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Use of Foul Language Among Chinese Adolescents: Developmental Change and Relations With Psychosocial Competences

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A B S T R A C T

Purpose: The use of foul language becomes increasingly popular among youth, yet scientific research on this topic is grossly missing in the literature. This longitudinal study examined the developmental change of foul language use and its relations to emotional competence, social competence, and moral competence over high school years.
Methods: Data were from a six-year longitudinal study between grade 7 and grade 12 with an annual assessment on 3,328 Hong Kong adolescents (mean age = 12.59 ± .74 years). Multiple-group latent growth curve modeling based on six waves of longitudinal data were conducted.
Results: Results showed that the use of foul language increased, but the increase rate slowed down over time; males showed faster increase rate yet faster deceleration than did females. In addition, changes in emotional competence, social competence, and moral competence negatively predicted the change in use of foul language across males and females, respectively.
Conclusions: Adolescents are vulnerable to increasing their use of foul language. However, promoting emotional competence, social competence, and moral competence could be helpful to minimize the increasing trend of use of foul language.

IMPLICATIONS AND CONTRIBUTION

The use of foul language is naturally increasing over high school years. Given the negative relation between change in use of foul language and change in psychosocial competences (i.e., emotional competence, social competence, and moral competence), intervention that attempts to reduce adolescents' use of foul language should focus on the promotion of these psychosocial competences.

The use of foul language has become increasingly popular among adolescents in the Western society [1] and Chinese society [2]. It is integrated into the daily conversation of adolescents and even appears in adolescent literature and media [3,4]. Foul language is often termed as curse words, swear words, taboo words, or profanity in the literature. Although no common definition of foul language is present across academic studies [5], it usually refers to the utterance of emotionally powerful, offensive words, or emotionally harmful expressions that are understood as insults regardless of the intention of the speakers [6,7]. Although cursing is primarily used for cathartic effect—expressing anger or frustration [5–7], for many parents and educational professionals, cursing is regarded as a sort of uneducated, rude, and even offensive behavior. Some researchers also regarded cursing as an indicator of adolescent problem behavior [8,9]. A previous study found that cursing was positively related to aggressive behavior among youth [10]. Despite the mounting concern about adolescent cursing, scientific studies about it are far from adequate.

First, research has yet to examine cursing behavior from a developmental perspective. Although children have picked up curse words since preschool years presumably from their parents [11], it is expected that the use of foul language reaches its high

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point in adolescence [7]. Adolescence is the period when identity formation is critical [12]. From the social constructionist perspective [13], cursing is particularly appealing to adolescents because it seems to be related to their social construction of identity during their interaction with peers. Adolescents who curse feel affiliated with peers who share the similar knowledge and usage of foul language and feel distinct from others who do not follow the same linguistic style [13,14]. During this process, they may obtain a sense of identity. However, it is not clear if cursing-related identity is adaptive. More important, cursing is neither the only way nor the healthy way to constructing identity, at least not the way to be recommended.

Second, what psychosocial factors are related to adolescents' use of foul language is not clear, whereas this question is critical for preventing foul language abuse. According to the positive youth development perspective, promoting adolescents' strengths including psychosocial competences would prevent them from engaging in problem behavior [15,16]. Competence usually refers to individuals' ability to adapt to the environment [17]. In general, higher psychosocial competence may prevent adolescents from externalizing their stress or negative emotion to problem behavior. According to this tenet, the use of foul language would be minimized when adolescents' competence is improved. Jay's [7] Neuro-Psycho-Social (NPS) model of cursing also implies that psychosocial competence may predict the likelihood of cursing. The NPS model maintains that the occurrence of cursing is subject to individuals' neurological state, psychological attribute, and sociocultural constraint, whereas psychological competence represents a psychological attribute.

Plentiful studies showed that emotional, social, and moral competences are related to reduced adolescent problem behavior [18–20]. It is possible that these competences are related to cursing as well, since cursing is often emotionally laden, used for communication, and morally controversial. Emotional competence refers to the ability to identify emotions and effectively deal with emotions and emotionally charged problems [21]. Social competence refers to the ability to achieve social or personal goals in a social context [22]. Moral competence refers to the ability to perform altruistic behavior toward others and the ability to judge moral issues at an advanced level of development [23]. Specifically, adolescents with higher emotional competence know how to express their emotions appropriately and manage their negative emotions skillfully [21]; adolescents with higher social competence are more empathetic, better at handling social relationship, and more apt in communication [22]; adolescents with higher moral competence are better at judging what is right and wrong and more sensitive to the possible harm to others [23]. As such, they are less likely to curse, which is often related to the cathartic expression of strong and negative emotion yet possibly elicits negative reactions in others or even hurts others [7,24].

Against this background, the objectives of this study were twofold. The first one was to examine the developmental change of foul language use over the high school years. We expected that foul language use would increase over the high school years. The second one was to study whether psychosocial competences would contribute to the change in foul language use over time. We expected that the initial level of emotional, social, moral competences would negatively predict change in adolescent foul language use over time. The change of emotional, social, moral competences would also negatively predict the change in adolescent foul language use over time.

All the hypotheses were tested using multigroup analyses [25,26], so as to determine the potential moderation by gender for all relations of interest. Previous literature has suggested that males generally curse more than females [9,11], while there lacks research documenting gender differences in the developmental change of cursing as well as the link between competence and cursing. Therefore, gender differences were explored without a priori hypothesis. As family demographic variables (i.e., economic status and family structure) may affect adolescent problem behavior [27], they were controlled as time invariant covariates.

Methods

Participants and procedure

The sample consisted of high school students recruited from 28 high schools, which participated in a six-year longitudinal project in Hong Kong [27]. This project included annual assessments during the high school years (grade 7–12) to understand adolescents' personal and family well-being. There were 3,328 seven graders ($M_{age} = 12.59 \pm .74$ years; 51.7% male) at wave 1. The attrition rates for the succeeding waves of assessment ranged from 12.7% to 28.3% caused by students transferring schools, dropping out, or being absent on the day of assessment (see Table 1).

This study received approval from the ethics review from the Human Subjects Ethics Subcommittee of The Hong Kong Polytechnic University. School, parental, and student consent was obtained. Participants completed a battery of questionnaires assessing adolescent development and family in a self-report manner in a classroom setting with a trained research assistant present.

Instrument

Emotional competence, social competence, and moral competence. Emotional competence, social competence, and moral competence were assessed by three subscales from the simplified version of the Chinese Positive Youth Development Scale [28], which measures 15 positive youth development attributes proposed by Catalano et al. [29]. Each construct was assessed by three items, which were loaded on the target constructs across the six waves of data, as showed by confirmatory factor analyses (see Table 1). Sample items of emotional, social, and moral competences are: "When I have conflict with others, I can manage my emotions," "I can interact with others in a harmonious manner," and "I have high moral expectation about my behavior," respectively. The internal consistency reliabilities of these scales exceeded the minimum standard of .70 [30] (see Table 1).

Use of foul language. Adolescents' use of foul language was assessed by a single item derived from a delinquent behavior scale asking the frequency of engagement in 12 delinquent acts, including speaking foul language, steeling, damaging others' properties, sexual intercourse, and trespasses [27]. Similar to a previous study [5], a single item was used to measure the frequency of cursing in this study (see Table 1).

Controlled variables. Adolescents' family economic status and family structure were controlled in the models. Poverty was indicated by receiving governmental subsidy–Comprehensive

Table 1
Descriptive statistics of key variables and internal consistency coefficients of scales (wave 1–6)

N[a]	Mean (SD)						Reliability					
	W1	W2	W3	W4	W5	W6	W1	W2	W3	W4	W5	W6
	3,328	2,905	2,860	2,684	2,474	2,385						
Use of foul language ("how many times have you spoken foul language in the past year?"	2.12 (2.27)	2.58 (2.47)	2.68 (2.55)	2.84 (2.60)	3.03 (2.63)	3.04 (2.67)	—	—	—	—	—	—
Never (0 = never); N (%)	1,000 (30.1)	842 (29.0)	856 (29.9)	794 (29.6)	703 (28.4)	723 (30.3)						
Attempted 1–6 times (1 = 1–2 time; 2 = 3–4 times; 3 = 5–6 times) N (%)	1,458 (43.8)	1,072 (36.9)	882 (30.8)	743 (27.7)	646 (26.1)	540 (22.6)						
Attempted six times or above (4 = 7–8 times; 5 = 9–10 times; 6 = more than 10 times) N (%)[b]	802 (24.1)	979 (33.7)	1,010 (35.3)	1,038 (38.7)	1,033 (41.8)	1,021 (42.8)						
Psychosocial competences (1 = strongly disagree; 6 = strongly agree)[c]												
Emotional competence	4.26 (.95)	4.30 (.88)	4.32 (.85)	4.38 (.79)	4.36 (.80)	4.38 (.78)	.73	.74	.75	.74	.77	.78
Social competence	4.74 (.89)	4.68 (.87)	4.64 (.82)	4.65 (.78)	4.65 (.77)	4.65 (.76)	.86	.88	.88	.88	.88	.88
Moral competence	4.37 (.91)	4.41 (.85)	4.46 (.81)	4.49 (.80)	4.50 (.75)	4.55 (.74)	.72	.75	.74	.75	.70	.70

The interval between adjacent waves was 1 year except that of wave 5 and wave 6. The average interval between wave 5 and wave 6 was 10 months, since 12th graders needed to sit for the public examination.

[a] The numbers of participants who completed six, five, four, three, two, and one assessments were 2,023, 472, 242, 200, 179, and 212.

[b] The seven response levels were combined into three categories.

[c] Confirmatory factor analyses showed that these items loaded on the target constructs (emotional: λ's > .63; social: λ's > .81; moral: λ's > .61), and the measurement models of three constructs fitted the data well across the six waves, CFIs > .970, TLIs > .95, RMSEAs < .06.

Social Security Assistance [31]. Family structure was indicated by parents' marital status (1 = divorced but not remarried, 2 = separated but not remarried, 3 = married (first marriage), 4 = remarried, and 5 = others). Adolescents who indicated "first marriage" were categorized as living in intact families, whereas those who indicated other options were categorized as living in nonintact families. At wave 1, 6.8% (N = 225) of the participants were receiving Comprehensive Social Security Assistance and 15.5% (N = 515) living in nonintact families [27].

Data analysis plan

Latent growth curve (LGC) was used to address our questions because it allows researchers to capture the changes of multiple psychological attributes over time and to estimate the associations of their changes [25]. In the present study, univariate LGC was firstly used to understand individuals' developmental patterns of foul language use. Intercept, linear slope and quadratic slope were estimated to test an individual's initial level of foul language use, constant rate of change and whether the change curve or bend in the foul language use over the assessment period, respectively (see Figure 1). Multigroup analyses were conducted to see if the growth parameters vary as a function of gender [25]. Similar analyses were applied to psychosocial competences to ensure that the variances in all the growth parameters of predictors for cursing are statistically significant.

Second, multivariate LGC modeling was conducted to examine how the initial level and the growth rate of each competence predicted the growth rate of foul language use, respectively. As shown in Figure 1, we estimated the relation between the initial level (intercept) of competence and the growth rate (linear slope) of foul language use (b_1) and the relation between the growth rate (linear slope) of competence and the growth rate of foul language use (b_2). The relation between the initial level (intercept) of competence and initial level (intercept) of foul language use (b_0) was not our primary interest but was also estimated. Individuals' economic status and family structure were included as controlled variables and dummy coded (economic status: −1 = poor, 1 = nonpoor; family structure: −1 = nonintact family, 1 = intact family). Multigroup comparisons were conducted to test the gender differences in these links (b_0, b_1, b_2).

We referred to three model fit indices that have been commonly used in previous research: CFI (Comparative fit index), TLI (Tucker-Lewis index) (>.90 acceptable fit; > .95 good fit) and RMSEA (Root mean square error of approximation) (<.08 acceptable fit; < .05 good fit) [32]. We included all the participants who completed at least one wave of assessment for analyses and adopted estimation with full information maximum likelihood in AMOS 22.0 [33] to handle the incomplete data [34]. Standardized effect sizes (Cohen's d) [35] were calculated for the parameter values of interest.

Results

Univariate latent growth curve models

The first purpose of the study was to understand the developmental trajectory of use of foul language. About 70% of the students reported speaking foul language in the past year across all the 6 years. The means and frequencies shown in Table 1 indicate that use of foul language increased over time. Analyses were then conducted to determine the extent to which the changes could be represented by multigroup LGC (see Table 2). We constrained the intercept (model 1), linear slope (model 2), and quadratic slope (model 3) by fixing the parameter of the male group to be equal to that of the female group and tested chi-square difference by comparing each constrained model to the unconstrained model. The $\Delta\chi^2$ (df) of the model 1 was not significant compared with the unconstrained model, $\Delta\chi^2$ (1) = .591, $p > .05$, which indicated that the gender difference was not significant at the initial status. However, constraining the linear slope (model 2) or quadratic slope (model 3) resulted in worse model fit, $\Delta\chi^2$ (1) = 27.070, $p < .001$; $\Delta\chi^2$ (1) = 5.907, $p < .05$. Therefore, we chose model 1 for as the final model. Results showed that over the 6 years, the frequency of speaking foul language increased among adolescents while the increase rate slightly slowed down. In addition, males (vs. females) experienced a faster linear increase but also a greater quadratic change.

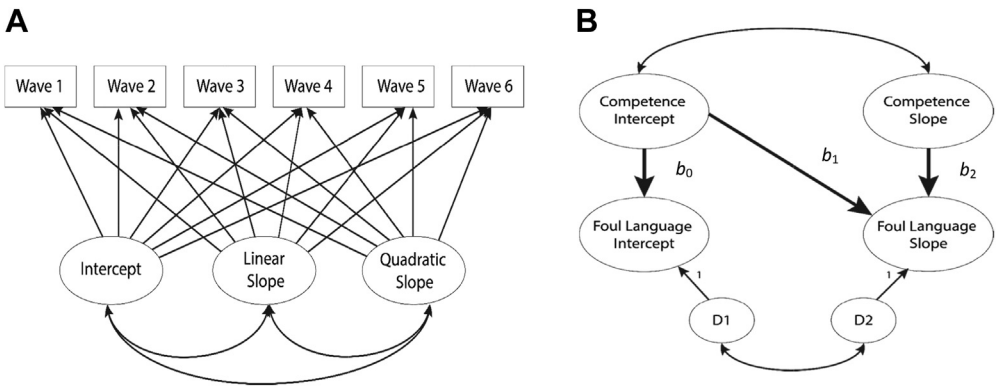

Figure 1. Conceptual diagram of growth curve models. In the univariate growth curve model (A), the latent intercept factor was modeled as a function of the observed variables of six waves with the paths from each observed variable to the latent intercept set equal to 1, the linear slope factor was estimated by setting the paths from to the latent linear slope factor equal to 0, 1, 2, 3, 4, and 4.85, and the quadratic slope was estimated by setting the paths to the latent quadratic slope factor equal to 0, 1, 4, 9, 16, and 23.52; error terms were omitted in the figure. In the multivariate growth curves model (B), D1 = disturbance of the intercept factor of foul language use; D2 = disturbance of the slope factor of foul language use. Covariates were freely correlated with intercepts and slope factors and omitted in the figure; Observed variables and their error terms were omitted in the figure.

Multigroup LGC was used to test the developmental patterns of emotional, social, and moral competences, respectively. Results demonstrated that despite the lower emotional competence among males (vs. females), males but not females showed a significant increase in emotional competence over the 6 years. No quadratic changes in emotional competence were detected in both males and females. Next, males (vs. females) showed lower levels of social competence at the initial status, but both males and females experienced a decrease in social competence with the decrease rate diminishing over time. Finally, despite lower moral competence among males (vs. females) at the initial status, both experienced a constant increase in moral competence over the 6 years. Although the growth of cursing among males was considered to be medium in effect size, other changes were small [35].

All the models showed good fits to the data (see Table 2). All the variances of the intercepts and slopes were significant, indicating individual differences existed at the initial levels as well as changes. However, as quadratic changes of emotional competence and moral competence were not significant, we did not include quadratic slopes in the multivariate LGC for parsimony.

Multivariate latent growth curve models

The second purpose was to examine how psychosocial competences predicted the change in use of foul language. As shown in Table 3, emotional and moral competences were negatively correlated with foul language use concurrently and longitudinally across all the six waves, and social competence was negatively associated with foul language use concurrently across the six waves but longitudinally in some pairs. Each pair of competence and foul language use was tested using multigroup multivariate LGC (see Table 4).

As predicted, the initial levels of emotional, social, and moral competences negatively predicted the initial level but not the change of foul language use. The effect sizes of emotional and moral competences were around large, while that of social competence was small [35]. In addition, the slopes of emotional competence, social competence, and moral competence negatively predicted the slope of foul language use. On average, emotional and moral competence increased, whereas social competence decreased over time. Therefore, the current results suggested that when adolescents' emotional competence or moral competence

Table 2
Univariate growth curve models

Variable	Intercept		Linear slope			Quadratic slope			Model fit		
	Mean	Variance	Mean	Variance	d^a	Mean	Variance	d^a	CFI	TLI	RMSEA
Foul language											
M	2.161***	3.516***	.554***	1.039***	.65	−.054***	.031***	.30	.991	.983	.022
F	2.161***	3.178***	.216***	.750***	.30	−.022***	.025***	.14			
Emotional competence											
M	4.212***	.430***	.043***	.045*	.18	−.002	.002*	.05	.992	.985	.018
F	4.310***	.453***	.022	.090***	.10	−.002	.003***	.05			
Social competence											
M	4.673***	.512***	−.067***	.136***	.30	.011***	.004***	.25	.995	.991	.015
F	4.805***	.418***	−.067***	.102***	.32	.008***	.003***	.19			
Moral competence											
M	4.290***	.447***	.031**	.076***	.14	−.001	.002***	.02	.995	.991	.015
F	4.471***	.378***	.031**	.067***	.15	−.001	.002***	.02			

Each model estimated the latent growth curve of one variable. Economic status and family structure were controlled as covariates. M = Male; F = Female; poor families (vs. nonpoor families) and nonintact families (vs. intact families) were related to higher initial levels of cursing among males.

[a] Effect size in terms of Cohen's d; $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Table 3
Zero-order correlations between use of foul language and competences

Variable	FL_W1	FL_W2	FL_W3	FL_W4	FL_W5	FL_W6
EC_W1	−.216[c]	−.159[c]	−.148[c]	−.140[c]	−.147[c]	−.130[c]
EC_W2	−.173[c]	−.219[c]	−.195c	−.136[c]	−.158[c]	−.153[c]
EC_W3	−.145[c]	−.161[c]	−.178[c]	−.140[c]	−.169[c]	−.137[c]
EC_W4	−.104[c]	−.146[c]	−.153[c]	−.162[c]	−.179[c]	−.143[c]
EC_W5	−.133[c]	−.151[c]	−.148[c]	−.149[c]	−.190[c]	−.155[c]
EC_W6	−.088[c]	−.146[c]	−.138[c]	−.134[c]	−.176[c]	−.186[c]
SC_W1	−.102[c]	−.058[c]	−.067[c]	−.049[a]	−.053[b]	−.038
SC_W2	−.067[c]	−.088[c]	−.079[c]	−.044[a]	−.046[a]	−.045[a]
SC_W3	−.057[c]	−.070[c]	−.068[c]	−.051[a]	−.095[b]	−.074[b]
SC_W4	−.043[a]	−.052[a]	−.061[b]	−.059[b]	−.077[c]	−.057[b]
SC_W5	−.043[a]	−.063[b]	−.060[b]	−.056[b]	−.081[c]	−.050[a]
SC_W6	−.003	−.026	−.036	−.029	−.056[b]	−.063[b]
MC_W1	−.265[c]	−.222[c]	−.189[c]	−.154[c]	−.178[c]	−.162[b]
MC_W2	−.198[c]	−.249[c]	−.234[c]	−.162[c]	−.201[c]	−.165[b]
MC_W3	−.148[c]	−.181[c]	−.207[c]	−.180[c]	−.204[c]	−.169[c]
MC_W4	−.129[c]	−.172[c]	−.208[c]	−.222[c]	−.220[c]	−.191[b]
MC_W5	−.158[c]	−.170[c]	−.189[c]	−.194[c]	−.219[c]	−.191[c]
MC_W6	−.114[c]	−.146[c]	−.135[c]	−.167[c]	−.176[c]	−.168[c]

FL = use of foul language, EC = emotional competence, SC = social competence, MC = moral competence.
[a]$p < .05$, [b]$p < .01$, [c]$p < .001$.

increased at a faster rate, their foul language use increased at a slower rate; when their social competence decreased at a slower rate, their foul language use increased at a slower rate. The aforementioned relations were consistent across males and females (emotional: $\Delta\chi^2(3) = 3.333$; social: $\Delta\chi^2(3) = 1.618$; moral: $\Delta\chi^2(3) = 5.317$; p's $> .05$), and the effect sizes were small [35]. All the models fitted the data well (see Table 4).

Discussion

The use of foul language has been always a controversial issue over history for its taboo nature [24]. Using curse words is acknowledged as one of the defining features of sexual harassment, blasphemy, discrimination, and verbal abuse categories [36]. The high subjectivity of judgment on its appropriateness and offensiveness makes it easy to elicit negative reactions in others [24]. Yet, together with other local reports [2], our findings demonstrated that using foul language is quite prevalent among Hong Kong high school students.

As predicted, the use of foul language increased over the adolescent years with the increase rate diminishing over time. This is similar to the developmental trajectory of general delinquent behavior [27]. The findings of the present study are particularly noteworthy, as this is the first scientific study that investigated the developmental change of adolescent cursing. A popular account for increasing cursing among teenagers is social construction of identity [13]. Seeking an independent identity is a critical developmental task during adolescence [12], whereas curse words, which are part of the language, serve a similar function of language that is to enact identity and display membership of social groups [37]. Through speaking foul language, adolescents associate themselves with their peers who share similar language usage while excluding other people like school teachers, parents, authority figures in the society that are against this linguistic practice. For some teenagers, using foul language that is disapproved by adults appears to be "cool," which creates a sense of being distinctive from established norms and values [13]. Having the similar linguistic practice also binds the adolescents together, hence creating a sense of belonging. It is thus not uncommon to find an increase of foul language use over high school years. Yet there is no evidence suggesting that such identity construction is adaptive. While seeking a sense of identity might explain the overall intraindividual change in cursing, future studies are needed to account for changes in different (early, middle, and late) stages of adolescence. In addition, this identity construction is more related to masculine identity [38], as males increased use of foul language faster than females over time. Furthermore, there are other possible factors that may explain the increasing trend of cursing, such as parents' increasingly lenient attitudes toward cursing as their children grow up, which deserves further investigation.

Factors related to foul language use

Although the developmental trajectories of using foul language and psychosocial competences vary across gender, the fundamental development processes remain similar for male and female adolescents about how psychosocial competences restrain the upward trajectory of cursing. Over the high school years, if adolescents had a faster increase in emotional competence or moral competence or a slower decrease in social competence, their foul language use increased at a slower rate. Suggested by

Table 4
Multivariate growth curve models

Model	b_0			b_1			b_2			Model fit		
	Unstd.	Std.	d^*	Unstd.	Std.	d^*	Unstd.	Std.	d^*	CFI	TLI	RMSEA
EC–FL												
M	−.994[**]	−.367	.75	−.040	−.070	.09	−1.021[**]	−.305	.34	.968	.958	.027
F	−.994[**]	−.360	.79	−.040	−.072	.10	−1.021[**]	−.342	.35			
SC–FL												
M	−.429[**]	−.152	.19	.003	−.021	.003	−.483[**]	−.144	.14	.964	.955	.028
F	−.429[**]	−.163	.20	.003	−.005	.003	−.483[**]	−.157	.14			
MC–FL												
M	−1.159[**]	−.410	.90	−.027	−.093	.06	−.981[**]	−.290	.30	.966	.957	.028
F	−1.159[**]	−.405	.95	−.027	−.047	.05	−.981[**]	−.293	.32			

EC-FL = emotional competence predicts use of foul language; SC-FL = social competence predicts use of foul language; MC-FL = moral competence predicts use of foul language; M = male; F = female. b_0 = the intercept of competence predicts the intercept of use of foul language; b_1 = the intercept of competence predicts the slope of use of foul language; b_2 = the slope of competence predicts the slope of use of foul language.
[*]Effect size in terms of Cohen's d; [**]$p < .001$.

the positive youth development perspective [15,16], for both males and females, higher psychosocial competences serve as developmental assets providing them with more mental resource and strategies to cope with life events and emotions that may elicit cursing. Cursing may be a straightforward approach to deal with strong emotions and opinions [7,24] or an approach to construct and present their identity [13]. However, with the improvement of psychosocial competences, adolescents would know alternative strategies to express intense emotions, communicate strong opinions, and construct social images. For example, if they learn other coping strategies to regulate negative emotion, they would be less likely to rely on cathartic cursing. If they can be more skillful in handling interpersonal relationships and more apt in constructing their social images, they would be less likely to use foul language, which easily elicits aversion of others. In addition, if they are more morally mature, they would be less likely to use foul language considering its obscene connotation that may offend or harm listeners. In brief, adolescents with higher competences may acquire and use better coping strategies, which further reduces the likelihood of cursing. This psychological process deserves further study.

The current findings support the positive youth development perspective that promoting youth strength reduces youth problem [15,16] and other views suggesting helping adolescents enhance their control over their foul language rather than simply disciplining them for using it [11]. However, since the increase of foul language use seems independent of the initial level of these psychosocial competences in this study, the long-term role of these competences in inhibiting the increase of cursing behavior over time still requires further inquiry.

Collectively, the current findings have significant implications for future research and practice in the field of adolescent cursing. Primarily, the current findings provide initial evidence for the growth of cursing behavior over adolescence and possible factors related to this increasing trend. These findings lend support for the NPS model of cursing which contends that psychological attributes account for the occurrence of cursing [7]. Our findings add to previous literature documenting psychosocial correlates of cursing (e.g., personality, religiosity, sexual anxiety, and gender identity) [24,36] by suggesting that psychosocial competences (i.e., emotional, social, and moral competences) may explain cursing. Practically speaking, it is a common practice for parents or school teachers to punish or blame adolescents for cursing. However, punitive responses to cursing seem unable to stop the further occurrence of cursing [39]. Our findings suggest that it may be wiser to promote adolescents' emotional, social, and moral competences.

Limitations and future directions

There are two major limitations of this study. First, it warrants caution when interpreting the longitudinal associations as causal effects. Generally, time order effect is needed for a causal interpretation. Therefore, the relations between the change of competence and the change of foul language use cannot be interpreted causally, since they were assessed within the same period of time without a time lag. In this case, we cannot exclude the possibility that cursing in return impairs psychosocial competences. Thus, future studies that explore the reciprocity between psychological competences and cursing are needed.

The second limitation regards the assessment of foul language use. The single-item assessment used in the present study may be regarded as less reliable. Given that foul language use is a concrete singular construct, it is acceptable to use single item [40]. However, for more understanding about how adolescents use foul language, it is also beneficial to examine the foul language use in different contexts (e.g., personal vs. interpersonal) by using multiple items. In addition, future studies should use a narrow span such as a week to measure the frequency of foul language, so that the variation of cursing would not be underestimated.

Despite the limitations, the present study provides initial yet important scientific evidence suggesting that emotional, social, and moral competences account for the development of use of foul language during high school years. We call for future studies with a refined measure for the use of foul language to further examine the mechanisms underlying the relationship between psychosocial competences and cursing among adolescents.

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