

## Poverty and adolescent developmental outcomes: a critical review

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### Abstract

This paper reviews the impact of poverty on adolescent developmental outcomes. Based on a review of the literature, the impact of poverty on the psychological development of adolescents, the pathways through which poverty operates, and the protective factors of adolescents from the impact of poverty are outlined. The review showed conceptual problems in the literature, including the neglect of attention paid to cultural diversity and intervening processes between poverty and child developmental outcomes. This review also highlights methodological challenges, including the lack of longitudinal and qualitative studies in the field and the problems of using single informant perspective to study dynamic family processes. Recommendations for directions of future research are offered.

**Keywords:** adolescents; developmental outcomes; poverty; psychological development.

### Introduction

As suggested by McLoyd et al. (1) poverty is “not a unitary variable or distinct event. Rather, it is a conglomerate of stressful conditions and events, many of which are outside personal control” (p. 445). There is ample research studying the impact of poverty on psychological development of children and adolescents (2). The trend of research also shifts from studying the deprivation of poor children and their families to the ecological influences at the family, school, community,

and societal levels (1). Although the impact of poverty on children and adolescent development appears to be a growing concern, studies face conceptual and methodological challenges. In this paper, conceptual and methodological problems pertinent to the literature on the impact of poverty on adolescent developmental outcomes are highlighted.

To understand the impact of poverty on psychological development of adolescents, cognitive development and psychological well-being of adolescents are commonly discussed. Studies showed that children in poverty suffer from the problem of “stimulus deprivation” that causes deficits to formal and contentual cognitive development of the children (3). There was ample evidence showing that poverty had great influence on cognitive development of early childhood, including children's intelligence, verbal and reasoning skills, academic achievement, and school readiness (4). In addition to stimulus deprivation, biological impairment of children's health caused by inadequate nutrition, lack of prenatal care, and prenatal exposure to drugs also hamper cognitive development of children, which can further create vulnerabilities in adolescence and adulthood (5).

For the cognitive development of adolescents, a variety of indicators, including children's school achievement, years of schooling, grade failure, and engagement in schools, were employed (6). It was found that low-income adolescents had high rate of school dropout and poor academic performance (7). Furthermore, timing of poverty is an important factor influencing the achievement of adolescents, with poverty experienced in early childhood had strong correlation with school completion. Hence, early poverty experience provides long-lasting effects to lives of adolescents.

Regarding educational attitudes and aspirations of adolescents experiencing economic disadvantage, Mickelson (8) found that minority adolescents from lower socioeconomic backgrounds had less positive concrete attitudes about education. Other research also found that youth experiencing economic disadvantage exhibited a decline of education aspiration across the stage of adolescence (9). Furthermore, it was found that perceived barriers to educational and occupational success were linked to diminished achievement values of low-income, ethnic-minority adolescents. The impact is crucial as adolescence is the stage for identity formation and future aspiration.

It was also found that learned helplessness perceived by individuals experiencing poverty inferred a “motivational deficit” (believing action is useless), “cognitive interference” (difficulty in learning that action can produce positive outcomes in new situations), and “affective reaction” (depression or resignation) (10). Pareek (11) further elaborated the model by suggesting that poverty induced a specific pattern of motivation with low need for achievement, low need for

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extension, and high need for dependence. This motivational pattern together with expectancy of powerlessness created the lifestyles and culture of poverty. The outcomes included disproportionate risk-taking, interest in chance, lack of interest in feedback, seeking of peers with similar backgrounds, lack of activity and initiative, lack of concern for others, lack of faith and trust, avoidance behaviors, fear of failure, seeking favors of superiors, and over-conformity.

There are also research findings showing that poverty leads to poor psychological being in adolescents. Research showed consistent findings that economic disadvantage results in internalizing and externalizing outcomes of adolescents (2). Furthermore, duration of poverty influenced the outcomes, with children and adolescents who experienced persistent economic hardship showing higher scores of internalizing and externalizing problems than those who experienced intermittent hardship or without hardship (3, 4, 12). With regard to gender difference, it was found that the relationship between poverty and externalizing behaviors was stronger in boys than it was in girls. Among children experiencing persistent poverty, the internalizing behaviors decreased over time in girls but increased over time in boys (3).

The concept of psychological well-being should not be simply interpreted as the absence of pathological psychological symptoms because it consists of the presence of positive mental health attributes (13), such as self-esteem, locus of control, self-mastery, purpose in life, and future orientation. According to social evaluation theory, psychological well-being of individuals is shaped by their social status through reflected appraisals and social comparison (14). Individuals with lower socioeconomic status would have a negative appraisal of self-worth, sense of loss of control, resentment, and powerlessness. The effect is magnified by the stigmatizing circumstances precipitated by socioeconomic disadvantage (15). In a research review studying the association between socioeconomic status and self-esteem, it was found that although there was a strong correlation between socioeconomic status and self-esteem in adults, the relationship was relatively weak in adolescents and virtually non-existent for children (16).

Future orientation has been regarded as an important positive youth development attribute as it influences the goals and aspirations of individuals and shapes their future plans (17). However, it was found that adolescents from low socioeconomic status exhibited lower occupational aspirations and expectations, higher economic worry, more barriers to occupational success, higher level of cynicism about work, opportunities and the social mobility system, and perceived their ideal lives embedded in the main theme of economic sufficiency (18, 19).

### **Pathways through which poverty affects adolescent development**

The effects of poverty on adolescent development are mediated by other variables. Brooks-Gunn et al. (20) highlighted five related pathways, including (a) health and nutrition, (b) parental mental health, (c) parenting behaviors, (d) the home environment, and (e) neighborhood conditions.

In studying the impact of poverty on adolescent development via parental mental health and parenting behaviors, the "family stress model" of economic hardship has become the mainstream model employed in research. The family stress model addresses how parental distress (parental mental health) and parenting behaviors mediate the effects of poverty to adolescent development. The model proposes that economic hardship leads to economic pressure in families. The stresses and strains that result in emotional and behavioral disturbances of parents leads to marital conflict and further results in reducing nurture for their children and poor parenting. Poor parenting could be demonstrated by less affection towards their children, less involvement in children's daily activities, and inconsistency in disciplinary practices. These can affect the emotional, behavioral, cognitive, and physical well-being of children (21).

The family investment model mainly addresses how family resources and the home environment correlate with poverty and child development. It works on the proposition that family income affects the investment of parents for the lives of their children. It is expected that parents invest their time, energy, and money for the upbringing of their children. Children with more human capital would enhance their cognitive ability, academic achievement, and social-emotional well-being (21). However, for families in poverty, cognitive and psychological development of children is restricted with limited income available for investment.

Recent research has focused more attention to familial and environmental stimulations that contribute to the cognitive and socio-emotional development of adolescents. Home environment has been regarded as an obstacle for the development of adolescents experiencing economic disadvantage. In addition to home environment, it was found that economically disadvantaged parents were less involved in the education of their children. Parents of low-income families often worked long hours in physically demanding jobs (22), possessed the perception that they were less knowledgeable about the school system, and exhibited a less optimistic view of their children in attending high school. These circumstances served as barriers for parental involvement and hindered adolescent cognitive development (23).

Regarding neighborhood conditions, Jencks and Mayer (24) identified five categories of theories relating neighborhood poverty to child development. These include (a) "epidemic" theories – emphasizing the power of peer influences on the spread of problem behaviors; (b) collective socialization theories – a proposal that neighborhood role models and monitoring are critical in children's socialization; (c) "institution" model – the institutions (schools, security) of the neighborhood influence outcomes; (d) competition models – the neighbors compete for scarce neighborhood resources; and (e) models of "relative deprivation" – children and adolescents evaluate their situations relative to those of their neighbors. Evidence supporting the above theories regarding the effect of neighborhood poverty on adolescent development has been reported previously (25).

Researchers working on resilience try to answer the question: Why do some children and adolescents of economic disadvantage develop psychological or behavioral problems

while others adapt so well? They studied protective factors that moderated the influences of poverty and enhanced the existential functioning of individuals. The resilience literature suggests three categories of protective factors: (a) personality/dispositional features such as self-esteem, locus of control, self-efficacy, optimum, stress reactivity, active coping strategies, cognitive competence, communicative skills, affective responses to others, and predictability; (b) affectional ties within the families, such as cohesion, warmth, shared values, patience, consistency of rules, support from adults; and (c) availability of external support systems such as schools, church, caring agency. Wyman et al. (26) showed that personal attributes and family resources constituted protective factors of children and adolescents in the face of adversities.

### Conceptual problems of the studies

Although there is ample research studying the impact of poverty on adolescent development, there are conceptual problems found in these studies. First, the complexity of poverty as a construct brings "conceptual muddiness" (p. 522) (27) to the studies. Although poverty, economic disadvantage, low socioeconomic status are commonly used in describing the economic conditions of the families in many studies, they represent different concepts and have different properties. Among the three constructs, economic disadvantage is the simplest one. However, it still cannot escape from the issue of economic threshold or baseline that determines and differentiates "disadvantage". The problems on defining and measuring "economic disadvantage" still remain.

Poverty is a more complex concept and has different conceptions. Absolute poverty measures the subsistence level of living of the people that is adequate for survival and maintenance of human development. Hence, poverty threshold reflects a minimum standard of living conditions. Relative poverty, by contrast, suggests that poverty should be understood and measured in the context of society where it happens. Relative poverty draws the poverty line by comparing the household income within the population. Differences in definitions of poverty represent different expectations of standards of living and can imply different concepts of measurement.

Socioeconomic status is a more complex construct in both conceptualization and measurement. According to the definition of Bornstein et al. (28), socioeconomic status is a multidimensional construct indexed by three quantitative factors of parents: educational achievement, occupational status, and financial income. Many researchers prefer to use socioeconomic status as it gives a richer content with a combination of social and economic domains. Also, it is less volatile than poverty status. However, the concept of socioeconomic status goes beyond economic situation and brings complexity in conceptualization and operationalization.

Another related issue lies on the use of eligibility criteria of a particular assistance scheme or welfare programs as poverty levels. For ease of identification of respondents as well as defining poverty level, some research chose the recipients

of assistance schemes or welfare programs as the respondents (29). However, the respondents' perceptions and behaviors are largely influenced by the content and implementation of the schemes. This can create systematic bias in the research.

Second, situations of poverty are not stagnant and it fluctuates as family incomes fluctuate. Mistry et al. (29) suggested that poverty exhibited a cyclical pattern, that is, families transitioned in and out of poverty over time (p. 948). The dynamic nature of poverty creates difficulty in measuring the impact of poverty, especially in cross-sectional research. Even in longitudinal studies, researchers seldom collect information of family income over time that captures the lifespan of child development.

It was also found that duration, timing, and depth of poverty have important implications on the development of adolescents. For example, with regard to duration, McLoyd et al. (1) concluded that persistent poverty jeopardized children's and adolescents' cognitive and psychological functioning to a much greater degree than transitory or occasional poverty. For timing of poverty, it was found that poverty experienced in early childhood of adolescents had higher tendency of school incompletion. Although there is empirical evidence showing that duration, timing, and depth of poverty have important implications on adolescent development, they are always ignored in related research.

Level of analysis constitutes the third concern. Theoretically, there has been an intense debate on two dichotomized levels of analysis in studying social phenomena: methodological individualism vs. holism. In methodological individualism, the individual is considered as the causal agent for research and theoretical explanation. In contrast, theorists maintaining holism argue that social facts could not be reduced to individual level. Level of analysis is of critical importance to understand the impact of poverty on individual and family functioning, as the social phenomenon captures three levels of analysis: individual, family, and societal, being interwoven with one another. To solve the puzzle, a call for an integrated, multilevel, interdisciplinary study is required.

Fourth, there are concerns on the theoretical conceptualization of adolescent resilience and positive development in the context of poverty. In particular, research studying family characteristics and family processes for building up resilience of adolescents in facing adversities and poverty is lacking. Shek (30) found that there were few studies examining adversity and resilience of adolescents, particularly in the context of poverty. McLoyd et al. (1) called for "a dearth of research about contributors to positive adaptation in the context of socioeconomic disadvantage" (p. 446).

Fifth, there is a neglect of parental beliefs as protective factors of adolescents in facing poverty. Although parental beliefs can influence a family's strategies, which in turn affect the well-being of family members, research on parental beliefs of poor families is scarce. The paucity of research on parental beliefs of poor families could be due to the difficulties on theorization and conceptualization of the belief system, cultural-specificity of the belief system, as well as the lack of measurement tools in measuring parental beliefs. Sigel and McGillicuddy-De Lisi (31) commented that "a clear

conception of beliefs [for parents] and theoretical explanations of how and why beliefs are effective are lacking" and literature on beliefs "is superficial, poorly defined, and while often in face validity, it is sorely lacking in providing information about construct and content validity" (p. 497).

Sixth, ethnicity and culture are important in the study of the impact of poverty on adolescent development, but are always neglected in studies. Ethnicity and culture lay down the ideological values, norms, and institutional patterns that make up the "blueprints for the ecology of human development" (p. 423) (32), and affect the socialization process, parenting strategies, social adaptation, and coping mechanisms of families. However, ethnicity and culture do not hold appropriate concern in related research.

Last but not least, the impact of poverty on adolescent development is a complex process and involves more than one pathway. It is difficult to study one particular process or factor that influences a specific developmental outcome, especially in drawing causal relationships between complex social settings such as neighborhood and adolescent outcomes, or interpreting the mediation relationship across different levels, as several potential factors can contribute to the effects.

### Methodological problems of the studies

In addition to conceptual problems, there are methodological problems of the studies concerning the impact of poverty on adolescents' psychological development. First, many studies in the field adopt a correlational research design. However, in correlational design, the problems of directionality and third variables bring challenges for the cause-and-effect relationship to be established. The problem of directionality is illustrated by Shek's study (33) of perceived family functioning and adolescent adjustment in Chinese families with economic disadvantage. It was found that the relationships between perceived family functioning and adolescent psychological well-being and problem behaviors were bidirectional in nature. Spuriousness is another problem that correlational design needs to address. Magnuson and Duncan (34) claimed that most developmental studies using non-experimental design "consequently suffered from serious omitted-variable bias" (p. 106).

Second, cross-sectional studies have difficulties in capturing the process and cumulative impact of poverty on adolescent development. The design has inherent problem in inferring cause-and-effect relationships due to the lack of time order. In addition, the problem of directionality is explicit with cross-sectional design. Recently, the development of structural equation modeling (SEM) facilitates the causal interpretation of correlational results in cross-sectional studies. However, Mistry et al. (29) gave a sound comment that "when applied to cross-sectional data, the results obtained from analyses involving SEM, at best, support the proposition that the pattern of associations are an adequate representation of the data, they do not provide confirmation of a causal relation between two constructs...SEM cannot rule out the problem of omitted variables" (p. 948).

Third, it was found that many general measurement tools used in studying adolescents and families are not validated with ethnical or cultural specific samples. The impact of culture is underestimated. An illustration is the Home Observation for Measurement of the Environment (HOME) Inventory that assesses the quality and quantity of stimulation available to children and adolescents in their home environment developed in Western world (35). The inventory is widely used in poverty research in the United States. However, Bradley et al. (36), in their review of more than 70 studies utilizing the HOME Inventory in different countries outside the USA, found that many items were inappropriate in other cultures and had to be omitted. Thus, there is a need for the development of indigenous measurement instruments.

Fourth, in analyzing the impact of poverty on adolescent development, it is inevitable to measure family processes and parent-child relationships. However, Wampler and Halverson (37) suggested that quantitative measurement is weakest in "capturing the complexity of family life in the sense of an ongoing stream of behavior over long period of time that interweaves the perceptions of individuals with behaviors in relationships" (p. 189). The perceptions of family relationships can change with many possibilities. Qualitative research, in contrast, fills the gap in studying family processes and relationships through direct interactions with the family members in a naturalistic context. However, qualitative studies in this area are sparse.

Fifth, unit of analysis is always an issue when studying the impact of poverty on adolescent development, especially with family processes as the pathways. It would be problematic to collect data from a single source due to individual bias. However, many researchers gathered information and responses from the adolescents only. Day et al. (38) argued that responses from one person in family research provided "a very limited basis for extrapolating a sequence of events that may lead to a certain decision or interactional style" (p. 110). They called for research strategies that include "the collective perceptions of multiple family members" as researchers can "appropriate latent, covert, unseen processes that influence, predict, and alter subsequent behavior by family members" (p. 110).

Sixth, difficulties in recruiting respondents and high attrition rate contribute to methodological concern in poverty research. Income or socioeconomic status is a sensitive variable with social stigmatization for poor people. In addition, it would be particularly difficult to study parenting qualities, as parents with better parenting qualities tend to respond to research than those with poorer parenting qualities. So is the research related to parents' mental health. This could contribute to systematic bias and threaten the generalizability of research.

### Directions for future research

With regard to the conceptual and methodological challenges on studying adolescent development and economic disadvantage, several directions of future research could be explored. First, understanding and analyzing adolescents experiencing economic disadvantage from a "positive development" paradigm

would be needed. The protective factors of adolescents and their families to build up resilience should be identified. Second, duration, timing, and depth of poverty should be considered to capture the dynamic situations of poverty on influencing adolescent development and family functioning. Third, multiple levels of analysis would be important for theoretical formulation. The impacts of poverty on individuals and families as well as the ecological influences at the family, community, and societal levels should be explored. For instance, the exo-system of work in relation to family functioning and adolescent development is a new niche for research. Fourth, incorporation of cultural dimension in the studies would be necessary as culture provides ideological ingredients in the conceptualization of adversities, coping mechanisms, as well as perceptions and beliefs of parents and children.

Fifth, exploration of factors and processes of family and community in mediating and moderating the impact of poverty on adolescent development are needed. Sixth, employing a longitudinal study would be a preference in the study of the impact of poverty on adolescent development, as this helps to minimize the problem of directionality as well as taking care of the dynamic nature of poverty over time. Seventh, development of indigenous measurement instruments is important to capture cultural specificity in the conceptualization and validation of the instruments. Eighth, data collected from different sources such as adolescents and parents would provide different perspectives on the understanding of phenomena and reduce individual bias. Ninth, triangulation of different methods such as observation in the real setting, survey, and interviews would provide a more comprehensive picture of the phenomena being studied. Finally, as there are research findings showing that positive youth development programs contribute to holistic adolescent development (39, 40), it would be exciting to see how such programs can promote the development of adolescents experiencing economic disadvantage.

## Conclusions

Although there are increasing concerns regarding the impact of poverty on the psychological development of adolescents, there are conceptual and methodological challenges of the studies that deserve special attention. Rooms for research employing a "positive development" paradigm, multilevel analysis, and sensitivity of cultural specificity are called for. The roles of family and community as mediating and moderating factors that influence adolescent development in the context of poverty need to be further researched. Last but not least, methodological advances such as development of indigenous measurement tools, employment of longitudinal and qualitative studies, triangulation of different data sources and methods, are suggested.

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