



SCIENTIFIC ARTICLE

Hostile behaviours in children and adolescents: sociodemographic and parental variables

Carla Cruz^{a,*}, Cláudia Chaves^a, Odete Amaral^a, Paula Nelas^a, Sofia Campos^a,
Anabela Antunes^b, Mariline Almeida^c

^a Escola Superior de Saúde de Viseu, CI&DETS, Instituto Politécnico de Viseu, Viseu, Portugal

^b Centro Hospitalar Tondela-Viseu, Viseu, Portugal

^c Hospital São Francisco Xavier, Lisboa, Portugal

KEYWORDS

Hostile behaviours;
Children;
Adolescents

Abstract

Background: Hostile behaviour in children and adolescents is a current and very relevant problem due to individual, social and economic harm it produces.

Objectives: To verify if sociodemographic variables (gender, age, grade, place of residence and cohabitation) influence hostile behaviour in children and adolescents; to ascertain whether family variables (marital status, occupation, education level, monthly income) interfere with hostile behaviour in children and adolescents.

Material and methods: Quantitative, cross-sectional, descriptive and analytical study involving a sample of 999 students of the 2nd and 3rd cycles of basic education (5th-9th years of schooling), with an average age of 12.15 years ($SD = \pm 1.46$ years). Data collection includes the questionnaire of demographic data and family context, the Buss-Durkee Hostility Inventory.

Results: Sociodemographic variables, sex, age, area of residence and cohabitation interfered in hostile behaviour in children and adolescents: girls, older students, residents in urban areas, living with parents were shown to have higher levels of hostile behaviours as a whole. Parents' marital status, their secularity and family income also interfered in the hostile behaviour of the sample under study, finding that children and adolescents whose parents have no partner and have an average high / high household income reveal higher levels of hostile behaviours, particularly with regard to resentment, verbal hostility, fear, negativity and global hostility.

Conclusion: We hope that this study contributes to preventing hostile behaviour in children and adolescents, reducing the potential risks of this problem.

© 2016 Elsevier España, S.L.U. All rights reserved.

*Corresponding author.

E-mail: cruzcarla@hotmail.com (C. Cruz).

Introduction

Hostile behaviors in children and adolescents is a current and very relevant problem due to the individual, social and economic harm it produces.¹ According to this author, knowledge of the factors that might influence this phenomenon is very important in order to be able to contribute to the mental health of adolescents, their families and the community itself. Working in partnership with an entire educational community is also relevant, with the aim of preventing and combating of hostile behaviour in children and adolescents.

Hostile behaviors develop early. While most children learn to inhibit hostile behaviours, some manifest diffuse behaviour, which is often hostile and serious.² According to this author, when hostile behaviours interfere with children's development to the point that they are unable to maintain a pro-social relationships, there is consensus that these behaviours should be considered atypical. In this sense, evaluating early behavioural and emotional imbalances is extremely important, so that children do not suffer a significant impact on their development.

It should be noted that dysfunctional behaviours may start in childhood and develop until adolescence with a tendency to becoming more hostile, especially when adolescents are confronted with authority.³

These authors argue that it is often these behaviours, started at around the age of eight, whose prevalence increases with age and, as a rule, are associated with lower socioeconomic levels or more fragile family structures. The justification for such behaviour can also be associated to cognitive and emotional skills deficits, which could jeopardize adolescents' ability to meet adult demands. An example of this is the presence of an affective modulation deficit, which can cause adolescents to react very excessively or even explosively when faced with an order made by a parent or a person in authority. This occurs to the extent that adolescents cannot modulate their emotions.³

In light of these findings this study seeks to answer the following research questions: *a)* which sociodemographic variables that affect hostile behaviours in children and adolescents?; *b)* which family variables interfere in hostile behaviour in children and adolescents?

Taking into account the research questions stated above, we have outlined the following objectives: *a)* to verify whether sociodemographic variables (gender, age, year of schooling, place of residence and cohabitation) influence hostile behaviour in children and adolescents; *b)* to determine whether family variables (marital status, occupation, level of education, monthly income) interfere with hostile behaviour in children and adolescents.

Material and methods

We have outlined a quantitative, non-experimental, cross-sectional, descriptive and correlational and explanatory study, conducted on a probabilistic convenience sample consisting of 999 students of 2nd and 3rd cycle of basic education (5th, 6th, 7th, 8th and 9th years), with a minimum age of 10 years and a maximum of 16 years (mean = 15.12 years), (SD = ±1.46 years).

Female represent 49.2% with a minimum and maximum age ranging from 10 to 16. The age range is identical in males, whose representation is 50.8%. Boys are slightly older than the girls; however, the differences are not significant.

In terms of age, younger students stand out (57.6%). Of these 56.8% are boys and 58.3% girls. The percentage recorded for the older students, who represent 42.4% of the total sample are also significant. Of this group 43.2% are boys and 41.7% girls.

As for the school year, students who attend the 7th year of schooling are in the majority (22.1%) with 21.7% boys and 22.6% girls. After this group are the students who are in the 8th year (21.0%), with a representation of 22.3% boys and 19.7% girls, followed by 19.3% attending the 5th year (boys 19.9% and girls 18.7%). The remaining students attend the 6th year (18.9%) and 9th year (18.6%). In the overall sample, there is a predominance of students attending the 3rd cycle of basic education (7th-9th years) (61.7%).

With regard to the area of residence more than half the sample (75.5%) live in urban areas. This group is made up of 75.4% boys and 75.6% girls.

Most of the students (74.6%) live with their parents (75.1% of the boys and 74.0% of the girls). More than half of students (87.4%) state they do not only live with their father (87.0% boys and 87.8% girls). Students who assert they do not live only with their mother are also in the majority (76.2%), 77.7% boys and 74.6% girls. There is a predominance of students to affirm they live with siblings (67.2%). This situation is virtually identical for most boys (64.1%) and girls (70.3%), resulting in statistically significant differences ($\chi^2 = 4.384$, $P = .036$). The vast majority of students (85.6%) reported they do not live with grandparents, which is common to 84.4% of boys and 86.8% girls. The prevalence of students who do not live with other relatives (92.2%) is notorious, corresponding to 90.7% of the boys and 93.7% of the girls.

The data collection instrument includes questions to characterise the sociodemographic and family context and the Buss-Durkee Hostility Inventory, which assesses the following dimensions: Violence, Indirect hostility, Irritability, Negativism, Resentment, Fear, Verbal hostility, Guilt.

The data was processed using the SPSS (Statistical Package for Social Sciences) and AMOS (Analysis of Moments Structures) version 21 from 2012 for Windows.

Results

Regarding the marital status of parents, in more than half of the sample (81.8%), parents have a partner, which is an analogous situation for 83.4% of the boys and 80.2% of the girls, as opposed to 18.2% students whose parents have no partner.

In relation to the father's education level, students (50.4%) whose father has higher education prevail, with 51.2% boys and 48.7% girls, seconded by those whose father has secondary education (25.7%), which includes 24.3% boys and 27.0% girls. This is followed by fathers who have the 3rd cycle of basic education [9th year of schooling] (12.6%), with very close percentages for both sexes (boys 12.9% and 12.3% girls). Similarly, most of the students stated that their

mother has higher education (60.1%), which is common for boys (59.4%) and girls (60.7%), followed by students whose mother has secondary education (21.6%), 20.7% boys and 22.5% girls. The results reveal that for the majority of the sample, parents have a high level of education.

Students (51.5%) whose parents have an average-high/high monthly income prevail. This group is made up of 52.5% boys and 50.4% girls. Students whose parents have a low/average-low monthly income is also a significant percentage (47.5% boys and 49.6% girls).

As for hostile behaviours in students, the minimum values in all of the dimensions is 0.00 and the maximum 100.0, with the exception of overall hostility with a minimum of 33.33 and a maximum of 85.33. On average, we found that the highest mean value is in guilt (mean 59.11 ± 22.819). It is followed, on average, by overall hostility (mean 57.10 ± 9.202). Where a lower mean value is found is in violence (mean 35.54 ± 23.660), followed by the dimension resentment (mean 45.29 ± 23.530).

From the results we observe that for the whole sample, there is a predominance of students who do not reveal violence (59.6%), especially for boys (69.0%). However, we assess that 40.4% of students do reveal violence, where girls show it more (50.2%), with statistical significance ($\chi^2 = 38.362$; $P = .000$).

With regard to the relationship between indirect hostility and gender, most students (76.7%) present indirect hostility, with 78.9% of the boys and 74.4% of the girls manifesting it, while 23.3% of the students do not have indirect hostility indices, especially girls (25.6%).

There is a predominance of students (58.9%) who do not show irritability (65.3% boys vs. 52.2% girls), while 41.1% of manifest irritability, with the girls scoring more in irritability (47.8%) compared to boys (34.7%). These differences are statistically significant ($\chi^2 = 17.561$; $P = .000$).

From the results, we find that no students show negativism (100.0%).

More than half of the students (60.6%) did not manifest verbal hostility, with 61.0% of the boys and 60.2% of the girls included in this group, whereas 39.4% of the sample do present verbal hostility, which we found in 39.0% of the boys and 39.8% of the girls.

The vast majority of the students has no resentment (85.1%).

Regarding fear, nearly the entire sample (93.3%) did not manifest it, since only a minority (6.7%) revealed fear, with 7.7% boys and 5.7% girls.

As for guilt, (51.1%) of students exhibit this behaviour, 55.6% boys and 46.3% girls.

The results show that the vast majority of students does not show hostility (99.5%), 99.2% boys and 99.8% girls, with only 0.5% revealing it overall.

Discussion

The results obtained allowed us to draw a sociodemographic profile of the sample, consisting of 999 2nd and 3rd cycle basic education students (5th-9th year of schooling). 50.8% are boys and 49.2% girls, with an average age of 12.15 years ($SD = \pm 1.46$ years). The results revealed that for most of the sample, their parents have higher education. We also found

that it is mostly a sample whose parents have an average-high/high monthly income (51.5%). Despite working with a sample of older students than in our sample, i.e. aged between 14 and 20 years⁴ found that most were female, which was not borne out in our study. With regard to the family area of residence, our results are consistent with those reported by Cruz et al⁴ who also registered a prevalence of students residing in urban areas. In addition, there is conformity with regards to cohabitation, with a predominance of students living with their parents, who are mostly married, with high academic qualifications, i.e. higher education, also corroborated by our results.

As our dependent variable is Hostile Behaviour in children and adolescents, the results showed that the highest mean value was for guilt (mean 59.11 ± 22.819), followed by global hostility (mean 57.10 ± 9.202). The lowest mean value was for violence (mean 35.54 ± 23.660), followed by the dimension, resentment (mean 45.29 ± 23.530). Thus, the perception emerged that children and adolescents have more guilt, which translates into feelings of malice, procedure and guilty conscience.

We found a prevalence of children and adolescents who do not show violence (59.6%), with an emphasis on boys (69.0%). These results are not in accordance with those found by Díaz Galvis et al,⁵ according to whom there is a predominance of violent behaviour in males justified by some factors such as hormonal characteristics, temperament, noradrenaline, serotonin and dopamine which affect this type of behaviour, or are responsible for boys revealing higher levels of violent behaviour as a rule than girls¹ also found that there is more evidence of violent behaviour in males. However, in this study we have obtained different results, in that girls demonstrated more violent behaviours (50.2%) compared to males (31.0%).

Most of the students (76.7%) manifested indirect hostility with 78.9% of the boys and 74.4% of the girls manifesting it. It should be noted that indirect hostility evaluates indirect hostile behaviours, such as gossiping or jokes and releasing of negative emotions towards others without focusing on anyone in particular³ consider that indirect hostility is characteristic of adolescence, which is corroborated by Dias.⁶

The results for irritability revealed a predominance of students (58.9%) who do not show it (boys 65.3% vs. girls 52.2%); however, 41.1% manifest irritability, with the girls scoring more for irritability (47.8%) compared to boys (34.7%). This suggests that girls have more of a tendency to explore negative emotional reactions to small provocations with a manifestation of a constant bad mood, exasperation and incivility. On the other hand, we found that the students do not show negativism, indicating that they are not prone to a behaviour of widespread opposition to authority. On the contrary, they reveal a sense of cooperation by complying with conventions or rules. Another result refers to the fact we found that more than half of the sample (60.6%) do not manifest verbal hostility, (61.0% boys and 60.2% girls), suggesting that most boys and girls do not show expression of negative emotions through speech, content and style of discourse. Similarly, we found that the vast majority of the participants do not show resentment (85.1%), fear (93.3%) and overall hostility (99.5%). However, 51.1% expressed guilt, (55.6% boys and 46.3% girls) which includes feelings of malice.

With regard to sociodemographic and family variables which affect hostile behaviour in children adolescents, the results showed that girls generally manifest the most hostile behaviours, except for violence, irritability and overall hostility, which are higher in boys. The results found showing that the girls in our sample exhibit more hostile behaviour than boys are in line with Ferreira et al.,³ insofar as these authors argue that, before adolescence, girls may be more likely to manifest hostile behaviour in a disguised way, especially in terms of their relationships, resorting to intrigue and social exclusion, making use of most obvious form of verbal abuse, while boys are more prone to destructive behaviour or physical aggression. This was confirmed in our study, given that the boys showed more violence, irritability and overall hostility. These data also corroborate Cruz,¹ where male adolescents expressed higher levels of violence, irritability and overall hostility, and girls expressed resentment, fear and guilt.

The results for age revealed that children and older adolescents (≥ 13 years) constitute higher levels of hostile behaviours, on the whole, except for irritability, revealed by children and younger adolescents (≤ 12 years). This is not in accordance with the findings reached by Cruz,¹ where older teens had fewer hostile behaviours.

We also found that children and adolescents living in urban areas show more violence, indirect hostility, negativism, verbal hostility and overall hostility, while children and adolescents living in rural areas indicate more irritability, negativism, resentment, fear and guilt. These results may allow us to say that there is a relationship between area of residence and guilt. They can be justified by the fact that the urban environment is more favourable to developing hostile behaviours, which, according to Cruz,¹ may be related to the actual stress of the urban environment, assumed to be a factor responsible for increased violence in those locations.

The results also showed that children and adolescents living with parents reveal more indirect hostility, negativism, verbal hostility and guilt, while those living with other relatives manifest violence, irritability, resentment, fear and overall hostility, which is in line with the data collected by Cruz,¹ whose study revealed that adolescents who live with another relative expressed greater overall hostility. Nevertheless, the author has found that violence was more notorious with those who only lived with their father. In our study, this was most marked in those living with other relatives.

We found that children and adolescents whose parents have no partner reveal higher levels in all dimensions of hostile behaviour, especially with regard to resentment, verbal hostility, fear, negativity, overall hostility and guilt. Once more we find a similarity between our results and those reported by Cruz,¹ where children and adolescents of parents without partners demonstrated greater hostility, violence and indirect hostility.

Another result refers to the relationship between hostile behaviour and parents' educational attainment. It was found that children and adolescents whose parents have basic education manifest hostile behaviour, taking into account that they scored higher in all dimensions, followed by those whose parents have secondary education. This is consistent with the results observed by Cruz,¹ given that the

author found that the adolescent children of parents with the 1st cycle of basic education (4 years of schooling) expressed more hostile behaviour.

Ferreira et al.³ report that hostile behaviours are related to lower socioeconomic levels, and may even begin at an early age increasing in prevalence with age. According to Cruz,¹ violent behaviour is twice as likely among poor adolescents as in middleclass adolescents. However, the results of our study indicate the most significant hostile behaviour in children and adolescents with average-high/high family incomes, except violence, resentment, fear, verbal hostility and guilt, which were observed in adolescents lower household income.

Given the results presented, it is worth mentioning that some behaviours require experience to be adequate.⁷ In this regard, this author gives an example of cases in which, if the return conduct cooperates in encoding a stimulus at the beginning of the sequence, we are thus dealing with the cyclical nature of the model.

Memory structures as well as social schemes influence and are influenced by the processing at each stage. As a result of this process, there may be a deviant behaviour, considered more severe hostility. Therefore, the processes and chronic deviant behaviours end in psychopathology, which includes both, biological or genetic aspects, and environment aspects in which children and adolescents find themselves.

What we know about the theme

In Portugal the theme of hostile behaviors in children and adolescents has been very little explored.

What we get out the study

- This study allowed us to understand the influence of sociodemographic and family variables on hostile behaviour in children and adolescents.
- We suggest to develop intervention programmes in schools which promote mental health with parents or parental figures, teachers and students dealing with this real problem of hostile behaviour in children and adolescents.
- We feel it is absolutely indispensable to continue to conduct research involving this issue, to detect situations of risk to children and adolescents' physical and psychological well-being.

Acknowledgements

The Portuguese Foundation for Science and Technology (FCT) through the project PEst-OE/CED/UI4016/2014, and the Centre for Studies in Education, Technologies and Health (CI&DETS).

Conflicts of interest

The authors declare that there are no conflicts of interest.

References

1. Cruz CMVM. Parentalidade e comportamentos hostis em adolescentes. Dissertação de Doutoramento. Lisboa: Universidade Lusófona de Humanidades e Tecnologias; 2014.
2. De Lisboa CSM. Comportamento agressivo, vitimização e relações de amizade de crianças em idade escolar: fatores de risco e protecção. Tese de Doutoramento. Universidade Federal do Rio Grande do Sul; 2005. Available at: <http://www.msmdia.com/ceprua/tesecarollisboa.pdf>
3. Ferreira S, Nogueira S, Fernandes B. O meu filho põe-me à beira de um ataque de nervos. *Saúde Infantil*. 2011;33:91-2.
4. Cruz CMVM, Almeida M, Pinto JR, Aleluia S. Comportamento violento em adolescentes. uma evidência numa escola secundária. *Millenium*. 2011;40:133-47.
5. Díaz Galvis JL, De la Peña Olvera F, Suárez Reynaga JA, Palacios Cruz L. Perspectiva actual de la violencia juvenil. *Med Unab*. 2014;6:115-24.
6. Dias SAR. Processamento de informação social e respostas sociais em adolescentes. Dissertação de Mestrado. Aveiro: Universidade de Aveiro. Departamento de Educação; 2012. Available at: <https://core.ac.uk/download/pdf/15569414.pdf>
7. Rodrigues MJB. Reações emocionais e percepções da criança ao conflito parental. Tese de Doutoramento. Porto: Universidade do Porto, Instituto Superior de Ciências Biomédicas de Abel Salazar; 2008. Available at: <https://repositorio-aber-to.up.pt/bitstream/10216/19395/2/ReacesEmocionaisPercepoCrianaConflitoParental.pdf>