

Intergenerational Studies of Parenting and the Transfer of Risk From Parent to Child

Lisa Serbin¹ and Jennifer Karp

Centre for Research in Human Development and Department of Psychology, Concordia University, Montreal, Quebec, Canada

Abstract

This review describes a recent approach to studying the intergenerational processes that place families and children at risk for a broad variety of social, behavioral, and health problems. Intergenerational studies typically involve two (or more) generations of participants, observed over time. These projects are utilized to study the origins and early determinants of parenting behavior and of other environmental, health, and social conditions that place young offspring at risk for continuing behavioral, cognitive, and health problems. Convergent findings, across a broad range of research populations in several countries, suggest that problematic parenting develops in part through learning the behavior modeled by one's own parents. In addition, problematic parenting seems to be an extension of an individual's early style of aggressive and problematic social behavior. Parents with a history of childhood aggression, in particular, tend to have continuing social, behavioral, and health difficulties, as do their offspring. Conversely, parental involvement, cognitive stimulation, warmth, and nurturance appear to have important protective effects for offspring. Finally, educational achievement appears to be a powerful buffer against prob-

lematic parenting and a wide variety of difficult family circumstances, protecting families against the transfer of risk between generations.

Keywords

intergenerational; risk; longitudinal; parenting; psychopathology

Longitudinal studies following the lives of children into adulthood are generally familiar to psychologists. Over the 20th century, such studies have contributed a great deal to our understanding of the course of development. In particular, longitudinal studies that have followed individuals across the life course have provided basic information about the ways in which young children's psychological and behavioral characteristics interact with their environment and experiences, leading to various positive or negative life trajectories. Recently, there has been a new feature introduced into many ongoing and recently initiated longitudinal studies (Serbin & Stack, 1998). As their young participants reach adulthood, many of these projects are being utilized to study the origins and early determinants of parenting behavior. In addition, birth circumstances, pre- and perinatal maternal health, and other aspects of the family environment that may affect the psychological growth of young offspring are be-

ing studied within prospective longitudinal designs.

In part, this focus on the developmental origins of parenting and child rearing is a response to renewed interest in the outcomes of atypical patterns of social behavior, such as extreme aggression in girls (Peplar, Madsen, Webster, & Levene, 2003; Underwood, 2003). Girls' aggression is attracting increasing attention as a risk factor for ongoing social maladjustment, as well as mental and physical health problems. Early aggression may become a stable pattern of social behavior in both males and females, leading to maladaptive family relationships, including violent and dysfunctional behavior toward spouses and children. In other words, there has been considerable recent interest in understanding the long-term consequences of childhood aggression and other problematic patterns of social behavior. Psychologists are particularly interested in examining how these types of behaviors in childhood may affect a person's future family relationships and transfer risk to a new generation of children.

BACKGROUND

Risk Research and Prospective Longitudinal Designs

Current theory, supported by a growing body of empirical research, strongly suggests that genetic and environmental influences combine to produce intergenerational similarities between parents and children. Individual characteristics, learning experiences, environmental context, and the process of development interact to create differing life trajectories and outcomes. These variables and a subject's life outcomes can be observed and measured over time. Despite the overall tendency for similarity and

continuity within families, there is always considerable variability in behavior between individuals, even within families identified as at risk or within disadvantaged groups. Studies of the circumstances, environments, and experiences that promote differential outcomes for children and their families are often referred to in the literature as risk research.

Intergenerational Research Designs

Longitudinal research has historically been concerned with understanding the processes of socialization: how one generation transfers patterns of behavior to the next. In a variation of this theme, recent intergenerational studies have often focused on the prediction of parenting behavior and other environmental conditions within the life course of one generation, with a view to identifying the processes that place the offspring of the original subjects at risk for social, behavioral, and health problems across childhood and adulthood. Outcomes studied have included parenting conditions and environmental conditions that place a new generation at risk for a disadvantaged life course, as well as the actual behavior and health of the young offspring. In these studies, a series of steps involving developmental processes that lead to the outcomes of interest is proposed, based on theory. These proposed steps are then statistically tested for their fit with the observed data. If members of both generations (parent and child) are examined at approximately the same ages, researchers can compare parents and children to determine the similarity of their behavior at similar points in development (Cairns, Cairns, Xie, Leung, & Hearne, 1998). At the same time, the impact of parenting behavior and other environmental factors can be ex-

amined (Conger, Neppel, Kim, & Scaramella, 2003).

CONCEPTUAL AND RESEARCH ISSUES

Predicting Early Parenthood, Parenting Behavior, and Environmental Rearing Conditions

The most basic design for studying intergenerational risk involves following a sample of children as they mature and become parents themselves. Some such studies focus primarily on a single generation, but many also include the parents of the target participants, and also the target participants' children, the generation born during the course of the study. Intergenerational studies, in this way, often include up to three generations. Outcomes that are relevant to the intergenerational transfer of risk may include the circumstances of the next generation's birth, the parenting behavior of the participants, and the rearing environment that they establish for the next generation.

For example, a number of studies have examined the predictors of teen parenthood within various high-risk populations, including low-income rural families, foster children, inner-city urban children, and racial minority groups (Fagot, Pears, Capaldi, Crosby, & Leve, 1998; Hardy, Astone, Brooks-Gunn, Shapiro, & Miller, 1998; Scaramella, Conger, Simons, & Whitbeck, 1998; Serbin et al., 1998; Serbin, Peters, McAffer, & Schwartzman, 1991). Both behavioral and environmental predictors of teen parenthood have been identified in these longitudinal studies. Such factors include early aggression and other antisocial behavior, risk-taking behavior (such as smoking, or alco-

hol and drug use), having delinquent friends, failing in school, and dropping out of high school. Protective factors include family income (above poverty level), social support to parents (by extended family, friends, and the community), parental involvement in their child's activities and schoolwork, and high academic abilities and achievement of the child during the elementary and high school years.

Along with teen parenthood, other problematic conditions for offspring have been predicted from parents' earlier patterns of aggressive behavior and low levels of educational achievement. These conditions include obstetric and delivery problems and poor pre- and postnatal infant health. Longitudinal studies with participants drawn from many geographic and cultural regions (including the United Kingdom, United States, Canada, and Scandinavia), and from diverse social and ethnic groups, have yielded a general convergence of findings about risk factors and protective factors for teen parenthood, problematic parenting, and impoverished early environment.

The Intergenerational Transfer of Parenting Behavior

Many ongoing intergenerational studies are examining the similarity of parenting behavior from one generation to the next. Most of these studies have focused on the transfer of harsh and punitive parenting, or on effective versus ineffective transfer of styles of parenting behavior (see also Capaldi, Pears, Patterson, & Owen, 2003; Chen & Kaplan, 2001; Conger et al., 2003; Thornberry Freeman-Gallant, Lizotte, Krohn, & Smith, 2003). General support has been found for the idea that direct modeling of parenting behaviors leads to the transfer of those behaviors from one generation

to the next. However, these studies also suggest that there is continuity of an aggressive behavioral style from childhood to parenthood. In other words, adults' style of parenting incorporates both (a) what they learned directly from parenting behavior that was modeled in their childhood and (b) their own behavioral style, which was already apparent during childhood.

Predicting Outcomes in a Second Generation

Parents' histories are often used to predict a variety of outcomes in the next generation, such as their offsprings' early health, behavior, and development. In studies that include parents and their children, both individual and environmental sources of risk may be identified. Predictors of interest often include events that occurred years prior to the birth of the offspring. For example, in several studies of the offspring of teen parents (e.g., Fagot et al., 1998; Serbin, Peters, & Schwartzman, 1996), parents who had been aggressive and antisocial as children tended to have offspring who had poorer physical health (e.g., asthma, frequent respiratory infections) and made more visits to the emergency room during the first years of life than the offspring of other parents. One variable that may be involved in these specific negative outcomes for early health is maternal smoking, as mothers who smoke tend to have a history of childhood aggression, risk taking, and antisocial behavior.

Predicting Diverse Outcomes Within Populations Identified as at Risk

Some intergenerational designs focus on atypical or clinical risk

factors, such as specific behavioral problems or having a family member with diagnosed mental illness. For example, a researcher might observe children whose parents have depression or parents who are raising developmentally delayed children. Some intergenerational studies include a range of risk profiles, or include multiple comparison groups, each with a distinct risk profile (see McMahon & Peters, 2002, for a recent collection of studies of the children of dysfunctional, mentally ill, and at-risk parents).

SUMMARY OF CENTRAL FINDINGS AND CONCLUSIONS TO DATE

Several generally consistent findings deserve emphasis. First, problematic parenting seems to be the combined outcome of modeling by the individual's own parents and the continuation of a pattern of aggressive and antisocial behavior that can be observed in the individual early in childhood. Second, childhood aggression and antisocial behavior also seem to lead to problematic parenting and negative outcomes for offspring via an indirect pathway from childhood behavior patterns to adolescent risk-taking behavior, low educational and occupational attainment, maternal smoking, substance abuse, poverty, and other problematic circumstances of birth and parenthood. Third, parental involvement, warmth, and nurturance during childhood appear to have important protective effects on later family formation and parenting. Finally, educational achievement appears to be a powerful buffer against problematic parenting and the transfer of risk to the next generation, within both normative samples and at-risk populations.

UNRESOLVED ISSUES AND DIRECTIONS FOR FUTURE RESEARCH

The Need for Integrated Theoretical Models and Research Designs

The specific and interrelated pathways linking maladaptive behavior during childhood to future parenting problems need to be examined within comprehensive research models and designs. In particular, history of socialization, the indirect effects of early maladaptive behavior (such as school dropout, substance abuse, ill health, and poverty), and genetic factors affecting behavior and temperament should all be included in both the theoretical models and the empirical designs used in intergenerational research. In many current studies that are focusing on behavior and environment in the absence of genetic information, researchers are studying only a piece of the puzzle of intergenerational transfer of risk. Advances in work with physiological, behavioral, or molecular genetic markers may provide new opportunities to measure the genetic and physiological similarity of parent and child generations. Both projects in the planning stage and ongoing intergenerational research programs may choose to incorporate these new methods into their designs in future phases of data collection.

Statistics and Methodological Limitations

The complexity of intergenerational processes—in particular, the interactive and sequential nature of individuals' life trajectories—presents many challenges for researchers using traditional methods of quantitative and qualitative statistical analysis. Multiple regression and path modeling are widely

used in intergenerational research, but these methods have definite and well-known limitations, especially when dealing with interactive, cumulative processes. A variety of new and evolving methods that utilize multiple predictors to project developmental trajectories (i.e., hierarchical linear modeling, growth curve analysis) present some intriguing possibilities for expanding the array of theoretical and empirical issues that can be investigated within intergenerational studies.

Moving Beyond the Limits of Current Correlational Designs

Uncontrolled situations and events are often important conceptually and statistically, representing naturally occurring influences on the life course of individuals. Examining converging results from several studies will help us determine if predictive patterns related to individuals' characteristics and experiences are specific to particular studies, historical periods, or research populations, or occur more generally. In order to confirm whether the predictive effects identified in intergenerational research projects to date are causal, intervention studies using experimental or quasi-experimental designs, including random assignment of participants to intervention and control groups, will be required. In the future, it may be possible to employ experimental designs to examine well-specified research questions, such as the effects of parent training or other prevention programs, within intergenerational research projects.

APPLICATIONS AND IMPLICATIONS FOR SOCIAL POLICY

Issues of intergenerational transfer of risk are central to the field of

human development. However, their importance extends further because identifying risk factors provides crucial information that can be used in developing social, educational, and health policy. Policymakers often want to design and implement preventive interventions aimed at improving children's health and well-being. Before such interventions are designed and evaluated, however, it is essential to identify and evaluate specific predictors of risk and protective factors that increase children's resiliency. Because healthy functioning during early childhood is an important predictor of healthy lifelong development, it is important to design preventive strategies that can be implemented during early childhood, pregnancy, and even prior to conception. For example, many intergenerational studies suggest that maternal education is a key protective element for children in high-risk families. Based on these findings, an experimental study could be designed to investigate the effects of providing increased educational and social support to girls who are at risk for dropping out of school. These girls could be followed into adulthood so that we might evaluate the usefulness of such increased support for the future health and development of their children.

The opportunity to study complex, important phenomena with intergenerational designs has been compelling for many developmental researchers in recent years. This trend seems likely to continue and expand.

Recommended Reading

- Patterson, G. (1998). Continuities—a search for causal mechanisms: Comment on the Special Section. *Developmental Psychology, 34*, 1263–1268.
- Putallaz, M., Costanzo, P.R., Grames, C.L., & Sherman, D.M. (1998). Inter-

generational continuities and their influences on children's social development. *Social Development, 7*, 389–427.

- Rutter, M. (1998). Some research considerations on inter-generational continuities and discontinuities: Comment on the Special Section. *Developmental Psychology, 34*, 1269–1273.
- Serbin, L.A., & Karp, J. (in press). The inter-generational transfer of psychosocial risk: Mediators of vulnerability and resilience. *Annual Review of Psychology*.
- Serbin, L.A., & Stack, D.M. (Eds.). (1998). Longitudinal studies of inter-generational continuity and the transfer of psychosocial risk [Special section]. *Developmental Psychology, 34*, 1159–1273.

Note

1. Address correspondence to Lisa Serbin, Centre for Research in Human Development, Concordia University, 7141 Sherbrooke St. West, Montreal, Quebec, Canada, H4B 1R6.

References

- Cairns, R.B., Cairns, B.D., Xie, H., Leung, M.C., & Hearne, S. (1998). Paths across generations: Academic competence and aggressive behaviors in young mothers and their children. *Developmental Psychology, 34*, 1162–1174.
- Capaldi, D.M., Pears, K.C., Patterson, G.R., & Owen, L.D. (2003). Continuity of parenting practices across generations in an at-risk sample: A prospective comparison of direct and mediated associations. *Journal of Abnormal Child Psychology, 31*, 127–142.
- Chen, Z.Y., & Kaplan, H.B. (2001). Intergenerational transmission of constructive parenting. *Journal of Marriage & Family, 63*, 17–31.
- Conger, R.D., Neppel, T., Kim, K.J., & Scaramella, L. (2003). Angry and aggressive behavior across three generations: A prospective, longitudinal study of parents and children. *Journal of Abnormal Child Psychology, 31*, 143–160.
- Fagot, B.I., Pears, K.C., Capaldi, D.M., Crosby, L., & Leve, C.S. (1998). Becoming an adolescent father: Precursors and parenting. *Developmental Psychology, 34*, 1209–1219.
- Hardy, J.B., Astone, N.M., Brooks-Gunn, J., Shapiro, S., & Miller, T.L. (1998). Like mother, like child: Intergenerational patterns of age at first birth and associations with childhood and adolescent characteristics and adult outcomes in the second generation. *Developmental Psychology, 34*, 1220–1232.
- McMahon, R.J., & Peters, R.D. (Eds.). (2002). *The effects of parental dysfunction on children*. New York: Kluwer Academic/Plenum Publications.
- Peplar, D., Madsen, K., Webster, C., & Levene, K.

(Eds.). (2003). *The development and treatment of girlhood aggression*. Hillsdale, NJ: Erlbaum.

Scaramella, L.V., Conger, R.D., Simons, R.L., & Whitbeck, L.B. (1998). Predicting risk for pregnancy by late adolescence: A social contextual perspective. *Developmental Psychology, 34*, 1233–1245.

Serbin, L.A., Cooperman, J.M., Peters, P.L., Lehoux, P.M., Stack, D.M., & Schwartzman, A.E. (1998). Intergenerational transfer of psychosocial risk in women with childhood histories of aggression, withdrawal, or aggression and withdrawal. *Developmental Psychology, 34*, 1246–1262.

Serbin, L.A., Peters, P.L., McAffer, V.J., & Schwartzman, A.E. (1991). Childhood aggression and withdrawal as predictors of adolescent pregnancy, early parenthood, and environmental risk for the next generation. *Canadian Journal of Behavioural Science, 23*, 318–331.

Serbin, L.A., Peters, P.L., & Schwartzman, A.E. (1996). Longitudinal study of early childhood injuries and acute illnesses in the offspring of adolescent mothers who were aggressive, withdrawn, or aggressive/withdrawn in childhood. *Journal of Abnormal Psychology, 105*, 500–507.

Serbin, L.A., & Stack, D.M. (1998). Introduction to the special section: Studying intergenerational continuity and the transfer of risk. *Developmental Psychology, 34*, 1159–1161.

Thornberry, T.P., Freeman-Gallant, A., Lizotte, A.J., Krohn, M.D., & Smith, C.A. (2003). Linked lives: The intergenerational transmission of antisocial behavior. *Journal of Abnormal Child Psychology, 31*, 171–184.

Underwood, M.K. (2003). *Social aggression among girls*. New York: Guilford.

Transfer as the Productive Use of Acquired Knowledge, Skills, and Motivations

Erik De Corte¹

Department of Educational Sciences, University of Leuven, Leuven, Belgium

Abstract

Historically, the notion of transfer has been very controversial, conceptually as well as empirically. Therefore, there is an obvious need for further inquiry aimed at a better understanding of the processes underlying transfer. Taking into account the recent literature, this article defines transfer as the broad, productive, and supported use of acquired knowledge, skills, and motivations in new contexts and learning tasks. As an illustration, an intervention study is briefly discussed. This study shows the possibility of designing a powerful learning environment that yields transfer effects in accordance with this reconceptualized perspective on transfer.

Keywords

transfer; learning; learning environment

Throughout history, educators have attempted to equip students with cognitive tools that they can apply beyond the initial learning context. At present, transfer of learned knowledge and skills is still considered a fundamental goal of education. It is, for instance, expected that the teaching of reading comprehension will facilitate students' reading and understanding of texts in other subject-matter domains and outside the classroom. In addition, the field of industrial and corporate training is strongly interested in the transfer of learning. For example, an employer may attempt to teach clerks to use a text-processing program in such a way that afterward they can easily and quickly acquire mastery of a new program.

The scientific study of transfer dates back only to the beginning of the previous century. From the start, the concept has been very controversial, conceptually as well as empirically. The empirical literature contains many failures to achieve transfer, but also many suc-

cessful demonstrations of transfer. At the conceptual level, researchers argue for divergent conceptions of transfer that reflect different schools in psychology. For instance, from a behavioristic perspective, for transfer to occur the transfer task must share specific identical elements with the original learning task. But from a cognitive psychology standpoint, the transfer of general skills, such as problem-solving strategies, can occur (De Corte, 1999).

In this article, I attempt to explain and overcome the empirical and conceptual discords by reconceptualizing transfer in terms of the productive use of cognitive tools and motivations. I discuss an intervention study illustrating the possibility of designing learning environments that yield transfer effects in accordance with the revised perspective on transfer. The article ends by touching on some major issues for further inquiry.

RECONCEPTUALIZING TRANSFER

Proposals to reconceptualize the transfer construct are making an important contribution toward advancing theory and research. An analysis of the literature shows that traditionally transfer was very narrowly conceived as the independent and immediate application of