Risk Factors Associated with Emotional and Conduct Behavior Problems of UK Female Adolescents: Comparative Exploration between Non-Stepfamilies and Stepfamilies

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Abstract : Adolescents from stepfamilies have been considered as at-risk group of mental and behavioral problems. This study aims to determine whether there is a group difference of emotional or behavior disturbance between young people in step and non-stepfamilies and whether risk factors linked to emotional and behavior symptoms of young people in stepfamilies are different from those of girls in non-stepfamilies. The study used 'the Mental Health of Children and Young People in Great Britain, 2004 (MHCYP 2004)'. In the MHCYP 2004, the Rutter Problem Behavior Questionnaire, the Strengths and Difficulties Questionnaire (SDQ), and Child Behavior Checklist (CBCL) were administered to parents, teachers, and children drawn from young people aged 5-17 living in private households in England, Scotland (including the Highlands and Islands) and Wales. The total of 2,471samples of aged 13 through 17 from them were selected for this study. The selected data was analyzed using SPSS. The findings showed group differences in emotional and behavior symptoms between young people in step and non-stepfamilies: Young people from stepfamilies were more emotional and have behavioral disturbances than those from non-stepfamilies. The result also confirmed the different risk factors associated with emotional behavior problems. The study supports that professionals need to develop effective treatment and preventive approaches designed for young people in stepfamilies who may have different risk factors different from those in non-stepfamilies.

Key Words : adolescents in stepfamilies, adolescents in non step families, emotional and behavioral problems, risk factors, step and non-stepfamilies

I. Introduction

Young people can have emotional or behavioral problems during their transitional adolescent period and some of them may have been experiencing serious symptoms which require treatment. According to SAMHSA's National Mental Health Information Center (2007), the magnitude of young people affected by those problems is significant (13/anxiety disorder, 8/depression, 5/ADHD, and 4/conduct disorder of every 100 young people aged 9 to 17 who have a disorder). Many researches have found that several risk factors have been found to contribute to increase or to decrease emotional or conduct behaviors among adolescents: socio-demographic factors such as sex, age, numbers of household, adult educational level, and household income; family factors such as family conflicts; school factors such as levels of educational attainment and bullying; individual factors such as smoking/drinking behavior and social support network (Wilson, 1987; Voydanoff, 1990; Farrington, 1993; Ge *et al.*, 1994; Sampson & Laub, 1994; Ellenbogen & Chamberland,

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1997; Chan, 1998; Craig, 1998; Hoffmann, 1998; Stahl & Clarizio, 1999; Burke *et al.*, 2001, Moffitt & Caspi, 2001; Bradley & Corwyn, 2002; Fergusson & Woodward, 2002; Juvonen *et al.*, 2003; O'Neill *et al.*, 2003; Hillegers *et al.*, 2004; Taylor *et al.*, 2004; Young *et al.*, 2005; Arseneault *et al.*, 2006, Bukstein *et al.*, 2006; Bursik, 2006; Chen & Berdan, 2006; Dohrenwend, 2006; Storch *et al.*, 2007).

Bursik (2006) examined gender-related developmental differences in adolescents and found that girls are more internalizing behavioral patterns in expression or self-conception than boys. The different socialization patterns existing in adolescent boys and girls may foster gender differences in locus of external behavior control (Moffitt & Caspi, 2001).

Several empirical studies have reported that lower family socioeconomic status (SES) are linked to various negative child and family interactions such as harsher and inconsistent discipline practices, non-reciprocal parent-child communication resulting in the child's behavioral problems (Wilson, 1987; Voydanoff, 1990; Sampson & Laub, 1994; Bradley & Corwyn, 2002; Taylor *et al.*, 2004; Chen & Berdan, 2006). Low socio-economic status parent who experience high levels of economic stress, tend to neglect and negatively respond to their children. The possibility of increased negative parent-adolescent interaction styles in the lower SES contexts serves to understand the given magnitude of various stressors amongst lower SES adolescents.

Young *et al.* (2005) have examined if parental or peer support contributes to the depression symptoms and reported that adolescents with high parent support or high peer support was significant related to the lower levels of depressive symptoms among 11 to 16 aged adolescents. This suggests that having high supportive social network tends to further reduce levels of depressive symptoms and low perceived social support predicts depression.

Exposure to various life events may have potential important effects on later development of emotional problems among adolescents. Post-traumatic stress associated with life events have been reported in the prior studies (Ge *et al.*, 1994; Chan, 1998, Hoffmann, 1998; Hillegers *et al.*, 2004; Dohrenwend, 2006). Students reporting prior life events were more likely to show having depressive symptoms, compared with students who report no previous life events. Stressful life events experienced by parents were also linked to parents' depressed mood and disrupted parenting practice resulting in increased risk for increased risk for developing depressive symptoms among adolescents who experience parental neglect and negative parental support systems.

Research indicated that many children and adolescents are at risk of bullying and violence (Farrington, 1993; Ellenbogen & Chamberland, 1997 Craig, 1998; Juvonen *et al.*, 2003; Arseneault *et al.*, 2006; Storch *et al.*, 2007). Many bullies are generally linked to aggressive, disruptive, and hyperactive violence behaviors and they have little sympathy for their victims. Children who have been bulliedtend to be bullies later or be more likely to be dropping-out schools, whereas the short-term effects of victimization include serious distress and low levels of academic attainment.

In addition to adolescent demographic, family, and social network factors, abuse of substance also has significant impacts on mental and behavior characteristics and vice versa. Adolescent behavioral problems have been associated with the development of substance abuse such as drinking or smoking behavior in adolescence (Stahl & Clarizio, 1999; Burke *et al.*, 2001; Bukstein *et al.*, 2006). Substance abuse also increases the risk of drinking or smoking dependency among adolescents with conduct disorders (Fergusson & Woodward, 2002; O'Neill *et al.*, 2003).

1 in 5 men and women experiencing the break up of their marriage in 2005 had a previous marriage and the rate has been doubled since 1981 (National Statistics in UK, Divorces, 2006). It is reported that such family disruptions put more than 150,000 (BBC News, 2004) at risk of experiencing behavioral problems affected by parental marital disruption (Chase-Lansdale *et al.*, 1995; Cleveland *et al.*, 2000; Malone *et al.*, 2004; Loehlin *et al.*, 2005). However, it is found that little studies have

specially examined the risk factors associated with emotional and behavior disturbances of young people in stepfamilies compared to those in non-stepfamilies, whereas the prior researches have well identified major predictors of emotional or conduct symptoms amongst adolescents. Although emotional problems or conduct problems are related to different risk factors, because of its comobidity characteristics, the analysis of these risk factors provides needs to examine significant risk differences between adolescents within non-stepfamilies and those within stepfamilies. Much of the prior research on adolescent behavior have neglected to examine comparative characteristics of the different factors which foster problematic mental and behavioral problems between adolescents with non-stepfamilies and adolescents with stepfamilies. The purpose of this study is to explore if there exist different multiple variables which contribute to the emotional and conduct behavior symptoms between the two groups.

II. Literature Review

It is expected that the majority of adolescents whose parents have divorced or experienced remarriages well adapt to the family transition emotionally or behaviorally. Many of them may benefit from the parental divorce, as children with single parent or abused parent may have opportunities to experience positive feelings and parenting environments after remarriage (Butler *et al.*, 2002). However, many adolescents in divorced, separated, or remarriage families become at risk of exhibiting internalizing and/or externalizing behavioral problems, where the parent-parent relationships and/or parent-child relationships are conflicted because of various stressors. Internalizing behavior problems refer to emotional symptoms such as depression, anxiety, low self-esteem, and withdrawn behavior. Externalizing behavior problems refer to aggressive or delinquent behaviors.

A range of previous researches have attempted to explain the link between parental divorce or separation and adverse emotional outcomes on adolescent. It is reported that adolescents who have experienced parental disruptions or malfunctioning are at somewhat greater risk for poor psychological symptoms and its consequent effects (Morrison & Coiro, 1999; Sun, 2001; Sohn, 2005b). Compared to their peers who have not experienced marital transitions, adolescents who experience parental disruptions show more disruptive emotional characteristics like being depressed or have low levels of self-esteem (Berg, 2003; Ozen, 2003). Negative environments such as inactive communications or violent responses cased by parental disruptions affect negatively parental Adolescents' perceived closeness to their parents and contribute to their maladjusted emotional functioning. In particular, girls in stepfamilies are more likely to have adjustment problems than boys (Hoffman & Johnson, 1998).

With respect to externalizing behavior problems in adolescents from divorced families, the direct effects of parental disruptions on aggressive or delinquent behavior characteristics have been well established. Buchanan *et al.* (1996) report that low support from divorced parents increases likelihood for substance use and delinquent behavior which are more strongly associated with school absence, lack of positive peer relationship, and early sexual activity. 1993). Lack of parental warmth/support and adolescents' depression were found to be linked with adolescents' permissive attitudes for externalizing behavior problems (Miller *et al.*, 2001). When parents could not spend time with their children positively or could not be involved in their children's lives because of marital conflicts, the opportunity for positive parent-child interaction or social value transmission is minimized.

Moreover, children of remarriage fare worse than children living with two biological parents in terms of long-term child outcomes such as mental health problems or marriage disruptions in later adult lives including becoming single parents themselves. Sohn (2005b) found that parental divorce or separation was associated with an increased likelihood of having mental health problems in the child's adult lives. Amato and

Deboer (2001) also note that parental divorce or separation could make a negative impact on children's own marriages i.e. increasing possibilities to end in divorce or separation. Adolescents of divorced families are more likely to engage in early-onset sexual activities and to become parents at an early age without being prepared for being a parent (Little & Rankin, 2001).

With respect to these internalizing and externalizing behavioral problems existing in adolescents in divorced, separated, or remarried families, its seems that studies have largely focused on parental environments and coping strategies to help adolescents' adjustment to parental disruptions. Therefore research efforts have given to explain what kinds of parental variables reveal the effects of divorce on internalizing and externalizing behavior characteristics in adolescents. Gerard & Beuhler (1999) found that low levels of socio-economic condition, parental conflict, and parental neglect were directly associated with negative behavioral characteristics among adolescents. Economic disadvantage during marital transitions may increase a possibility of having financial distress and showing low levels of parental support or supervision on their children. Due to the stressors associated with marital transitions, lack of positive parental interactions or low levels of parental support may have a close relationship with adolescents' problematic behaviors. Children of high conflict divorces or separations become significantly more disturbed emotionally or behaviorally, resulting jeopardizing parent-child relationships as well as parental commitment to children's education and supervision (Morrison & Coiro, 1999; Sun, 2001).

Previous research established a link between familial conflicts and adverse effects on adolescents' emotional and behavior problems. While prior empirical researches offer the evidence of causal relationships between parental disruptions and its impact on adolescents' well-being, such researches are not well suited for identifying how children of divorced, separated, or remarriage families are differently affected by major risk factors from those in intact families. If one attempts to find effective intervention strategies to reduce or solve internalizing or externalizing behavioral problems existing in adolescents of stepfamilies, it may be important to identify exclusive risk factors different from those of adolescents from intact families. Raising awareness of the potential difficulties with adolescents of stepchildren may promote proactive steps to develop effective methods of intervention to reduce the emotional or behavioral problems of adolescents in disruptive families.

The literature review suggests that adolescents who have experienced a parental divorce or remarriage are more likely to be experiencing internalizing or externalizing behavior problems, even though many of adolescents in stepfamilies may have been functioning well. They tend to be more vulnerable to those internalizing or externalizing behavior symptoms, compared to adolescents in non-marital transition families, because of familial stressors or adolescents' individual risk factors. Based on previous literature reviews, it is expected that the levels of internalizing and externalizing behavior problems will be high in adolescents with stepfamilies, and will have different risk factors, compared to those in non-stepfamilies. For the current study, the following hypotheses are proposed:

- Hypothesis 1: Adolescents with stepfamilies will show high levels of internalizing and externalizing behavior problems, compared to those in non-stepfamilies.
- Hypothesis 2: Risk factors associated with internalizing or externalizing behavior problems will have different effects on between adolescents in step-families compared and those in non-stepfamilies.

III. Methods

1. Research participants

This research used 'the Mental Health of Children and Young People in Great Britain, 2004' (Green *et al.*, 2005; Office for National Statistics, 2005) which comprised

<Table1> Characteristics of adolescents from Non-Stepfamilies (1,645) and Stepfamilies (826)

Variables	Non-stepfamilies	Stepfamilies
Age (Mean)	14.40	14.30
Household gross weekly income (over £ 700)	533(32.4%)	56(6.7%)
Parents' educational level		
College qualifications	236(14.3%)	78(9.4%)
No qualification	253(15.3%)	233(28.0%)
Smoking behavior (Regular smoker ~ tried smoking once)	630(38.9%)	380(46.0%)
Drinking behavior (Almost everyday ~ a few times a year)	974(59.2%)	486(58.0%)
Number of Life Events (4 or more)	40(2.4%)	84(10.1%)
School Absence	79(4.8%)	86(10.4%)
Social Support Score (mean)	18.30	17.63
Strength & difficulty score (mean)	27.09	26.31
Friends Score (mean)	5.65	5.58
Emotional diagnosis	147(8.9%)	155(18.7%)
Conduct diagnosis	71(8.9%)	91(11.0%)

(%) indicates percentage of the case out of total research participants

young people living in private households in England, Scotland (including the Highlands and Islands) and Wales. Respondents were children aged 5 to 17 participating in the Cycle 2 of 'the Mental Health of Children and Young People in Great Britain'. The current study studied samples of aged 13 through 17 from MHCYP 2004.

There were only 7.1 percent of boy participants when the whole data was sorted out for the purpose of this study (aged 13 to 19 boys and girls). Therefore this study only included aged 13 through 17 girls for the study analysis. The characteristics of research participants were found as shown in the below <Table 1>. The age of survey respondents was ranged in age 13 through 17. Mean age was 14.40 for girls in non-stepfamilies and 14.30 for adolescents in step-families. Non-stepfamilies' adult education levels were more likely to be higher than those of step-families (college qualifications: 14.3% for non-step parents, 9.4% for step parents), whereas the smoking and drinking levels of girls in non-stepfamilies were less likely to be than those in step-families (38.9% and 59.2% each for girls in non-stepfamilies 46.0% and 58.0% each for girls in stepfamilies, see Table 1). Girls in step-families experienced higher numbers of life event and school absence than those in non-stepfamilies. Social support, strength, and friends scores of girls in non-stepfamilies were more likely to be higher than those in stepfamilies <Table 1>.

2. Instruments

1) Instruments for measuring Independent Variables

Stressful life events (SSLE): Adolescents were asked if they have experienced any of ten stressful life events with response categories (1) 'yes' and (2) 'no' (Goodyer *et al.*, 1990; Zheng *et al.*, 1994). Holmes and Rahe's Scale of Stressful Life Events (SSLE) consists of 57 items that correspond to supposedly stressful life events such as the loss or death of a family member, parental marital conflict, and family disruption involving self or significant other (parent, sibling, other relative, close friend) during the past 2 years. SSLE rate it on a Likert scale from 0 (it was not important to him or her) to 4 (it was very important to him or her). The Cronbach á of SSLE was .86 (Zheng *et al.*, 1994).

Social support: Two sets of questions were asked to

establish (a) the extent of the child's social networks, and (b) the child's support network. The questions were taken from the Health and Lifestyle Survey 1987 and the Health Survey for England, 1992.

Strength Score: The Strengths and Difficulties Questionnaire (SDQ) used to test the child's mental strength (Goodman, 1997). It covers 25 items (each question uses 5 Likert scales on psychological attributes of emotional and behavioral difficulties such as emotional symptoms (5 items), conduct problems (5 items), hyperactivity-inattention (5 items), peer problems (5 items), and pro-social behavior (5 items), inquiring how the child has a problem which is related to distress and social impairment in these areas (Glazebrook *et al.*, 2003). SDQ' Cronbach's alpha was .76 for total score (Goodman & Scott, 1999).

Friends score: The children were asked how many friends would describe as close or good friends.

2) Instruments for measuring dependent variables

Conduct problem and emotional problem diagnosis: These three diagnoses were assessed by using the Rutter Problem Behavior Questionnaire (Rutter *et al.*, 1970) and Child Behavior Checklist (Achenbach, 1991).

First, the study used Rutter Problem Behavior Questionnaire for 'Conduct Symptom'. The Rutter Problem Behavior Questionnaire encompassing 36 items, measures emotional. and behavior problems such as fears and worries, fighting, impulsivity, attention problems, sadness, relations with peers, and the like. data. Each item scores ranged from 0 (problems never seen) to 3 (very often seen) and The alpha value for the assessment was .84 (Laukkanen *et al.*, 2002).

Second, for 'emotional symptoms measurement', the study used Anxiety/Depression items of The Child Behavior Checklist(CBCL). CBCL using 89 items was originally designed to address the internalizing or externalizing behavior problems. CBCL includes measurement of Social Withdrawal, Somatic Complaints, Anxiety/Depression, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior and items are coded from 0 to 2, interpreting that above 70 total scores are in the clinical range. Cronbach's alpha values ranged from .62 to .92 for girls age 4-11 (Achenbach, 1991).

3) Data analysis

To examine the differences in the emotional and conduct symptoms of adolescents in non-stepfamilies and those in stepfamilies, t test was first used. Then, as preliminary examinations, bivariate correlations analyses involving sex, age, numbers in household, income level, adult education level, adolescent smoking & drinking levels, school absence, number of life events, social support score, strength score, and friends score were computed to find variables for logistic regressions. Because the correlations analyses showed that all selected variables were correlated positively or negatively, the study only presented the findings of logistic regression analyses.

All statistically significant explanatory variables from the univariate analysis were entered in the final multivariate logistic regression analysis. Finally, logistic regression was computed, as emotional diagnosis and conduct diagnosis have two variables, being diagnosed or not being diagnosed. In the logistic regression, the strength of the associations is illustrated by the odds ratio with 95% confidence interval (CI).

IV. Findings

1. Differences between adolescents in non-stepfamilies and stepfamilies

The significant difference among emotional and behavior characteristics experienced by young people was found in marital status. T tests showed that young people in stepfamilies experienced significantly more emotional symptoms than those in non-stepfamilies. Also, girls in stepfamilies were significantly higher in conduct symptoms than those in non-stepfamilies <Table 2>.

<Table 2> Comparison of Emotional and Behavior Symptoms Among Girls in non-stepfamilies (n = 1,645) and stepfamilies (n = 826)

Variable		Mean	S.D.	t
Emotional Symptoms	Non stepfamilies	.09	.285	–7.106***
	Stepfamilies	.19	.391	–6.422***
Behavioral Symptoms	Non-stepfamilies	.04	.203	–6.398***
	Stepfamilies	.11	.313	–5.585***

***p < .001

2. What are associated with emotional and behavioral symptoms in non-stepfamilies?

When the relationship of selected variables to emotional and conduct behavior diagnoses was examined, the coefficient (B) indicates that girls showing school absence were 1.6 times more likely to experience emotional problems (OR = 1.586, 95% CI: 1.170, 2.150, p < .01). Girls with smoking behavior in non-stepfamilies, similar with those in stepfamilies, were more likely to be experiencing emotional (OR = 5.748, 95% CI: 2.012, 16.415, p < .01) and behavior problems (OR = 5.689, 95% CI: 1.937, 16.709, p < .01) than adolescents with no smoking behavior <Table 3>.

Furthermore, students who had high strength (OR = .927, 95% CI : .861, .972, p < .05 for emotional diagnosis) and friends scores (OR = .454, 95% CI: .312, .660, p < .001 for emotional diagnosis; OR = .449, 95% CI: .305, .661, p < .001 for conduct diagnosis) in contrast to those who did not, were less likely to experience emotional or behavior problems <Table 3>.

<Table 3> Factors associated with emotional and/or behavioral symptoms for adolescents with non-stepfamilies (n = 1,645)

	Emotional Diagnosis				Conduct Diagnosis			
Variables	B	Exp (B)	Lower	Upper	B	Exp (B)	Lower	Upper
Age		NS				NS		
Adult-Education Level		NS				NS		
Household gross weekly income (£)		NS				NS		
Parents' Work status (Both parents working)		NS				NS		
One parent working								
Neither parents working								
Number of Life Events		NS				NS		
School Absence	.461	1.586**	1.170	2.150		NS		
Smoking behavior (never smoked)								
Tried smoking once	1.749	5.748	2.012	16.415	1.739	5.689**	1.937	16.709
Used to smoke	.983	2.672	.553	12.903	1.161	3.193	.674	15.143
Occasional smoker	.290	1.336	.334	5.351	.179	1.196	.262	5.469
Regular smoker	–.175	.840	.305	2.311	–.196	.822	.283	2.388
Drinking behavior (never had a drink)		NS				NS		
Social support score	–.158	.854*	.732	.996		NS		
Strength & difficulty score	–.076	.927*	.861	.997		NS		
Friends score	–.790	.454***	.312	.660	–.801	.449***	.305	.661
Constant	7.549	.000			15.403	.00		
	Chi-square = 92.149 for 14*df*				Chi-square = 83.822for 14*df*			

*p < .05, **p < .01, ***p < .001
Variables which were not significant predictors of the disorders are denoted as 'NS'.

3. What are associated with emotional and behavioral symptoms in stepfamilies?

Because the previous empirical evidences provide that various risk factors influence the emotional and behavior conditions of adolescents, those variables based on the prior studies were entered in the logistic regression analyses to identify the factors most strongly linked with the different emotional and conduct conditions between girls in stepfamilies and non-stepfamilies.

First, in the logistic regression analysis for adolescents' emotional characteristics in stepfamilies, it was found that living in a family with high education levels (OR = 21.284, 95% CI : 2.114, 214.262, p < .01 OR = 33.960, 95% CI : 3.146, 366.604, p < .01 OR = 9.763, 95% CI : 1.268, 75.164, p < .01 for emotional symptoms) and smoking (OR = 18.079, 95% CI : 4.359, 74.994, p < .001 for emotional diagnosis/ OR=12.164, 95% CI : 2.384, 62.052, p < .001 for conduct diagnosis, See Table 4).

The coefficient for social support and friends score was small and the odds ratios of .842101(95% CI : .719, .986, p < .01) and .346 (95% CI : .210, .570, p < .001) indicate that girls with higher levels of social support or

<Table 4> Factors associated with emotional and/or behavioral symptoms for adolescents with stepfamilies

(n = 826)

	Emotional Diagnosis				Conduct Diagnosis			
Variables	B	Exp (B)	Lower	Upper	B	Exp (B)	Lower	Upper
Age		NS				NS		
Adult-Education Level (College education)						NS		
Nursing	−1.166	.311	.034	2.848				
A-Level	3.058	21.284**	2.114	214.262				
GCSE A-C	3.525	33.960**	3.146	366.604				
GCSE D-F	2.279	9.763**	1.268	75.164				
Other qualifications	1.009	2.744	.246	30.636				
No qualifications	2.380	10.805	.756	154.376				
Household gross weekly income (£)		NS						
Parents' work status (Both parents working)		NS						
One parent working					1.917	6.800*	1.163	39.760
Neither parents working					.365	1.440	.456	4.550
Number of Life Events		NS				NS		
School Absence		NS				NS		
Smoking behavior (never smoked)								
Tried smoking once	2.895	18.079***	4.359	74.994	2.498	12.164**	2.384	62.052
Used to smoke	1.561	4.762	.543	41.781	−18.024	.000	.000	
Occasional smoker	.258	1.294	.365	4.594	.047	1.048	.212	5.179
Regular smoker	−.395	.674	.220	2.66	−1.147	.318	.068	1.480
Drinking behavior (never had a drink)		NS				NS		
Social support score	−.172	.842**	.719	.946	−.157	.855	.713	1.026
Strength & difficulty score	−.021	.979	.900	1.065	−.100	.905*	.815	1.005
Friends score	−1.061	.346***	.210	.570	−.911	.402***	.233	.695
Constant	6.143	463.370			6.970	1063.830		
	Chi-square = 89.953 for 25 *df*				Chi-square = 66.946 for 25 *df*			

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

Variables which were not significant predictors of the disorders are denoted as 'NS'.

friends score in stepfamilies were less likely to experience emotional symptoms, compared with those with lower levels of social support or friends scores. Strength & difficulty score (OR = .905, 95% CI : .815, 1.005, $p < .05$) and friends score (OR = .402, 95% CI : .233, .695, $p < .001$) also differed the likelihood of showing conduct problems among adolescents with stepfamilies <Table 4>.

Step family adolescents under both parent working condition were nine times more likely to show conduct behavior problems than those under one parent working condition (OR = 6.800, 95% CI : 1.163, 39.760, $p < .05$, See Table 4).

V. Discussion

The main goal of this study was to attempt explore how risk factors of emotional and behavior problems of young people are differently associated with non-stepfamilies and stepfamilies. As expected, findings revealed different risk factors in emotional and conduct behavior problems between young people in stepfamilies and non-stepfamilies. The findings of this study may contribute to the existing literature to find treatment and protective factors for at-risk young people in stepfamilies, compared to those in non-stepfamilies.

First, according to differences of mean level between adolescents in stepfamily and adolescents in non-stepfamily, it was found that there are significant group differences between these groups: adolescents who have experienced familial transition to divorce, separation, or remarriage have higher mean levels of internalizing and externalizing behavior problems than adolescents from intact families. This finding again posits that family transition characterized by marital conflicts, financial hardships, and parenting problems really matters for children's emotional or external behavior outcomes (Hoffman & Johnson, 1998; Sun, 2001; Berg, 2003; Malone *et al.*, 2004). Adolescents who experience a family structure transition, compared to those in intact families, in addition to the preexisting stresses and risk factors of being a teen like other young people, are likely to be at risk of having emotional and external behavior problems. Therefore, it is important for professionals to note that adolescents who experience a family structure transition require a special attention to take advantage of the opportunity for personal healthy growth, although general attention should be given to young people of intact families who are showing emotional or behavior problems. The consequences of family structure transitions on adolescent well-being depend upon how to adjust to the new family structure and to have healthy means of dealing with the challenges associated with familial transitions. Professionals are advised to identify the adverse outcomes of family structure transition and develop effective ways of dealing with those negative outcomes for young people in stepfamilies.

Second, for young people in stepfamilies, young people with parent of high educational qualifications were less likely to show emotional and behavior problems than those with parent of low education qualifications, whereas parental education did not make any statistical significance in adolescents of non-stepfamilies. It is notable to indicate that financial hardship and low levels of parental education qualification are found to be variables of the biggest problems resulting from divorce (Stephens *et al.*, 2005) and they are associated with everyday strains such as difficulties of having good paid jobs, living in well established communities, and be well equipped with qualified parenting skills. Besides, an advantage of living with parent of high education qualifications may help stepfamilies to have better access to information about having positive relationships with their children leading to increasing emotional and behavior well-being (Robertson *et al.*, 2006). One implication of this finding is that step families need greater assistance to have effective methods of facilitating parent-adolescent relationships and raising adolescents under step family condition.

School absence is highlighted in the findings as being especially important to increase the risk of internalizing

behavior problems among young people in non-stepfamilies, whereas school absence as reflected by associations with academic pressure or bullying have not been related to any kinds of problematic adolescent outcomes in stepfamilies. For example, poor success, academic pressure, being bullied at school could be especially risky factors in increasing the likelihood of having depression and anxiety in school patterns characterized by low community cohesion (Ellenbogen & Chamberland, 1993; Laukkanen *et al*., 2002 Juvonen *et al*., 2003; Arseneault *et al*., 2006 Bursik, 2006). For young people in stepfamilies, during the process of separation, divorce, or remarriage, parents are commonly stated to show reduced affection, inconsistent, discipline and decreased communication, control and monitoring (Kalil, 2003). Under those conditions, child outcomes of stepfamilies are more likely to be sensitive to not schools but familial transitions and parental indifferences.

Third, in the multivariate analysis, emotional and conduct behavior problems were significantly linked to smoking experiences for young people in both non-step and stepfamilies. This finding is consistent with the previous research (Duncan & Rees, 2005; Swahn and Donovan, 2004). Adolescents who smoke or drink are at higher risk of subsequently developing the symptoms of depressive or compulsive behaviors. Boys and girls in stepfamilies reporting smoking had significantly more psychopathological characteristics, both internalizing and externalizing syndromes, even though those smoking behaviors were less common. Therefore, if smoking and drinking behaviors among adolescents with stepfamilies are actively screened, there may be promising results on the effectiveness of primary prevention interventions concerning internalizing or externalizing behavior problems among young people in stepfamilies.

Fourth, the current research finding indicates that "social support networks" and "having close or good friendship" tend to buffer the existing emotional and behavior problems among young people both in stepfamilies and non-stepfamilies, whereas delinquent students have a greater at-risk behavior vulnerability to close friends (Carrol *et al*., 1999 Currie *et al*., 2000). It is possible that having social support networks and positive friendships with pro-social figures may be contributing to motivate a withdrawal from the possible stressful family environment which stemmed from familial conflicts, depending on the degree of behavior problems. For young people in stepfamilies or non-stepfamilies, who may be feeling of accumulated isolation or lack of social resources predicts mal-adaptation misleading into behavior problems. Therefore positive relationship with pro-social peer networks and other activities with good friends which enable positive peer networks are one of key components for the treatment and prevention of emotional and behavior problems among young people in stepfamilies (Bender & Losel, 1997 Armsden & Greenberg, 1987) or in non-stepfamilies. In many home and school practice, however, peer relationships and other social activities are given lower priority than educational attainment. This suggests that additional encouragement to facilitate positive social relationships must be delivered by parents, school or health professionals who work for young people in local societies (Kalil, 2003). Positive peer relationship and other social support need to be encouraged to help victimized young people, as one of the best protective approaches.

Finally, in the current study, one parent working (opportunities to spend more times with parents) appears to be significantly related to the likelihood of less engaging in conduct behavior problems, compared to both parents working. It is generally well established that positive warmth in families, parent-adolescent relation-ships, and parental supervision has significant associations with adolescent problematic behaviors (Paulson *et al*., 1990). Young people who spend more times and positive interactions with their parents are less likely to show behavior problems. The most likely explanation of this result is that spending more times with parent leads to a decrease in engaging in conduct behavior problems of young people even in step families where less active parent-adolescent interaction is assumed because of

newly established relationship. This finding asks step parent to try to offer their roles in active alliances with their children.

However, attention should be paid to ensure the accuracy of current study information. A primary limitation of this study is sample selection. Although the original survey matched numbers of male and female participants, the gender did not match when samples of aged 13 through 17 samples were selected for the purpose of this research. The current study only used data for girls. Due to the fact that the current study used UK data and included only girls for the analysis, the study findings may not be generalized to adolescents living in outside UK or boys. Despite of the study limitations, the findings provide important information for professionals who work for adolescents at risk: the importance of giving special attentions for adolescents in stepfamilies and finding coping strategies different from those in non-stepfamilies. Helping parents to lessen financial stressors, assisting parents to find better parenting methods, providing increased opportunities for adolescents in stepfamilies to build positive social network, strengthen self-coping capabilities, and manage substance abuse may be effective ways to reduce with internalizing or externalizing behavior problems.

Factors that play important roles in increasing possibilities of internalizing or externalizing behavior problems among adolescents in stepfamilies should be identified for finding effective intervention strategies to reduce those problematic outcomes which put adolescents jeopardize the successful adjustment during the family transition period.

In summary, this study demonstrated that different risk factors exist in young people within stepfamilies. The findings of this study will lead to an ongoing need for researches to solve the risk factors linked to various emotional and behavior problems and to develop services that will improve those problems areas differently existing among young people in stepfamilies, compared to those in non-stepfamilies. Future empirical research need to more fully examine the causal mechanisms how those risk factors which have been identified by this current study, increase the possibility of emotional and behavior characteristics among young people in stepfamilies: influences of parental economic status, substance abuse levels, and peer relationships. Future research may help to develop treatment and preventive programs which sustain positive parent-adolescent attachments, especially in stepfamilies.

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