Psychosocial Correlates of Violence over 8 Years

M. G. Matos[1,2], M. Carvalho[1,3,4] & Social Adventure Project Team[1,2]

[1] Centre of Malaria and Tropical Diseases – Associate Laboratory
&
[2] University of Lisbon, Portugal
[3] ISMAT Department of Psychology, Portugal
[4] Mental Health Department of CHBA, Portugal

ABSTRACT--- *This study aimed at identifying the prevalence of emotional problems and bullying behavior among children and adolescents in Portugal. Gender, developmental aspects, their psychosocial determinants, and the time trends over 8 years were also explored. The three waves of a cross-sectional survey obtained from the HBSC nationally representative samples of 10-17 year old children and adolescents in 1998, 2002, and 2006, were used. Specific composite indexes included emotional and somatic symptoms, involvement in violence, either as a perpetrator and/or a victim,, demographic and psychosocial factors and neighborhood. Girls reported more emotional symptoms, and boys reported more bullying behavior. Emotional symptoms increased with age, in contrast bullying behavior, school commitment and perception of safe neighborhood decreased with age. With age, the communication with the family tends to become more difficult, while communication with the friends tends to become easier. Along the three waves, bullying behavior has shown a decrease (from 2002 to 2006) and emotional symptoms have shown a general pattern of decrease. Results were discussed according to literature and their consequences for the understanding of emotional problems and bullying behavior in childhood and adolescence. Mental health and wellbeing promotion include both the prevention of emotional problems and bullying behavior; determinants include individual factors and a range of psychosocial factors. Mental health problems have a huge impact on adolescents' well-being; however it is often a poorer area of intervention in school based interventions. Gender differences are highlighted.*

Keywords--- Violence, Adolescents, Psychosocial Factors, Emotional Problems, Trends

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1. INTRODUCTION

Bullying is a widespread phenomenon, with consequences in different domains for all the involved, offenders and victims, families and school. Specifically, several studies have reported its impact on the psychosocial functioning of bullies and victims, although the number of studies dedicated to the analysis of the independent contributions of these main factors involved in bullying is scarce. Also, the study of the inter-relationships between the factors that contribute to its onset and development is of most importance for bullying prevention. Bullying refers to several negative acts (including physical assault, verbal harassment, and psychological coercion or exclusion) that are carried out intentionally and repeatedly over time and involving a real or perceived imbalance of power. A double standard is usually evidenced, with males tending to bully and being bullied more often than females. For males, the physical forms of bullying (hitting, kicking, spitting, pushing, and taking personal belongings) are more frequent; for females, verbal and psychological bullying (taunting, malicious teasing, name calling, making threats, spreading rumours, manipulating social relationships, or engaging in social exclusion, extortion, or intimidation) are the most common. Although is not a new problem, and is widespread among school-aged children, generally beginning in the elementary grades, peaks in the sixth through eighth grades, and may persist into high school, bullying behaviours demonstrated being associated to other behavioral problems and, specifically, to other forms of antisocial behaviour as vandalism, fighting, using drugs and alcohol, and dropping out of school. Also, the children and adolescents that bully and are bullied present greater risk of a broad spectrum of emotional problems, namely, loneliness and depression, relationship problems with peers, lack of success in school, and involvement in other risk behaviours such as smoking, drinking, and drugs consumption (see for a review Matos, Negreiros, Simões & Gaspar, 2009). However, not all children who are violent or are victims of violence go on to develop such problems. Researches on the psychological effects of violence demonstrate a wide range of reactions observed among victims and also a wide range of factors involved in offender behaviours, raising the question of what accounts for response variability. Although diathesis-stress models of psychopathology suggest the possibility that genetic differences may render some children more vulnerable than other children to the effects of bullying and victimization, in an ecological perspective, familial, and contextual (school, community, and peers) factors, may also contribute to explain these individual differences. Several empirical studies were carried out with the main purpose of

analysing the specific contributions of individual, familial, and social factors related to the development and maintenance of bullying behaviours (e.g., Idsoe, et al., 2008). According to this point of view, risk includes not only individual factors as impulsivity and non-inhibition, but also familial, peers, social, and school related factors (e.g., Spriggs et al., 2007). These factors have shown a differential pattern, according to age of onset: individual and familial factors seem to play a more relevant role in childhood, and peers and school factors appear to have more relevance in adolescence. On the other hand, many children are exposed to one or more of these risk factors although only a small number become a bullies. Again, protective factors, as school compromise and a positive relationship with, at least, one adult, may contribute to maintain these children away from a non-adaptive developmental trajectory (e.g., Coie, & Dodge, 1997). In one longitudinal study, along eight assessment moments, on the developmental trajectories of bullying and its individual, familial, and peer correlates in children aged 10 to 14 years old, Pepler and colleagues (2008) demonstrated the existence of four distinct paths, presenting differential associations with parental and peers relationships. One of the population-based studies on the time trends of bullying was conducted in Finland by Santalahti and colleagues (2008), with the main purpose of analysing the modifications on bullying prevalence in the period between 1989 and 1999, in eight years old children. The authors have compared two representative independent samples, composed of children born in 1981 and 1991. Results of parental reports have shown that, in 1999, there was a lower number of bullying victims, when compared to the same index, but ten years before. Using the HBSC study dataset (the collaborative cross-national study of the World Health Organization, carried out every four years, including, at the moment, 44 countries, with the main purpose of analysing the knowledge of behaviours and life style in school-aged adolescents, in different contexts – school, family, and neighborhood), Molcho and colleagues analysed the time trends in bullying behaviours between 1994 and 2006, comparing Europe with North America. Results demonstrated a significant decrease in most of the countries (Molcho, et al., 2009). In Portugal, according to the data obtained from HBSC cohorts (Matos et al., 2000; 2003; 2006), results have shown that the most frequent behaviours related to violence include bullying, provocation, intimidation, humiliation, aggression, insults, harassment and maltreatment, abuse, indiscipline and vandalism. In the same study, bullying was directly related to provocation, victimization, double involvement, observers, relievers, and supporters, and thus, to two main components: provocation and victimization. More recently new patterns of personal and interpersonal violence were highlighted, bringing new concerns for health promotion, such as self-harm, Cyberbullying and witnesses of interpersonal violence (Matos et al, 2010; Reis, Matos, Figueira, 2012). According to the more recent HBSC national published report (Matos et al, 2010), 36,7% of the pupils were ever involved in bullying as victims in the last 2 months, and 31,8 % as bullies; 15,6% ever self-harm, (no gender differences) decreasing with age 17,3% at 8th grade and 14,2% at 10th grade. Concerning bullying, 54, 8% declared to stay around watching peer interpersonal violence without interfering (bystanders). Furthermore 15, 9% have been involved in cyberbullying, although 48, 3% reported no consequences. More frequently bullying occurred in the school yards (56%) or around the school (30.8%). Regarding fights in the last year 28, 4% were involved in fights. Bullying behaviour (as a bully and as a victim) as well as fighting behaviour is more frequent in boys and tends to decrease with age during adolescence. On the opposite cyberbullying, being also more frequent in boys tends to increase with age.

Based on this, the goals of the present study were twofold: a) to analyse the time trends of bullying related behaviours in the nationally representative sample of the HBSC between 1998 and 2006, and b) to understand the individual, familial, and school factors associated with interpersonal peer to peer violence.

2. METHOD

2.1. Participants

The three waves of the Portuguese sample of the HBSC include 17911 adolescents, 47% male and 53% female, aged between 10 and 17 years old (mean age of 14 years old), in the 6th (35.3%), 8th (36.3%), and in the 10th school year (28.3%), randomly assigned from national schools and stratified, representing all the country. In 1998, the first Portuguese sample was composed of 6903 children and adolescents, 47% males (Matos and colleagues, 2000). In 2002, the second sample was composed of 6131 children and adolescents, 49% males (Matos, & Aventura Social, 2003). Finally in 2006, 4877 children and adolescents composed the third sample, 49.6% males (Matos et al., 2006), in the three samples the mean age is 14 years old. Table 1 shows the demographic characteristics of the three samples, according to the database year. Details on the other demographic characteristics of the three samples can be found Matos et al. (2000, 2003, 2006), and regarding international guidelines in Currie et al. (2000).

2.2. Measures

The HBSC questionnaire (Currie, et al., 2000) is composed of two parts. The main part includes a demographic data section and the assessment of school environment, alcohol and tobacco consumption, violence, physical activity and hobbies, nutrition, security, psychosocial health, general symptoms, social relationships and social support. In the second part, questions about drugs consumption and HIV information, attitudes and behaviours were included. Each questionnaire requires about 55 minutes to be administered.

Table 1 Demographic characteristics of the sample according to the database year

	1998		2002		2006	
	N	%	N	%	N	%
Gender						
Male	3241	47	2417	49.6	3006	49
Female	3662	53	2460	50.5	3125	50
School Grade						
6th grade	2409	31.7	1546	31.7	2369	38.6
8th grade	2589	37.5	1740	35.7	2181	35.6
10th grade	1905	27.6	1591	32.6	1581	25.8
	1998		2002		2006	
	M	*SD*	*M*	*SD*	*M*	*SD*
Age	14.12	1.71	14	1.85	14.05	1.89

The HBSC questionnaire is a broad and well known international instrument, cross validated and, using well established and well validated questions. The HBSC study currently includes 44 countries and it is a WHO collaborative study. Portugal was involved as full partner since 1998. For the purpose of the present work a set of questions were derived from the main questionnaire: all the questions concerning demographics, interpersonal violence, communication with relevant others., neighborhood characteristics, somatic and psychological symptoms and school commitment (Table 2). Three waves of the national survey were used in the present study: 1998; 2002 and 2006 corresponding to the national reports already published (Matos et colleagues 2000; 2003 and 2006)

Table 2. Items used and range

Items	Range
School commitment	
School performance	1 – 4 (very good/below average)*
Liking school	1 -4 (a lot/not at all)*
School mates like being together	1 – 5 (always true/always false)*
School mates acceptance	1 – 5 (always true/always false)*
Homework pressure	1 – 4 (none/a lot)*
Emotional symptoms	
Somatic symptoms	
Headaches	1 -5 (almost every day/almost never or never)*
Stomac aches	1 -5 (almost every day/almost never or never)*
Psychological symptoms	
Sad/depressed	1 -5 (almost every day/almost never or never)*
Angry/bad mood	1 -5 (almost every day/almost never or never)*
Nervous	1 -5 (almost every day/almost never or never)*
Violence	
As a victim	Recoded 1- ever and 2 – no
As a bully	Recoded 1- ever and 2 – no
Provocative victim	Recoded 1 – ever to 2 no combining simultaneous victim and bully status
Communication with family	
At ease speaking with father	1 – 4 (very easy/very difficult)*
At ease speaking with mother	1 – 4 (very easy/very difficult)*
At ease speaking with older brother	1 – 4 (very easy/very difficult)*
At ease speaking with older sister	1 – 4 (very easy/very difficult)*
Communication with friends	

At ease speaking with best friend	1 – 4 (very easy/very difficult)*
At ease speaking with same sex friend	1 – 4 (very easy/very difficult)*
At ease speaking with other sex friend	1 – 4 (very easy/very difficult)*
Safe neighborhood	
Get along weel	0 – 1 (no/yes)
Safe place	0 – 1 (no/yes)
Trust persons	0 – 1 (no/yes)
Hobbies	0 – 1 (no/yes)
Night fun	0 – 1 (no/yes)*
Violence/robery	0 – 1 (no/yes)*
Nice	0 – 1 (no/yes)
Too withdrawn	0 – 1 (no/yes)*
Good public services	0 – 1 (no/yes)

* reverted items.

2.3. Procedure

The schools that took part on the sampling process were randomly selected from the national schools list, and stratified by educational regions. In each school, a random selection of classes was carried out and the questionnaire was administered by the teachers in the classroom, in group, after the students' informed consent to their volunteer and anonymous participation in the study. Details on the procedures for data collection in the HBSC Study can be consulted in Matos et al. (2000, 2003, 2006).

2.4. Data analysis

Indexes were composed and descriptive analyses presented. Student t and ANOVAS were carried on, comparing the different groups.

3.   RESULTS

3.1. Descriptive data for individual, family, and school composite indexes

Table 3 shows the descriptive data obtained for all the indexes composed to assess emotional problems, communication, and safe neighborhood. Except for somatic symptoms, all skewness values were similar to the normal curve; kurtosis values on those variables, as for communication with significant others, also did not assume normality. However, due to the sample size, parametric statistics were used in further analyses.

Table 3. Descriptive data for individual, family, and school composite indexes

	Number of items	*M*	*SD*	Range	Skewness	Kurtosis
School commitment	5	16.72	2.35	5-22	-.51	.62
Emotional Symptoms	5	9.34	.408	5-25	1.05	.60
Somatic symptoms	2	3.24	1.74	2-10	1.51	1.82
Psychological symptoms	3	6.11	3.05	3-15	.96	.11
Communication significant others	7	24.06	3.91	7-35	-.66	1.21
Family	4	14.33	2.82	4-20	-.93	1.07
Friends	3	9.69	2.08	3-15	-.56	.69
Safe neighborhood	9	12.21	1.87	7-18	-.33	1.03

3.2. Time trends of bullying behaviour

The evolution of bullying behaviour was analysed along the three waves (see Table 4). Significant associations between the database year and the bullying behaviour were found. Most of the participants did not report being involved in bullying, and a decrease of have being a victim and have being a provocative victim was found from 2002 to 2006. In all waves boys were always significantly involved in bullying either as bullies, victims or provocative victims.

Table 4- Demographic characteristics of the sample according to the bullying status

	Only Victims (ever)		Only Bullies (ever)		Provocative Victims (ever)		χ^2
	N	%	N	%	N	%	
Database year							59.663***
1998	1467	40.5	690	37.4	1766	39	
2002	1333	37.1	598	30.9	1638	36.2	
2006	807	22.4	595	31.7	1122	24.8	
Gender							45.458***
Male	1849	51.4	985	53.4	2656	58.7	
Female	1748	48.6	859	46.6	1870	41.3	

Note: *** p $\leq$ .001.

3.3. Gender comparisons for individual, family, peers and contextual factors

Gender comparisons have shown significant differences for the total score of emotional symptoms, t (17103) = -28.95, p = .0001, somatic symptoms, t (17448) = -30.26, p = .0001, nervousness and sadness, t (17203) = -21.54, p = .0001, girls reported more emotional symptoms and boys reported more substances' use. Significant gender differences were also found for the total score of communication with significant others, t (7357) = 6.03, p = .0001, and specifically for communication with family, t (13095) = 7.90, p = .0001, and friends, t (9773) = 2.98, p = .003, with boys reporting being more at ease when communication with significant others. Finally, a gender difference was also found for safe neighborhood, t (4354) = -9.02, p = .0001, with girls reporting perceptions of a more safe neighborhood than boys. No gender differences were found for school commitment, p > .05 (see Table 5).

Table 5. Gender comparisons for individual, family, peers and contextual factors

	Males (N = 8265)		Females (N = 8930)		t	η^2
	M	SD	M	SD		
Emotional symptoms	8.42	3.61	10.18	4.30	-28.95***	.082
Somatic symptoms	2.84	1.47	3.61	1.88	-30.26***	.083
Psychological symptoms	5.59	2.81	6.58	3.19	-21.54***	.069
Communication						
Significant others	24.36	4.14	23.81	3.68	6.03***	.057
Family	14.54	2.83	14.15	2.80	7.90***	.049
Friends	9.76	2.22	9.63	1.95	2.98**	.034
School commitment	16.74	2.33	16.69	2.37	1.50	.018
Safe neighborhood	11.95	1.96	12.46	1.75	-9.02***	.209

Note: ** p $\leq$ .01; *** p $\leq$ .001.

3.4. Grade comparisons for individual, family, peers and contextual factors

Developmental comparisons, based on school grade, have shown significant differences in emotional symptoms, F (2; 17102) = 176.33, p = .0001, and specifically in somatic symptoms, F (2; 17447) = 70.48, p = .0001, nervousness and sadness, F (2; 17202) = 168.11, p = .0001. Participants in the 6th grade reported less emotional and behavioral symptoms compared to participants in the 8th grade, which also reported fewer symptoms than participants in the 10th grade. Grade differences were also found for communication with significant others, F (2; 7356) = 9.23, p = .0001, and specifically with family, F (2; 13094) = 40.38, p = .0001, and friends, F (2; 9772) = 34.23, p = .0001, with 8th graders reporting being more at ease communicating with significant others. However, when specifically considered, 6th graders reported being more at ease communicating with their families, compared to 8th and 10th graders, and less at ease communicating with

friends compared to participants in the 8th grade, which also reported being less at ease than 10th graders when communicating with friends. School commitment and safe neighborhood were also significantly different according to school grade, F (2; 17192) = 361.44, p = .0001, and F (2; 4353) = 32.32, p = .0001, respectively: 6th graders reported less school commitment than 8th graders, which reported less school commitment than 10th graders; 6th graders reported a perception of a less safe neighborhood compared to 8th and 10th graders (see Table 6).

Table 6. Grade comparisons for individual, family, peers and contextual factors

	6th Grade (a) (N = 6324)		8th Grade (b) (N=6510)		10th Grade (c) (N=5077)		F
	M	*SD*	*M*	*SD*	*M*	*SD*	
Emotional symptoms	8.63	3.84	9.4	4.0	10.09	4.22	176.33*** a<b<c
Somatic symptoms	3.08	1.69	3.22	1.71	3.47	1.79	70.48*** a<b<c
Psychological symptoms	5.57	2.90		3.09	6.62	3.09	168.11*** a<b<c
Communication							
Significant others	24.22	4.15	23.08	4.01	24.19	3.48	9.23*** a>b, c
Family	14.64	2.86	14.13	2.90	14.23	2.65	40.38*** a>b, c
Friends	9.50	2.30	9.67	2.07	9.93	1.82	34.23*** a<b<c
School commitment	17.3	2.39	16.64	2.3	16.11	2.2	361.44*** a>b>c
Safe neighborhood	11.88	1.94	12.28	1.88	12.43	1.76	32.32*** a<b, c

Note: *** $p \leq$ .001.

3.5. Time trends in individual, family, peers and contextual factors

Individual, family, peer and contextual factors evolution was studied according to gender (except for school commitment which showed no gender differences). Univariate ANOVA performed for school commitment showed a significant difference, F (2; 17192) = 276.01, p = .000, with 6th graders reporting less school commitment than 8th graders, which reported less school commitment than 10th graders (see Table 7).

Table 7-Individual, school and familiar factors according to the database year

	1998 (a) (N = 6561)		2002 (b) (N = 5921)		2006 (c) (N = 4713)		F
	M	SD	M	SD	M	SD	
School commitment	17.24	2.21	16.47	2.42	16.29	2.34	276.01*** a>b>c

*Note: *** $p \leq$ .001. Univariate ANOVAS 3*2 (database * gender) were performed for all the other variables. When main effects were significant, Post-hoc Scheffé tests, based on inspection of the sub-class means presented in Table 8, were undertaken to understand the nature of the interaction.*

A significant main effect of database year, F (2) = 67.30, p = .0001, η^2 = .008, and gender, F (1) = 831.35, p = .0001, η^2 = .046, qualified by a significant Database × Gender interaction, F (2) = 3.59, p = .027, η^2 = .000, was found for emotional symptoms. Post-hoc tests to follow up the main effect of database, revealed that in 2006, less emotional symptoms were reported, compared to 2002 and 1998, and that girls reported more emotional symptoms than boys. For somatic symptoms, a significant main effect of database year, F (2) = 62.48, p = .0001, η^2 = .007, and gender, F (1) = 879.49, p = .0001, η^2 = .048, were also found. The Database × Gender interaction effect was not significant, p > .05. Post-hoc tests to follow up the main effect of database, revealed that in 1998, more somatic symptoms were reported, compared to 2002 and 2006, and that girls reported more somatic symptoms than boys. Finally, for nervousness and sadness, a significant main effect of database year, F (2) = 89.28, p = .0001, η^2 = .010, and gender, F (1) = 362.54, p = .0001, η^2 = .026, qualified by a significant Database × Gender interaction, F (2) = 3.85, p = .021, η^2 = .000, was found. Post-hoc tests to follow up the main effect of database revealed that, in 2002, participants reported more nervousness and sadness compared to 1998, which, in turn, reported more somatic symptoms than in 2006. Following the previous pattern, girls reported more nervousness and sadness than boys.

Table 8 - Emotional factors according to the database year and gender

	1998				2002				2006			
	M		F		M		F		M		F	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Emotional symptoms (ES)	8.6	3.6	10.2	4.3	8.6	3.6	10.5	4.3	7.8	3.4	9.6	4.2
Somatic symptoms (SS)	3.0	1.5	3.7	1.9	2.7	1.4	3.5	1.8	2.7	1.3	3.4	1.8
Anxiety/ depression (AD)	5.6	2.7	6.4	3.1	5.9	2.9	7	3.2	5.1	2.6	6.2	3.1

Table 8 - Emotional factors according to the database year and gender (cont.)

	F y	*F y*g*	*F g*
Emotional symptoms (ES)	67.3***	3.6*	821.4***
Somatic symptoms (SS)	62.5***	1.3*	879.5***
Anxiety/ depression (AD)	89.3**	3.9***	462.5*

Note: M = Male; F = Female; y = year; g = gender. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Note : ES : (2006 < 1998, 2002) ; (F > M) ; SS : (1998> 2002, 2006) ; (F > M) ; AD : (2002 > 1998 > 2006) ; (F > M)

When assessing communication, a significant main effect of database year, $F(2) = 30.14$, $p = .0001$, $\eta^2 = .001$, and gender, $F(1) = 36.20$, $p = .0001$, $\eta^2 = .005$, were found. The Database × Gender interaction effect was not significant, $p > .05$. Post-hoc tests to follow up the main effect of database revealed that participants reported being more at ease when communicating with significant others in 2002 compared to 2006, and that boys reported being more at ease than girls. Specifically, a significant main effect of database year, $F(2) = 14.75$, $p = .0001$, $\eta^2 = .002$, and gender, $F(1) = 65.29$, $p = .0001$, $\eta^2 = .005$, was found for communication with family, and a significant main effect of database year, $F(2) = 27.37$, $p = .0001$, $\eta^2 = .003$, and gender, $F(1) = 7,36$, $p = .007$, $\eta^2 = .001$, was found for communication with friends. The Database × Gender interaction effect was not significant for communication with family, $p > .05$. However, a significant Database x Gender interaction effect was found for communication with friends, $F(2) = 7.50$, $p = .006$, $\eta^2 = .001$. Post-hoc tests to follow up the main effect of database, revealed that participants reported being more at ease when communicating with family in 2002 compared to 1998 and 2006, and reported being more at ease when communication with friends in 2002 compared to 2006; in both cases, boys reported being more at ease than girls (Table 9).

Table 9 - Social factors according to the database year and gender

	1998				2002				2006			
	M		F		M		F		M		F	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Communication												
Significant others (SO)	-	-	-	-	8,6	3,6	10,5	4,3	8.6	3.6	10.2	4.3
Family (FAM)	14.3	2.8	14	2.8	14.7	2.7	14.3	2.7	14.5	2.9	14	2.8
Friends (FR)	-	-	-	-	9.9	2.1	9.6	1.9	9.5	2.3	9.5	1.9

Table 9 -Social factors according to the database year and gender (cont.)

	F y	F y*g	F g
Communication			
Significant others (SO)	30.1**	1.3***	26.2**
Family (FAM)	14.7**	1.2***	66.2**
Friends (FR)	27.3**	7.5***	7.3***

Note: M = Male; F = Female; y = year; g = gender. ** p ≤ .01; *** p ≤ .001.
Note: SO: 2002>2006; M>F; Fam: 2002>1998, 2006; M>F.; Fr: 2002>2006; M>F.

Being a provocative victim seems to be the most devastating status once this status is associated with poor mental health (emotional problems and separately somatic symptoms and anxiety/depression). They also have the lower school commitment, and the lower quality of communication with family. Offenders have the more favourable overall communication status (with significant others), but mostly based on communication with friends, while victims have the lower easiness to communicate with friends. (Table 10)

Table 10- Comparisons, according to the bullying status, for individual, family and school factors

	Only Victim (ever) (a)		Only Bullies (ever) (b)		Provocative Victim (ever) (c)		F
	M	SD	M	SD	M	SD	
School commitment	16.6	2.4	16.5	2.3	16.2	2.4	21.01*** c < a, b
Emotional problems							
Emotional symptoms	9.6	4.1	9.3	4.1	10.2	4.3	28.6*** c > a > b
Somatic symptoms	3.3	1.7	3.2	1.7	3.4	1.8	4.2* c> b
Anxiety/depression	6.3	3.1	6.1	3	6.8	3.2	38.2*** c> a > b
Communication							
Significant others	23.7	4	24.2	3.7	23.7	4	4.9** b> a, c
Family	14.3	2.8	14.2	2.7	13.9	2.9	14*** c < a, b
Friends	9.4	2.2	9.9	2	9.6	2	21.4*** b > c > a
Safe neighborhood	12.3	1.9	12.1	2	12.3	1.8	1.9

1. Note: *** p ≤ .001.

4. DISCUSSION

The present study focused on gender and grade differences in individual, family and school variables in the three waves of the nationally representative sample of the HBSC between 1998 and 2006 and intended to analyse the time trends of emotional problems, bullying behaviour and related family and school factors associated to emotional problems and bullying behaviour. Although its limitations (namely related to the cross sectional nature of the study, to the nature of the sample (non-clinical), and to the fact that only addressed a set of all the main variables that are, according to the literature, relevant for explaining emotional and behavioral problems), these findings may present important implications for the development of prevention and intervention programs, according to grade and gender in order to address specific needs and lighten up their efficacy. Gender differences found were similar to the literature, with girls reporting more emotional symptoms and boys reporting more bullying behaviour (Gaspar et al.; 2012). Gender comparisons for communication with significant others and perception of a safe neighborhood were also according to literature (Luk, Farhat, Iannotti, & Simons-Morton, 2010) that is, girls are more sensitive to contextual factors and, although being more "verbal" (Matos et al., 2003) they have the perception of having a poorer interpersonal communication. Other studies using a qualitative approach suggest that girls use interpersonal communication to establish and maintain a close emotional relationship, whereas boys use interpersonal communication in a more instrumental way to "get things done", therefore being easier to refer to it as easy, girls tending to be more demanding in relation to what a "good communication" really is (Matos, Morgan et al., 2013; Matos, Gaspar et al., 2012; Matos, Gaspar et al., 2013). Also, developmental differences on emotional and behavioral symptoms, communication with

significant others, and school commitment were supported by Luk et al., (2010): along adolescence, emotional and behaviour problems tend to increase (Matos et al., 2000; 2003; 2006; 2008), the quantity and quality of the communication with family tends to decrease, while increasing regarding the peer group (Tomé et al., 2012).The new technologies of information and communication, with a special mention to the social networks, provided a new insight into interpersonal communication, either with strangers or with significant others. This discussion is far beyond the scope of the present work, but provoked a change in the communication patterns among adolescents (Matos & Ferreira, 2013), that now goes far beyond the communication in "presence", and is possible even during time previously devoted to family life. Finally, the analysis of the psychosocial factors associated with emotional problems and interpersonal violence has shown a set of common factors, school commitment, school grade and gender, and a set of specific factors, communication with family and perception of a safe neighborhood (regarding emotional symptoms) and communication with friends and, in general, with significant others (regarding bullying behaviour). These results are similar to the literature (e.g., Matos & Sampaio, 2009; Luk, et al., 2010; Matos, Gaspar et al., 2013) showing, the importance of the interactions between individual and social factors to emotional and behavioral problems.

Mental health problems have a huge impact on adolescents' well-being, although girls and boys appear to experience environmental constrains and stressful experiences in different ways and they seem to benefit from different protective factors. However, mental health it is a poorer area of intervention in school based health promotion interventions. A new approach to health promotion in Portuguese Schools highlighted the importance of having schools embrace mental health as a major focus, together with sexual and reproductive health, substance use, nutrition, active leisure and interpersonal violence (Matos et al., 2008; Matos, Sampaio et al., 2013). However, except when focusing at very specific social risk contexts (Matos, Gaspar et al. 2012), mental health promotion seems to remain the health promotion "taboo"; this fact has pervasive effects on children and adolescent's wellbeing, once internalizing and externalizing problems in childhood and adolescence are particularly common and particularly relevant, exactly due to their impact on psychosocial development. In fact while addressing various aspects of health promotion a look of actions are undertaking in school settings, interpersonal violence is often not only poorly addressed but also mostly addressed by means of " legislation and regiments" (GTES, 2007; Baptista et al., 2009; Matos et al., 2013). Another gap is the training of school assistants, the more close actors to peer to peer relationships during breaks).To make the scenario more complex, more recently new patterns of personal and interpersonal violence were highlighted , bringing new concerns for health promotion, such as self-harm, Cyberbullying and witnesses of interpersonal violence, the " bystanders" (Matos et al., 2010; Reis, Matos, Figueira, 2012), apparently reflecting either difficulties in problem solving and conflict management, lack of empathy; lack of emotion regulation, and in general lack of personal and social competences (Matos, Gaspar et al., 2012). Although not being an "interpersonal violence" procedure, self- harm is in need of further investigation because it is feared that it may be associated with "too much information about health" without working properly the " behavioral alternatives" associated with promoting and maintain a good health. Promoting wellbeing, mental health and interpersonal relationships free of violence (either as a bully, a victim , both or even bystanders or cyberbullies or bullies) along childhood and adolescence is not simply a matter of avoiding problematic contexts and health compromising behaviours, recent studies evidenced that increasing social and personal competences (such as self-regulation, negotiating, interpersonal communication and problem solving), and providing social support from significant others can be the golden standard for the promotion of wellbeing and mental health along childhood and adolescence (e.g. Morgan et al., 2010; Matos, Gaspar et al., 2012; Matos, Morgan, 2012; Matos, Sampaio et al., 2013), recommending a positive focus (the health assets) within a global social context. A special word for policymakers because, although a causality is not possible to be established, the positive evolution of Portuguese children from 2002 to 2006, can be read in association to a strong political investment in Portuguese schools and health education in schools around 2005 (GTES, 2007), where a system was established in a way that all the pupils attending school were supposed to attend weekly discussions in the classroom about health matters, health education and health promotion, under the supervision of a teacher with a specific training. Furthermore in every school a teacher was nominated to be the school coordinator in the area of health education and promotion. This "political will" had fast and efficient effects on pupils' health behaviors (Baptista et al, 2008), namely regarding pupils wellbeing and non-violent interpersonal relationships (Matos, Sampaio et al, 2008). All this policy change was then followed-up for a couple of years, demonstrating long lasting positive effects (Matos, Sampaio et al, 2013). Finally, other recent policy roadmaps (Ottava et al, 2013) raised the question of children and adolescents participation in the design and implementation of interventions targeting themselves. This last issue "making children voices and lives more visible and happier", become a scientific-policy motto, deserving further empirical and theoretical validation.

5. CONCLUSION

Mental health promotion and interpersonal violence prevention includes both the prevention of emotional problems and risk behaviours, and its determinants include individual factors and a range of psychosocial determinants whose identification has a major importance for intervention either universal prevention, selective prevention or indicative prevention, that is in clinical as well as in population interventions. Mental health problems and interpersonal violence

have a huge impact on adolescents well-being, although girls and boys appear to experience environmental constrains and stressful experiences in different ways, and seem to be differently affected by protective factors. However mental health and "violence free" peer relationships are often a poorer area in school based interventions. Gender differences should be considered in future research, as it is necessary to understand in what way there are (still) strong cultural issues, but also if there are biological issues including a different brain maturation that can be related to the gender differences that were highlighted. Considering the communication with family and peers, the recent boom of social networks and internet-based communication deserves a close follow-up, in order to highlight its positive and negative effects on interpersonal communication along adolescence. Also the more recent cyberbullying "format" has to be specifically addresses in its particularities. Also the status of bystanders deserves further attention, being perhaps the key changeable feature in school arenas. In the same way self- harm procedures have to be brought into further investigation to in depth understanding of its causes and prevention.

Future studies should empirically test the interactions between individual, social and contextual factors involved in the onset and maintenance of emotional and behavioral problems, using longitudinal designs in order to properly address both developmental issues and the determinants of the onset and maintenance of emotional and behavioral problems. Empirical and theoretical evidence is also recommended in order to evaluate the relevance and efficacy of the inclusion of children and adolescents as partners, defining own needs and being involved in the design of health promoting programs targeting themselves. Last but not the least important, policy makers have a very relevant role in the implementation and maintenance of health promotion strategies in schools at a national level- Health promotion programs in schools were associated with positive and long lasting effects on pupils wellbeing , health and positive interpersonal relationships during the years where this trend analysis took place.

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