking</i>	High (3)	26.1	9.6***	.001	1 < 2, 3
	Medium (2)	25.9			
	Low (1)	25.6			
<i>Involvement in learning</i>	High (3)	28.1	58.0***	.008	1 < 2 < 3
	Medium (2)	27.5			
	Low (1)	26.8			
<b>Career and talent development</b>	High (3)	78.8	10.7***	.002	1, 2 < 3
	Medium (2)	77.8			
	Low (1)	77.1			
<i>Talent development</i>	High (3)	26.6	12.9***	.002	1 < 2 < 3
	Medium (2)	26.3			
	Low (1)	26.0			
<i>Work habits and values</i>	High (3)	26.0	11.7***	.002	1, 2 < 3
	Medium (2)	25.6			
	Low (1)	25.4			
<i>Career exploration</i>	High (3)	26.1	5.3**	.001	1 < 3
	Medium (2)	25.9			
	Low (1)	25.7			

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ;  $\eta^2$  = partial eta-squared

Notes: 1. The numbers in parentheses in the second column refer to the numbers used for illustrating significant differences in the "post-hoc" column.

2. Post-hoc = Tukey HSD

$p > .05$ ,  $\eta^2 = .001$ ) in the male students. “Social development” ( $F = 6.119$ ,  $p < .01$ ,  $\eta^2 = .002$ ) was the only domain affected by teacher care, at a moderate confidence level ( $p < .01$ ). Of the 19 subscales of students’ life skills development, the effect of teacher care on male students was found marginally significant only in nine subscales including: self-management ( $F = 3.385$ ,  $p < .05$ ,  $\eta^2 = .001$ ); communication skills ( $F = 4.274$ ,  $p < .05$ ,  $\eta^2 = .001$ ); respecting and accepting others ( $F = 14.905$ ,  $p < .001$ ,  $\eta^2 = .004$ ); boy-girl relationship ( $F = 3.888$ ,  $p < .05$ ,  $\eta^2 = .001$ ); conflict management ( $F = 3.431$ ,  $p < .05$ ,  $\eta^2 = .001$ ); coping with bullying ( $F = 7.669$ ,  $p < .001$ ,  $\eta^2 = .002$ ); avoiding drugs, drinking and smoking ( $F = 13.663$ ,  $p < .001$ ,  $\eta^2 = .004$ ); involvement in learning ( $F = 15.077$ ,  $p < .001$ ,  $\eta^2 = .004$ ); and talent development ( $F = 3.962$ ,  $p < .05$ ,  $\eta^2 = .001$ ).

In contrast to the male student group, data from the female student group indicated that the effects of teacher care were significant in almost all four domains and all subscales of the LSD-SI at high confidence level, except in three subscales: boy-girl relationship ( $F = 5.349$ ,  $p < .01$ ,  $\eta^2 = .002$ ); time management ( $F = 6.823$ ,  $p < .01$ ,  $\eta^2 = .002$ ); and career exploration ( $F = 4.357$ ,  $p < .05$ ,  $\eta^2 = .001$ ).

### ***Gender Difference in the Effects of Teacher Care on Students’ Academic Achievement***

The gender difference in the effects of teacher care on students’ academic achievement is presented in Table 5. The sample as a whole indicated that the effect of teacher care was significant to both genders in academic achievement in all three major subjects, including Chinese language (Male:  $F = 9.588$ ,  $p < .001$ ,  $\eta^2 = .003$ ; Female:  $F = 6.705$ ,  $p < .01$ ,  $\eta^2 = .002$ ), English language (Male:  $F = 14.991$ ,  $p < .001$ ,  $\eta^2 = .004$ ; Female:  $F = 4.743$ ,  $p < .01$ ,  $\eta^2 = .001$ ), and Mathematics (Male:  $F = 9.447$ ,  $p < .001$ ,  $\eta^2 = .003$ ; Female:  $F = 15.068$ ,  $p < .001$ ,

$\eta^2 = .004$ ). Specifically, findings from Tukey's post-hoc test also reflected that students studying in schools with a high care level would tend to have higher achievement in Chinese language, English language, and Mathematics.

## **Discussion**

This study is the first in Hong Kong to examine the influence of teacher care on junior secondary students' life skills development and their academic achievement. Findings from this study provide preliminary support for the positive influential effects of teacher care on junior secondary students' life skills development and their academic achievement. In line with other international studies (Anderson, 1991; Dynarski & Gleason, 2002; Klem & Connell, 2004; Zimmerman et al., 2002), this study reflects that the establishment of a more personalized education environment leads the students toward success in academic achievement and confidence in life skills development.

Specifically, there are three issues that require further attention. First, findings from this study reflect that the effect of teacher care on female junior secondary students' life skills development tends to be stronger than the effect on male junior secondary students. As mentioned previously, teacher care is a cultural variable associated with the female role (Vogt, 2002). Another possible explanation contributing to the gender difference may be that of gender socialization pressures. According to Hook, Gerstein, Detterich, and Gridley (2003), with reference to everyday experiences, females may view relationships as an important medium for authentic interpersonal exchanges and deep emotional expression, and therefore it is no surprise that the influence of teacher care on female students is stronger. Additional research is needed to explore whether gender role and expectations account for gender differences in the effect of teacher care.

**Table 4. Gender Effects of Teacher Care on the Four Domains and All Subscales of Students' Life Skills Development: Mean, F Score, Partial Eta-Squared and Post-hoc Test**

Domain & subscale	Level of teacher care	Male			Female		
		Mean	F	$\eta^2$	Mean	F	$\eta^2$
<b>Personal development</b>	High (3)	103.6	1.363	.000	101.1	16.209***	.005
	Medium (2)	103.0			100.1		
	Low (1)	102.6			98.2		
<i>Positive self-concept</i>	High (3)	25.8	1.705	.000	25.4	15.068***	.004
	Medium (2)	25.8			25.1		
	Low (1)	26.1			24.6		
<i>Problem solving</i>	High (3)	25.8	1.733	.000	25.0	10.876***	.003
	Medium (2)	25.6			24.7		
	Low (1)	25.5			24.3		
<i>Self-management</i>	High (3)	25.8	3.385*	.001	25.1	12.346***	.004
	Medium (2)	25.9			24.8		
	Low (1)	25.6			24.3		
<i>Self-reflection</i>	High (3)	25.8	1.383	.000	25.6	15.973***	.005
	Medium (2)	25.7			25.4		
	Low (1)	25.5			24.8		
<b>Social development</b>	High (3)	211.4	6.119**	.002	216.2	16.796***	.005
	Medium (2)	208.5			213.1		
	Low (1)	206.7			209.8		
<i>Communication skills</i>	High (3)	24.8	4.274*	.001	25.6	16.219***	.005
	Medium (2)	24.3			25.5		
	Low (1)	24.3			24.9		

<i>Respecting and accepting others</i>	High (3)	27.0	14.905***	.004	1 < 2, 3	28.2	23.083***	.007	1 < 2 < 3
	Medium (2)	26.7				27.7			
<i>Family responsibility</i>	Low (1)	26.2				27.2			
	High (3)	25.3	.704	.000	1 = 2 = 3	26.4	14.137***	.004	1 < 2, 3
	Medium (2)	25.1				26.0			
<i>Boy-girl relationship</i>	Low (1)	25.1				25.4			
	High (3)	27.4	3.888*	.001	1, 2 < 3	27.7	5.349**	.002	1, 2 < 3
	Medium (2)	26.9				27.2			
<i>Conflict management</i>	Low (1)	26.8				27.1			
	High (3)	26.3	3.431*	.001	1 < 3	26.3	19.022***	.005	1 < 2 < 3
	Medium (2)	26.0				25.9			
<i>Coping with bullying</i>	Low (1)	25.8				25.3			
	High (3)	25.2	7.669***	.002	1 < 3	25.4	21.674***	.006	1 < 2 < 3
	Medium (2)	24.8				24.7			
<i>Leadership</i>	Low (1)	24.5				24.2			
	High (3)	24.7	1.025	.000	1 = 2 = 3	25.0	13.623***	.004	1 < 2 < 3
	Medium (2)	24.5				24.6			
<i>Avoiding drugs, drinking and smoking</i>	Low (1)	24.4				24.1			
	High (3)	29.9	13.663***	.004	1 < 2 < 3	31.2	9.385***	.003	1 < 2, 3
	Medium (2)	29.5				30.8			
<b>Academic development</b>	Low (1)	29.1				30.5			
	High (3)	103.2	2.987	.001	1 < 3	104.6	17.436***	.005	1 < 2 < 3
	Medium (2)	102.2				103.0			
<i>Applying study skills</i>	Low (1)	101.5				101.2			
	High (3)	25.1	1.300	.000	1 = 2 = 3	25.2	14.360***	.004	1 < 2, 3
	Medium (2)	24.8				24.9			
	Low (1)	24.7				24.4			

**Table 4 (cont'd)**

Domain & subscale	Level of teacher care	Male			Female		
		Mean	F	$\eta^2$	Mean	F	$\eta^2$
<i>Time management</i>	High (3)	24.5	.109	.000	24.8	6.823**	.002
	Medium (2)	24.5			24.3		
	Low (1)	24.5			24.1		
<i>Creative and critical thinking</i>	High (3)	26.1	2.040	.001	26.0	12.211***	.003
	Medium (2)	26.0			25.8		
	Low (1)	25.8			25.3		
<i>Involvement in learning</i>	High (3)	27.5	15.077***	.004	28.5	29.491***	.008
	Medium (2)	26.9			28.0		
	Low (1)	26.5			27.3		
<b>Career and talent development</b>	High (3)	78.4	2.693	.001	79.1	8.151***	.002
	Medium (2)	77.3			78.2		
	Low (1)	77.0			77.2		
<i>Talent development</i>	High (3)	26.7	3.962*	.001	26.5	16.479***	.004
	Medium (2)	26.2			26.3		
	Low (1)	26.1			25.7		
<i>Work habits and values</i>	High (3)	25.4	1.205	.000	26.5	10.786***	.003
	Medium (2)	25.4			25.8		
	Low (1)	25.2			25.6		
<i>Career exploration</i>	High (3)	26.1	2.019	.001	26.1	4.357*	.001
	Medium (2)	25.7			26.0		
	Low (1)	25.7			25.7		

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ;  $\eta^2$  = partial eta-squared

Notes: 1. The numbers in parentheses in the second column refer to the numbers used for illustrating significant differences in the "post-hoc" columns.

2. Post-hoc = Tukey HSD

**Table 5. Gender Difference in the Effects of Teacher Care on Students' Academic Achievement: Mean, F Score, Partial Eta-Squared and Post-hoc Test**

Academic achievement	Level of teacher care	Male			Female		
		Mean	F	$\eta^2$	Mean	F	$\eta^2$
Chinese language	High (3)	2.99	9.588***	.003	2.69	6.705**	.002
	Medium (2)	3.00			2.75		
	Low (1)	3.10			2.79		
English language	High (3)	3.12	14.991***	.004	2.78	4.743**	.001
	Medium (2)	3.22			2.82		
	Low (1)	3.28			2.90		
Mathematics	High (3)	2.67	9.447***	.003	2.86	15.068***	.004
	Medium (2)	2.88			2.95		
	Low (1)	2.84			3.08		

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ;  $\eta^2$  = partial eta-squared

Notes: 1. The numbers in parentheses in the second column refer to the numbers used for illustrating significant differences in the "post-hoc" columns.

2. Post-hoc = Tukey HSD

3. Lower mean score reflects better academic achievement.

Second, with reference to our findings, among 19 subscales of life skills development, the influence of teacher care on “respecting and accepting others,” “coping with bullying,” “avoiding drugs, drinking and smoking,” and “involvement in learning” are higher than other subscales, with confidence levels less than .001 in both male and female student groups. This suggests that students’ strength in resisting common risk behaviors and their self-perception of academic achievement would be enhanced when they experienced their teachers as genuinely caring, committed to their academic success, and trusting of their judgment and ability. In addition, findings indicate that positive teacher care is a significant influence in creating a harmonious school environment for both gender groups in our sample.

Third, consistent with previous studies conducted in different parts of the world (Gill-Lopez, 1995; Klem & Connell, 2004), the present study provides further evidence on the positive contribution of teacher care on junior secondary students’ academic achievement in Hong Kong, a community greatly influenced by Chinese culture. It has been well documented that Chinese culture regards education as the most effective avenue to social and economic advancement and the improvement of the person (Salili et al., 2003; Stevenson & Lee, 1996). Students living in a Chinese community in general face heavy pressure to achieve academically (Tam & Chan, 2009). The association of teacher care with students’ academic achievement clearly has potentially important implications for secondary school guidance teams and school administrators.

### ***Implications for Policymakers, Educators, and School Counseling Professionals***

“Education reform” seems to be a common norm in different parts of the world, and most comprehensive school reform models have been

tested in order to develop similar strategies for creating a more personalized environment for youth (Haynes, Emmons, & Woodruff, 1998; Legters, Balfanz, Jordan, & McPartland, 2002; Supovitz, Poglinco, & Snyder, 2001), in which a “caring environment” is stressed.

Similarly, in June 2001, education reform started in Hong Kong. A document, *Learning to Learn: The Way Forward in Curriculum* (Curriculum Development Council, 2001), was published, signaling the official implementation of education reform, in which “values and attitudes” was considered as one of the three key components, and “learning opportunities in an environment which provide relevant, authentic and meaningful experience for whole-person development” were the new goals (Curriculum Development Council, 2001, p. vii). The document stated clearly the importance of the personalized learning experience. Findings from the current study also indicate that a personalized, individual, caring environment is a crucial factor in enhancing student learning and life-long development. However, at the implementation level, the “caring environment,” at both the school level and the individual level, has been neglected (Kwan, 2010). It is worthwhile to review what is crucial in the student learning process in Hong Kong. This article does not report any ground-breaking empirical findings. Rather, it seeks to present the results in ways viewed as more useful and compelling for policymakers, school administrators, school counseling professionals, and teachers.

At the policy level, policymakers should be aware that for any reform initiative to promote students' learning to work, support from frontline teachers in creating a caring environment is essential. In today's school-based caring culture, the teacher plays an increasingly central role. Teachers' values and attitudes in promoting a caring school environment should be the foundation of any reform program. Policymakers should build a consensus among different stakeholders,

including school administrators, teachers, parents and students, and provide ample resources and opportunity for all parties for further development.

Findings from this study may also offer important lessons to school administrators and guidance professionals. A caring, supportive environment should be created by all school personnel. Therefore, the school administrators' goodwill and commitment to provide a caring learning community for teachers, parents and students is one crucial factor. To optimize and sustain this development, the teacher caring environment in all forms needs to take place at the whole-school level (Noddings, 1992) and be disseminated across different levels within the school, rather than just focusing on preventive programs for students. The initiative should be taken to highlight the importance of teachers' caring attitude and value. Professional development activities for teachers, focusing on enhancing their caring attitude, could be conducted on a regular basis. In addition, a favorable school ethos and learning environment, one that is conducive to developing teachers' values and attitudes, should be created. It is also important to include this caring/supportive component in school development plans and to allocate time and appropriate resources accordingly in the school's overall planning.

It is also recommended that teacher training institutions should include coverage of the "caring teacher" concept in their initial teacher training programs, and that in-service teacher training programs should continue to provide professional development programs.

### ***Limitations and Future Research Directions***

The findings of this study are limited by its specific focus only on junior secondary students. It is unclear at the moment to what extent the

results from this study of junior secondary students may be generalized to senior secondary students, or primary students in Hong Kong. Second, the sample of teachers who participated did so voluntarily. For this reason, the respondents who returned questionnaires might have tended to hold more positive attitudes toward teacher care in their working school. Third, data from this study were collected based on self-administered questionnaires, which may lead to the tendency to provide socially desirable responses. This limitation, however, is common to most survey research. Finally, the effect size we found was small in magnitude. However, the small magnitude of these effects does not necessarily mean they are unimportant. Prentice and Miller (1992) stated that small effects may be considered when the dependent variable is difficult to influence. Further, a large number of factors may be related to academic achievement and life skills development and it may therefore be difficult for any one variable to have much influence (Zimmerman et al., 2002). With reference to the above limitations, further studies using other research samples, such as primary school students or senior secondary school students are suggested. Further investigation by adopting a qualitative method to investigate the degree to which teacher care accounts for students' life skills development also seems warranted.

In the present study, findings indicated that teacher care is a significant factor contributing to all domains of students' life skills development and to their academic achievement. Comparing the student gender difference on the influence of teacher care, results reflected that teacher care has less influence on male junior secondary students than on female students. As a step forward, thinking about teacher caring environment in school, it is worthwhile for policymakers, school administrators, teachers and parents to ask themselves what values and priorities they place on key education objectives.

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### 教師關懷與學童生活技能發展及其學業成就之關係： 對學校輔導工作的啟示

本文報道一項研究，探索教師關懷對學童生活技能發展及其學業成就的影響。研究的主要目的包括：（1）探討教師關懷對學童生活技能發展中四個範疇（即學術發展、個人發展、群性發展及事業發展）的影響；（2）探討教師關懷與學童學業成就的關係；及（3）探討教師關懷與學童生活技能發展的關係是否因學童性別不同而有所影響。是項研究為橫貫式研究，透過參與者自填問卷收集相關數據。研究成功收集了 86 所中學合共 15,113 份學童問卷及 635 份教師問卷。結果顯示，教師關懷對學童生活技能發展中各個範疇及其學業成就均有正面影響，而教師關懷對女學童的影響亦較男學童明顯。在推動學校輔導工作方面，是項研究對學生輔導專業人員、教育工作者及教育行政人員有一定啟示。

關鍵詞：教師關懷；生活技能發展；學業成就；學校輔導工作