ENCYCLOPEDIA on Early Childhood Development

SOCIAL VIOLENCE

Early Prevention of Aggression in Children in Developing Countries

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Introduction

Expressions of violence are significantly more common in developing countries than in developed countries. Africa and Latin America have the highest rates of violent deaths in the world.[1] Problems with aggression and behaviour are also seen beginning in childhood in poor countries such as Brazil,[2] Egypt[3] and Colombia.[4-6] We can therefore see the importance of offering violence prevention programs in developing countries. In order to prevent violence, such programs must be effective and sustainable using the resources of these countries, and must be culturally accepted in them.

Importance of the issue

Both in developed[7-9] and developing countries,[10] it has been documented that early aggression is predictive of crime and violence in youth and adulthood. It is also predictive of other behaviours that threaten social and personal life, such as drug abuse, alcoholism, poor academic achievement, smoking, unsafe sex, teen pregnancy, family violence and problems at work.[7-9]

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These risky behaviours tend to occur as a cluster and can be considered to be comorbidities[11] with common causes.[12] This provides a basis to infer that it would be possible to develop successful programs for early prevention of violence that would also have effects on other risky behaviours: that is, multipurpose programs. This approach is of particular importance for developing countries, since it avoids the need to maintain a series of parallel programs aimed at preventing specific risky behaviours, such as drug abuse, alcoholism, gang membership, etc., and reduces duplicate overhead and administration and their associated costs. In developed[13-15] and underdeveloped countries,[16-21] it has been documented that this is possible, but we need to have more and better evidence in this regard.

The behaviours mentioned previously present risks for personal and social life and are, in turn, associated with several of the leading causes of illness, disability and death in developing countries. These include violent deaths, injuries, interpersonal assault, traffic accidents, several types of cancer, lung disease, sexually transmitted diseases and HIV/AIDS.[22-25] Another important association is the link between aggression early in life and learning problems[26] and school dropout rates,[27] which hinder personal and social development and can lead to failure to achieve the Millennium Development Goal that children complete at least primary education.

We thus have common causes that account for children's behaviour in their early years, their learning ability, and the state of their health later in life. These root causes include, very significantly, social inequity,[28] which paradoxically is much more prevalent in poor countries than rich ones;[1] patterns of education and parenting and children's relationship with theirparents,[29,30] and the physical, social and economic environment of the neighbourhood or environment where the child lives.[31,32] Children subjected to social and family stress have a high probability of serious consequences throughout their lives, such as problems with learning and economic productivity, poor health and shorter life expectancy.[12]

Despite the fact that in developing countries we find a high prevalence of behavioural problems in children and multiple risk factors, we also have very few studies in such countries that assess the effectiveness of early prevention programs addressing risky behaviours.[33]

Problems

1. There is little scientific evidence of the effectiveness of early prevention programs targeting aggression and risky behaviour in developing countries.

2. Assessments that have been carried out have problems in terms of measurements and evaluation methodology.
3. When existing programs from developed countries are implemented in developing countries, they are often inadequatelly adapted to the cultural context of these countries.

Research Context

Evaluations of the effectiveness of early prevention programs that target aggression in developing countries are limited, and little is known about strategies to carry out such assessments. There are also few resources and minimal interest from decision-makers in funding this type of initiative. However, it is important to note that in a study on research and priorities of decision-makers in low-and moderate-income countries, mental health problems were the fourth highest research priority.[34]

Key Research Questions

What is the effect of early aggression prevention programs in developing countries?

Should the same risk and protective factors be addressed in developing countries as in developed countries? What risk factors should be addressed?

Is it possible to take interventions conducted in developed countries and implement them in developing countries?

Recent Research Results

Of 30 successful interventions conducted in developing countries, 27 were assessed using experimental or quasi-experimental methods, including 18 carried out after 2000. We found interventions targeting parents,[17,20,21,35-46] interventions involving school teachers[47,48] and four studies that mixed these types of interventions.[16,18,49,50] Two involved clinical interventions with parents,[51,52] and four interventions integrated health care services, nutrition and psycho-social development.[19,20,53-55] The majority of the programs focused on small groups of children with conduct disorders or risk factors, and a few worked with broader sectors of the childhood population.[19,41,44]

Most of the assessments reported positive impacts on children’s conduct, including fewer involvements in fights and fewer aggressive behaviours,[16,18,21,47,50] improvement in pro-social

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behaviour,[16,18] better management of emotions[17,47,55] and better psycho-social development.[17,47,55] With respect to parents, some interventions noted reductions in physical punishments,[16,17] better parent-child interaction[36,38,44-46,52] and improved understanding of the child and his or her needs.[37,43,48,55] It was found that teachers improved their ability to respond to the various needs of children.[47,56]

The program evaluations were carried out using a large variety of instruments and measurements of outcome variables. In many cases these instruments were not properly validated. Most sample sizes were very small, limiting the analysis of potential confounding and interacting variables and decreasing the power of their estimates. Some measured the direct effect on children, while others looked at intermediate achievements in the behaviours and practices of teachers and parents. Most did not report on possible biases and limitations of the study. Positive effects on the behaviour of children, teachers and parents were reported for most of the studies. Harmful effects were found in two interventions; in both it appears that this may be due to difficulties in implementing the program.[41,49]

Research Gaps

We recommend the following steps to overcome the major research gaps identified above:

1. Increase research on the effectiveness of early risky behaviour prevention programs in developing countries, taking the socio-cultural context into account. It is important to draw attention to the inclusion of local researchers in studies conducted in developing countries, as authors or coauthors of major importance; if local researchers are limited to being mere “collaborators” or data collectors, it will weaken the research.
2. Conduct rigorous validation of instruments used to assess behavioural problems and practices, beliefs, and attitudes of parents and teachers, so that they can be used to assess the effectiveness of early interventions to prevent aggression, and in clinical practice.

Conclusions

It is possible to carry out successful early prevention programs addressing risky behaviours in developing countries, which is home to the majority of the world’s children who are coping with economic, social, and family stress.

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However there are few studies in developing countries that assess the effectiveness of early prevention programs addressing risky behaviours, and these studies share certain limitations, such as sample size and the methodology and measurement instruments used.

Of the evaluations found, most show an improvement in parents' knowledge and practices and in children's behaviour. We must encourage the evaluation of these programs, with a strong emphasis on the socio-cultural context of developing countries.

Implications for Parents, Services and Policy

Decision-makers must have solid, scientific bases for policies and programs to promote early prevention of risky behaviours. They should develop programs that are multipurpose and should promote studies of their effectiveness in developing countries. To do so requires an alliance between politicians, academia and the broader community.

If parents were to prefer that they and their children participate early prevention programs that address various risky behaviours and that are based on solid local scientific evidence, this would be very significant and would serve to legitimize public policies and programs. For parents in developing countries, implementing such culturally-sensitive multipurpose interventions represents an opportunity to improve educational practices and promote the development of children.

Academic institutions should increase their competence in the field of methodologies for assessing the effectiveness of early prevention programs that address risky behaviour in developing countries.

The implementation of early prevention interventions addressing risky behaviors could help break the cycle of violence in many countries that have experienced generations of armed conflict and criminal groups, where initiatives aimed at control have not been effective. It should be stressed that in order to effect change in society, we must implement long-term programs grounded in broadly conceived public policies and that cover the most vulnerable groups.

References

1. Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozaro R. *La violencia, un problema de salud pública. Informe mundial de violencia y salud*. Ginebra: OMS; 2002:11-12.
2. Fleitlich-Bilyk B, Goodman R. Prevalence of child and adolescent psychiatic disorders in southeast Bazil. *J Am Acad Child Adolsc Psychiatry*. 2004;43(6):727-734.

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3. Elhamid AA, Howe A, Reading R. Prevelnce of emotional al behavioural problems among 6-12 years old children in Egypt. *Soc Psychiatry Psychatr Epidemiol*. 2009;44:8-14.

4. Agudelo LM, Giraldo CA, Gaviria MB, et al. *Caracterísiticas de las familias y las escuelas relacionadas con los comportamientos agresivos y prosociales en nios y niños de 3 a 11 años*. Medellín: Editorial Marín Vieco; 2002.

5. Duque LF, Restrepo A, montoya NE. *Línea de base del programa e implementación del programa de prevención temprana de conductas de riesgo para la salud. Medellín: Secretaría de Salud de Medellin, Universidad de Antioquia; 2011.*

6. Duque LF, Klevens J. La violencia en Itagüí, Antioquia: II. Factores asociados. *Informe Quincenal Epidemiológico Nacional* . 2001;6, número - Bogotá, D.C. - 15 de junio del 2001(11):161-170.

7. Côté S, Tremblay RE, Nagin DS, Zoccolillo M, Vitaro F. Childhood Behavioral Profiles Leading to Adolescent Conduct Disorder: Risk Trajectories for Boys and Girls.*J Am Acad Child Adolesc Psychiatry*. 2002;41(9):1086-1094.

8. Loeber R, Hay D. Keyissues in the development of aggression and violence from childhood to early adulthood. *Annu Rev Psychol*. 1997;48:371-410.

9. Nagin DS, Tremblay R. Trajectories of boys' physical aggression, opposition and hyperactivity of path to physically violent and noviolent juvenile delinquency. *Child development*. 1999;70(5):1181-1196.

10. Anselmi L, Barros FC, Teodore MLM, et al. Continuity of behaviorial and emotional problems from pre-schoo years to pre-adolecence in a developing country.*Journal of Child Psychology and Psychiatry*. 2008;49(5):499-507.

11. Cerdá M, Sagdeo A, Galea S. Comorbid Forms of Psychopathology: Key Patterns and Future Research Directions. *Epidemiologic Reviews*. 2008;30:155–177.

12. Shonkoff JP, Garner AS. The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*. 2012;129:e232-e246.

13. Barlow J, Smailagic N, Ferriter M, Benett C, Jones H. Group-based parent-training programmes for improving emotional and behavioural adjustment in children from birth to three years old. *The Cochrane Library*. 2010;3:1-91.

14. Bernazzani O, Tremblay RE. Early parent training. In: Welsh BC, Farrintong DP, eds. *Preventing crime. What Works for Children, Offenders, Victims and Places*. New York: Springer; 2006;21-32.

15. Piquero AR, Farrington DP, Welsh BC, Tremblay R, Jennin WG. Effects of early family/parent training programs on antisocial behavior and delinquency. *J Exp Criminol*. 2009 5:83-120.

16. Duque LF, Orduz JF, Sandoval JJ, Caicedo BE, J. K. Lecciones del Programa de Prevención Temprana de la Violencia, Medellín, Colombia.*Revista Panamericana de Salud Publica*. 2007;21(1):21-29.

17. Fayyad JA, Farah L, Cassir Y, MM; S, Karam EG. Dissemination of an evidence-base intervention to parents of children with behavioral problems in a developing county. *European Journal of Adolescent Psychiatry*. 2010;19:629-636.

18. Klevens J, Martinez JW, Le B, Rojas C, Duque A, Tovar R. Evaluation of interventions to reduce aggressive and antisocial bahavior in first and second grades in a resource-poor setting. *Internationa Journal of Educational Research*. 2009;48:307-319.

19. Perez-Escamilla R, Pollitt E. Growth Improvements in Children above 3 Years of Age: The Cali Study. *Journal of Nutrition*. 1995;125(4):885-893.

20. Waber DP, Vuori-Christiansen L, Ortiz N, et al. Nutritional supplementation, maternal education, and cognitive development of infants at risk of malnutrition. *Americal Journal of Clinical Nutrition*. 1981;34:797-803.

21. Walker S, Chang SM, Vera-Hernández M, Grantham-McGregor S. Early Childhood Stimulation Benefits Adult Competence and Reduces Violent. *Pediatrics*. 2011;127:849.

22. World Bank, Oxford University Press. *Global Burden of Disease and Risk Factors*. Washington DC: Oxford University Press; 2006.

23. Sly DF, Quadagno D, Harrison DF, Eberstein I, Riehman K. The asoociation between substance use, condom use and sexual risk among low-income women *Family planning perspectives*. 1997;29(3):132-136.

24. Coffin LS, Newberry A, Hagan H, Cleland CM, Des Jarlais DC, Perlman DC. Syphilis in drug users in low and middle income countries. *International Journal of Drug Policy*. 2010;21:20-27.

25. Jane-Llopis E, Matytsina I. Mental health and alcohol, drugs and tobacco: a review of the comorbidity between mental disorders and the use of alcohol, tobacco and ilicit drugs. *Drug and Alcohol Reviews*. 2006;25:515-536.

26. Tramontina S, Martins S, Michalowski MB, et al. School Dropout and Conduct Disorder in Brazilian Elementary School Students. *Can J Psychiatry*. 2001;46:941-947.

27. Townsend L, Flisher AJ, Chikobvu P, Lombard C, King G T. The relationship between bullying behaviours and high school dropout in Cape Town, South Africa. *South African Journal of Psychology*. 2008;38(1):21-32.

28. Martin D, Margo W, Shawn V. Income inequity and homicide rates in Canada and United Estates. *Canadian Journal of Criminology* 2001;219:219-236.

29. Duque LF, Motoya N. *La violencia en el Valle de Aburá. Caminos para al superación*. Medellín: Catedrá litográfica; 2008.

30. Farrington DP, Welsh BC. *Saving children from a life of crimen. Early risk factors and effective interventions*. New York: Oxford University Press; 2007.

31. Morenoff JD, Sampson RJ, Raudenbush SW. Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology*. 2001;39(3):517–558.

32. Sampson RJ, Morenoff JD, Gannon-Rowley T. Assessing "neighborhood effects": Social processes and new directions in research. *Annual Reveiw of Sociology*. 2002;28:443-478.

33. Lucas PJ. Some reflections on the rhetoric of parenting programmes: evidence, theory, and social policy*Journal of Family Therapy*. 2011;33:181-198.

34. Sharan P, Gallo C, Gureje O, et al. Mental health research priorities in Low- and Middle income countries of Africa, Asia, Latina America and the caribbean. BJP. 2009;195:354-363.

35. Cooper C, et al. Improving quality of mother-infant relationship and infant attachment in socioeconomically deprived commmunity in South Africa: randomised controlled trail. *BMJ*. 2009;338 b974.

36. Cooper C, Landman M, Tomlinson M, Molteno C, Swartz L. Impact of mother-infant intervention in an indigent peri-urban South African context: pilot study. *British Journal of Psychiatry*. 2002;180:76-81.

37. Jin X, et al. Care for Development" intervention in rural China: a prospective followup study. *Journal of Developmental & Behavioral Pediatrics*. 2007;3:213-218.

38. Kagitcibasi C, Sunar D, Bekman S. Long-term effects of early intervention: Turkish low-income mothers and children. *Applied Developmental Psychology*. 2001:333-361.

39. Klein P, Rye H. Interaction-oriented Early Intervention in Ethiopia: The MISC Approach. *Infants & Young Children*. 2004.;4:340-354.

40. Magwaza A, Edwards S. An evaluation of an integrated parent-effectiveness training and children's enrichment programme for disadvantaged families. SouthAfrican *Journal of Psychology*. 1991;1:21-25.

41. Porter LS, Youssef M, Shaaban I, Ibrahim W. Parenting enhacement among Egyptian mothers in a tertiary care setting. Pediatric nursing. 1992;18(4):329-336.

42. Powell C, Grantham-McGregor S. Home visiting of varying frequency and child development. *Pediatrics*. 1989:157-164.

43. Rahman A, et al. Cluster randomized trial of a parent-based intervention to support early development of children in a low-income country. *Child: Care, Health & Development*. 2009;35(1):56-62.

44. Santelices MP, Guzman M, Aracena M, et al. Promoting secure attachment: evaluation of a effectveness of an early intervention pilot programme with mother -infant dyads in Santiago, Chile. *Child: care, health and development*. 2010;37(2):203-210.

45. Teferra T, Tekle L, Klein P. Mediational intervention for sensitizing caregivers: Ethiopia Early intervention: Cross-cultural experiences with a mediational approach. Vol 95-112. New York: Garland; 1996.

46. Van Wyk J, Eloff M, Heyns P. The evaluation of an integrated parent-training program. *The Journal of Social Psychology* 1983;121(2):273-281.

47. Pérez V, Rodríguez J, De la Barra F, Fernández AM. Efectividad de una Estrategia Conductual Para el Manejo de la Agresividad en Escolares de Enseñanza Básica Psykhe. 2005;14(2):55-62.

48. Baker-Henningham H, Walker S, Powell C, Gardner JM. A pilot study of the Incredible Years Teacher Training programme and a curriculum unit on social and emotional skills in community pre-schools in Jamaica.*Child: care, health and development*. 2009;35(5):624-631.

49. Chaux E. Citizenship Competencies in the Midst of a Violent Political Conflict: The Colombian Educational Response. *Harvard Educational Review*. 2009;79(1):84-93.

50. Peteren JJ, Carolissen R. Working with aggresive prscholers. In: D Donald, A Dawes, J Louw, eds. *Addressing childhood adversity*. Cape Town: David Philips; 2000:94-112.

51. Oveisi S, et al. Primary prevention of parent-child conflict and abuse in Iranian mothers: A randomized-controlled trial. *Child Abuse and Neglect*. 2010;3: 206-213.

52. Wendland-Carro J, Piccinini CA, Millar WS. The role of an early intervention on enhancing the quality of mother-infant interaction *Child Development*. 1999;3:713-721.

53. Aboud FE. Evaluation of an Early Childhood Parenting Programme in Rural Bangladesh.*Journal Health Population Nutrition*. 2007;25(1):3-13.

54. Aracena M, et al. A cost-effectiveness evaluation of a home visit program for adolescent mothers. *Journal of Health Psychology*. 2009;7:878-887.

55. Hamadani JD, Huda SN, Khatun F, Grantham-McGregor SM. Psychosocial Stimulation Improves the Development of Undernourished Children in Rural Bangladesh.*Journal of Nutrition*. 2006;136:2645-2652.

56. Baker-Henningham H, Walker S. A qualitative study of teachers' perceptions of an intervention to prevent conduct problems in Jamaica pre-schools. *Child: care, health and development*. 2009;35(5):632-643.