Contemporary Research on Parenting: Conceptual, Methodological, and Translational Issues

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Abstract

Researchers over the last decade have documented the association between general parenting style and numerous factors related to childhood obesity (*e.g.*, children's eating behaviors, physical activity, and weight status). Many recent childhood obesity prevention programs are family focused and designed to modify parenting behaviors thought to contribute to childhood obesity risk. This article presents a brief consideration of conceptual, methodological, and translational issues that can inform future research on the role of parenting in childhood obesity. They include: (1) General versus domain specific parenting styles and practices; (2) the role of ethnicity and culture; (3) assessing bidirectional influences; (4) broadening assessments beyond the immediate family; (5) novel approaches to parenting measurement; and (6) designing effective interventions. Numerous directions for future research are offered.

Introduction

Over the last 10 years, researchers have begun to examine the relationship between parenting and childhood obesity.[1,2] This is clearly an emerging field of study. For example, in a recent literature review by Sleddens and colleagues[1] of general parenting and childhood obesity risk, only two of the 36 articles identified were published before 2002. As researchers have begun to demonstrate the role of general parenting, family-focused childhood obesity prevention programs have been designed to modify parenting behaviors thought to contribute to childhood obesity risk.[3,4] However, as with any new field of study, numerous controversies and inconsistencies in the findings have emerged, possibly as a result of differences in the theoretical frameworks applied, the measures chosen, the populations studied, and the questions asked. The purpose of this article is to briefly consider, from the perspective of parenting researchers, a range of conceptual, methodological, and translational issues that can inform future research on the role of parenting in childhood obesity.

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General and Domain-Specific Parenting Styles and Practices

Definitions

Parenting styles can be general or domain specific and are related to, but distinct from, parenting practices. These terms can be conceptualized as a nested hierarchy, with general parenting styles being the broader and more inclusive concept reflecting an approach to childrearing across situations and domains.[5] General parenting styles are a function of the parent's attitudes, beliefs, and behaviors, and, as Darling and Steinberg argue,[6] reflect the parents' socialization goals, as well as the emotional climate in which specific parenting practices are implemented.

The most well-known examples of parenting styles include the authoritarian, authoritative, and permissive styles first identified by Baumrind in the mid 1960s.[5] Briefly, authoritative parenting, a parenting style frequently associated with positive child outcomes (e.g., emotional stability, adaptive patterns of coping, and life satisfaction) involves high levels of parental warmth and responsiveness paired with high levels of parental demandingness and control. These parents provide their children with clear guidance and direction, but in the context of a warm and loving relationship. Authoritarian parenting (low responsiveness and high demandingness) involves high expectations for child obedience in the context of an emotionally cold or distant parent–child relationship and is associated with poor academic achievement and depressive symptoms. Permissive parents (high responsiveness and low demandingness) provide their children with very little guidance and direction, and their children are more likely to show poor self-control, low self-esteem, and aggression.[7,8] Maccoby and Martin[7] differentiated between two types of permissive parenting by crossing parental responsiveness with parental demandingness: "Indulgent" parenting (high responsiveness and low demandingness) and "uninvolved" parenting (low responsiveness and low demandingness). Both are associated with negative child outcomes.[7]

Although parenting styles usually refer to general parenting, they can be domain-specific as well. Hughes and colleagues, for example, in a number of studies,[9–11] have demonstrated the utility of assessing parenting style in the feeding domain. In these studies, indulgent feeding styles were associated with the greatest childhood obesity risk.

In contrast to the more general styles, parenting practices are the discrete, observable acts of parenting (praise, feedback, reward, punishment, reasoning, limit setting, etc.). Parenting practices can be either general or domain-specific. When parenting practices are general, they refer to practices aggregated across situations and domains. For example, one could examine parental reasoning regardless of the issue it addresses (e.g., household rules, friends, or schoolwork). When parenting practices are domain-specific, they refer to parental behavior in a specific context (e.g., reasoning to get the child to be more physically active). Traditionally, parenting practices have been aggregated across domains[12,13] (e.g., induction, power assertion, and psychological control). However, more recently, there has been a significant amount of research on domain-specific practices in both the feeding[14–16] and physical activity[17,18] domains.

Because parenting practices are directly observable, there has been a tendency to measure practices and use them to assign parents to parenting styles. For example, if a mother frequently reasons with her child and consistently enforces maturity demands, she will be labeled an authoritative parent. However, the relationship between parenting styles and practices is complex—a father may turn a blind eye to a disobedient child, because of a belief that positive rewards are more effective than punishments or because a father does not care. Although the behavior of these two fathers appears similar, we would label the first as indulgent and the second as uninvolved. This example illustrates how the values and attitudes of a parent create an important backdrop that gives context to and colors the interpretation of their parenting behavior. Although some have argued that parenting attitudes should be studied separately from parenting behaviors,[19] we believe that parenting practices should be studied in the context of the parents' underlying beliefs, values, and attitudes.

Comparing Domain-Specific and General Parenting

Research in social psychology demonstrates that the relationship between attitudes and specific behaviors increases as one increases the specificity of the attitude being studied.[20] That is, the strongest attitude–behavior correlations are found when the specificity of the attitude matches the specificity of the behavior. Consistent with this theory, we would expect that parental feeding practices would correlate more highly with child eating behavior than general parenting practices and styles. Although numerous studies show that general parenting style predicts child overweight and eating behaviors,[1] when measures of general parenting style and specific feeding practices are entered in the same regression, only feeding practices are significant predictors of child weight status and food consumption, not general parenting style.[21–24] This suggests that the effects of general parenting style may be mediated through specific parental feeding practices. For example, parents with an authoritative general parenting style may be less likely to have obese children because they use authoritative feeding practices (e.g., reasoning, suggestions, and providing choices).

In contrast to the above findings, Brotman and colleagues[25] demonstrated that a family intervention to promote effective parenting in early childhood had a significant impact on preventing obesity in adolescence, despite the fact that the intervention did not address parental feeding practices. As the authors argue, "obesity interventions that are narrowly focused on eating and activity without changing fundamental aspects of the early

family environment are likely to be insufficient, especially for children at high risk'' (p. e626). It is possible that the effects of this intervention were mediated through a change in parental feeding practices, or that general parenting does have an effect over and above specific feeding practices, impacting child development in a number of domains. These findings may not be at odds. A recent analysis of seven interventions showed that focusing on both parenting styles and specific practices was the most effective in impacting weight-related outcomes.[3]

The results of these studies raise a fundamental question: When intervening with parents, should we try to change domain-specific parenting practices or general parenting styles? Should we teach parents specific strategies such as enthusiastic modeling[26] when presenting new foods, or should we, for example, try to increase parents' general sensitivity and responsiveness to child behavior[27] to move them toward a more authoritative style? If the answer is both, then in what proportion? Current research does not fully answer this question. One might argue that targeting parenting styles might be more effective, because changing parental beliefs, values, and attitudes may have a broader impact on child developmental outcomes than changing parenting practices alone. Conversely, there is likely a gradient of learnability ranging from specific parenting practices to general parenting practices to parenting styles, making it easier to change specific practices. Future intervention research should explore the effectiveness of interventions designed to modify different aspects of parenting and explore the impact of these changes on weight status and other child outcomes.

Ethnicity and Culture

Parenting styles and practices are imbedded in the larger culture, and theories and measurement practices need to take this critical issue into account. Baumrind,[28] for example, in her classic parenting research, identified parenting styles unique to African-American families. This led to considerable research on parenting in African-American families.[29] One finding to emerge from these studies is that authoritarian parenting, a style associated with negative child outcomes in middle class, European-American families, often is not associated with negative outcomes in low-income, African Americans.[30,31] Researchers are mixed on their interpretation of these findings. Some argue that parenting assessments developed using middle class, European-American families may not accurately assess parenting styles in other populations. Gonzales and colleagues,[32] for example, found that African-American coders rated African-American mothers more positively than did non–African-American coders. This suggests that if they had relied only on data from the non–African-American coders, many of the authoritative mothers may have been inaccurately classified as authoritarian. Alternatively, it could be that low-income, African-American mothers are indeed more authoritarian and that authoritarian

parenting might serve important protective functions for some children in low-income environments.[33]

Measurement

Given these differences between ethnic groups and cultures, we need to develop and validate parenting measurement tools that work equally well across cultural groups without excluding important cultural constructs, and examine cultural similarities and differences in the correlates of these measures. Chao,[34] for example, developed questionnaire items that assessed the Chinese concept of *chiao shun*, a concept related to training that is central to the practices of Chinese and many Chinese-American parents. The transferability and predictive validity of this construct across different cultural groups remains unclear. Similarly, Power and colleagues[35] found that the Parenting Dimensions Inventory (PDI),[36] a questionnaire developed with European-American parents, had good psychometric properties when administered to parents in Japan, but cluster analyses identified parenting styles in the United States and Japan that were markedly different. Mothers from both cultures were included in the same cluster analysis. Five clusters were identified. Three clusters were very similar to Baumrind's[5] parenting styles and these were made up of mothers primarily from the United States; two clusters, however, were made up primarily of Japanese mothers—one reflecting a highly permissive style and one reflecting a stricter, yet still inductive, parenting style. This begs a series of questions: What do these new clusters really represent? Do they have correlates in other cultures? Are we missing other constructs or behavior clusters because our tools are incomplete?

Universality

With enough research, we may be able to identify underlying universal characteristics of parenting that operate across cultures, but may be expressed in different ways. The three components of self-determination theory—competence, autonomy, and relatedness[37]—are often given as an example of such universal characteristics in another domain. For example, although cultures clearly differ in the degree to which they place an emphasis on autonomy, Milyavskaya and colleagues[38] found that the satisfaction of autonomy, competence, and relatedness needs were associated positively with adolescent adjustment in a wide range of cultural settings including Canada, China, France, and the United States. If such universal characteristics could be identified in the parenting domain (with the wording for the items inclusive enough to be equally valid across cultures), parenting measures could be developed that could be used across varying cultural contexts. This would involve a long and complex process starting with collaboration between researchers from multiple cultures to identify similar, cross-cultural constructs; generation of items by research teams in all of these cultures to measure the constructs; pilot data in each culture with the populations involved (focus groups, cognitive interviewing); data

analyses (factor analyses, item-response theory analyses) demonstrating cross-cultural equivalence of the constructs and items; studies demonstrating validity of the assessments in all of these cultures (predictive, concurrent, convergent, and discriminant validity); and cluster analytic studies to identify parenting styles within and across cultures.

Parenting in Context

Bidirectional Effects

Parenting is traditionally defined as the act of raising children. There is an inherent parent-centric bias to this definition that casts parents as the principal players. Another perspective (that of the child) may define the growing up process differently and may view parent–child interactions more as the act of "taming the parents." In fact, the influence of children on parents is well documented.[39] These "child effects" have been demonstrated through experimental studies that vary child behavior, and in longitudinal studies where changes in child behavior predict changes in parent behavior over time.[39] Children influence their parents at the same time that parents influence their children. However the complex moment-to-moment processes that operate in these behavioral transactions[40] have yet to be adequately described. This is unfortunate, since theorists have been writing about such bidirectional processes for at least 60 years.[41] One promising approach would be to examine parent–child interactions from a systems science perspective (e.g., emergent processes, state changes, and feedback loops).[42]

Household Perspectives

It is likely that child outcomes are influenced by the combined parenting practices and styles of the household, but the interactions between these styles and practices may be complex. For example, if one parent is authoritarian and the other parent is authoritative, does the authoritative parenting style "buffer" the other parent's authoritarian style? Berge and colleagues[43] found that the co-occurrence of an authoritarian mother and a neglectful father was associated with higher BMI in adolescent sons, but there was no protective effect of authoritative parenting style. Furthermore, the study found that incongruent parenting practices were associated with higher BMI values in adolescents. Specifically, when mothers modeled and encouraged healthful eating and physical activity, but fathers did not, adolescents had higher BMI values. Thus, it is important to examine all parents and other caregivers (and their interactions)[44] to capture a more comprehensive picture of the home environment when trying to assess risk and protective factors for childhood and adolescent obesity.

Community Perspective

Besides parental influences, child development is influenced by a wide range of factors including the physical environment, siblings, and primary caregivers, as well as relatives, friends, neighbors, childcare providers, and

teachers–in fact, the community at large.[45] The cliché "It takes a village to raise a child" comes into sharp focus when one observes positive outcomes in settings where traditional parenting is almost totally lacking. Little is known about parenting influences outside of the household, but this may be an interesting vein of research in a world where family and home structures are rapidly evolving. Parenting researchers should broaden their focus and include in their research designs assessments of the "parenting" behavior of other individuals who may play a significant role in the child's life.

Measurement Issues in Parenting

It is well-established that various approaches to assessing parenting have their strengths and weaknesses, and the use of multiple methods is usually the best approach.[46–48] Problems associated with the use of self-report questionnaires include: Social desirability biases; faulty recall or recall biases; ambiguous, general, or leading questions; limited awareness of one's own behavior; and careless or random responding. Questionnaires can provide: Data on important unobservable variables such as attitudes, beliefs, values, and feelings; information on low-frequency events; and a global view of parenting, not simply a snapshot at a single point in time. Also they are inexpensive and efficient to administer. Child questionnaires have the same advantages and disadvantages as parent questionnaires (often they are exaggerated), but have the added complexity of developmental issues (the child's level of cognitive development will have a major effect on the nature of his or her responses). Interviews overcome a few of the problems of questionnaires (follow-up questions can be asked, inconsistency in responding can be noted and explored), but they bring problems of their own, especially the issue of biased interpretations by the interviewer and the possibility of the interviewer unintentionally eliciting certain responses from the participant. The major advantage of interviews is that participants can talk about parenting in their own terms. Observational methods address many of the limitations of self-reports because behavior is recorded as it occurs, but observations are still susceptible to social desirability bias and reactivity. Moreover, videotapes are difficult and expensive to collect and code. The best tools for measuring parenting depend on the research question being asked and the resources available. When possible, the use of multiple measuring tools is preferable because they will likely collect complementary information. Finally, as discussed in the ethnicity and culture section above, it is important that measures are chosen that are valid for the group under study.

New Measurement Options

Emerging electronic and web-based technologies open the door to a wide range of new assessment tools. Smartphones and tablet computers, for example, allow for real-time collection of audio and video data without the cost or

intrusion of having an investigator in the room. Perhaps new technologies that allow for easy ecological momentary assessment may be useful in the parenting domain.[49] Ecological momentary assessment refers to techniques where participants repeatedly report on their behaviors or experiences in real time, often with the aid of an electronic device (such as a cell phone). These methods have significant advantages over other self-report measures in that they "minimize recall bias and maximize ecological validity" (p. 1).[49] By examining how parent and child behaviors emerge over time, it is possible that time series analyses can be used to examine the bidirectional nature of social interaction[50] (see earlier discussion of bidirectional influences).

Short Forms

Researchers often do not include parenting assessments in their studies because instruments with good reliability and validity take too long to complete. Advanced psychometric methods, including confirmatory factor analyses and item-response modeling, should be applied to existing parenting measures (*i.e.*, item banks) to develop short forms and rapid assessment parenting tools. These new tools could be used for multiple purposes such as adding a short set of questions to large national surveys where parenting is not the main focus, developing screening instruments for identifying high-risk participants for targeted interventions, assessing parenting in clinical settings such as pediatric and primary care medical practices, and evaluating parenting-related interventions. As with all measures, it is important to take ethnicity and culture into account in these endeavors, because shortening a measure often can threaten its validity, especially if the measure is to be used in a range of populations.

Variable- versus Person-Centered Approaches

As described elsewhere in this issue,[51] researchers have used both variable-centered and person-centered approaches to data analysis in parenting studies. In variable-centered analyses, the relationships between variables are examined across participants. For example, an investigator may examine correlations between parents' scores on a set of parenting dimensions and a set of independently assessed child outcomes. In contrast, in person-centered analyses, individuals are assigned to groups based on their scores on one set of variables (*e.g.*, parenting dimensions) and the groups are compared for differences on a second set of variables (*e.g.*, child outcomes). The variable-centered approach is usually employed in studies of parenting practices and dimensions, whereas the person-centered approach is usually used in studies of parenting styles. The simplest way to assign parents to styles in a person-centered analysis is to use a median split procedure. For example, parents above the median on both responsiveness and demandingness would be classified as authoritative and parents below the median on responsiveness and above the median on demandingness would be classified as authoritarian. This ap-

proach is useful when samples are small or when previous research provides clear guidelines for assigning parents to categories. Unfortunately, the data are not always clear, and many individuals may be close to the median making assignment to one cluster or another seem arbitrary. Cluster analytic approaches using multiple dimensions may be more effective for capturing the complexity of parenting and may facilitate the exploration and discovery of parenting styles that are not driven by current theoretical positions. Because such approaches identify naturally occurring groups of subjects, the number of individuals at the "cluster borders" is often smaller.

In the person-centered, cluster analytic approach, individual parents receive a score on multiple parenting dimensions (maybe 5–6 as compared to the 2 used in the Baumrind classifications). Then each parent is "plotted" in an *n*-dimensional space (*n* being the number of dimensions), and groups of parents who are close together in this space are assigned to the same parenting style. Once the groups (styles) are identified, the researcher looks at the mean scores on the dimensions by group to understand the characteristics of each group. For example, one style may be made up of parents who are high on parental support, consistency, and the use of reasoning, and low on expectations for obedience and physical punishment. Another style, in contrast, may be made up of parents who are high on expectations for obedience and physical punishment, but low on support, consistency, and reasoning. Power[51] reviewed the cluster analytic studies of parenting conducted to date and found that few yielded parenting styles that differed substantially from those of Baumrind. With better parenting measures that assess a wider range of dimensions, paired with powerful cluster analytic techniques, such as latent class analysis,[52] further cluster analytic studies may identify a wider range of parenting styles than have currently been discussed.

Designing Interventions

Challenges

Parenting is a central element in everyone's lives, and any intervention designed to change parenting practices could be perceived negatively, thereby either undermining the effectiveness of the program, or undermining the parent's sense of competence in the parenting domain. As with all interventions, unforeseen consequences (positive and negative) are inevitable. Awareness and surveillance of such effects should be the norm.

Intervention Level

Given the limited resources typically available for prevention, what populations should be targeted in parenting interventions? Gordon[53] differentiates between universal, selective, and indicated approaches. Universal programs are designed to reach the entire population, selective programs target at-risk groups, and indicated interventions are for individuals who are beginning to

show early signs of the problem behavior. Effective prevention involves intervening at all levels, such as in the well-known, evidenced-based, Triple P-Positive Parenting Program.[54] The intervention contains five levels, ranging from the use of universal media to disseminate positive parenting information to an intensive individually tailored program which includes home visits.

Strength-Based Approaches

Group settings are particularly attractive for parenting interventions. Parenting is fundamentally a social act that is heavily influenced by cultural and community role modeling and norms. A group setting potentially circumvents some of the issues relating to judgment by providing a built in support group. The best approaches are also strength-based—parents reflect upon their parenting goals and strengths and build on these strengths to achieve their goals. As with behavioral change in other domains, interventions that start with parents "where they are" and build on their existing beliefs and knowledge, are more effective than interventions that require immediate, major changes. Self-determination theory[37] and motivational interviewing[55] provide excellent guidance for developing such interventions.

Timing

Transition periods are by definition linked to change, uncertainty, and perceived or real risk, and may also be accompanied by a receptiveness to interventions. Parenting milestones that may be privileged opportunities for intervention include the birth of a child, childcare or school transitions, adiposity rebound, and puberty. At all of these times, multiple decisions need to be made and parents are likely to be particularly responsive to new information, advice, and guidance.

Conclusion

The study of parenting as a determinant of childhood behavior and health is an exciting and important field. Much progress has been made in describing individual variations in parenting behaviors and styles and examining their relations with child developmental outcomes. Very little progress, however, has been made in understanding the bidirectional nature of influences in the parent–child dyad, or in understanding how influences beyond the dyad (other family members, neighborhoods, cultures) moderate the relationships between parenting and child outcomes. We are just beginning to understand the diversity of parenting practices across cultures and beginning to understand which relationships between parenting and child outcomes are universal or which vary across cultural groups. Further research on parenting and child outcomes across multiple cultural groups is clearly needed.

Methodological advances are important as well. Given the limitations of self-reports and global ratings of parenting practices, researchers need to explore further the value of emerging technologies for examining the complexity of parent–child interactions as they unfold over time and to explore the value of new statistical methods for examining the nature of parenting influences. Comparative research needs to be conducted on the relative value of variable- versus parent-centered approaches and on how to best triangulate parenting data collected through multiple methods. Finally, the implications of basic parenting research for the development, evaluation, and dissemination of parenting programs need to be further explored. By examining these issues relative to children's health behaviors, such research should lead to a greater understanding of the important role of parenting in the development and reduction of childhood obesity.

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