

# Chapter 4

## Parents and Technology: Integration of Web-Based Resources to Improve the Health and Well-Being of Children

**Sean W. Mulvenon**  
*University of Arkansas, USA*

**Sandra G. Bowman**  
*University of Arkansas, USA*

### ABSTRACT

*The use of technology to improve the health and nutrition outcomes of children has been improving in recent years with many resources available online. Additionally, the expansion and continued growth of the Internet allows a method of access to information that transcends the traditional geographical obstacles in providing educational resources to parents in rural communities. A review of research and resources online to support parents with early childhood development is presented. A challenge identified in use of technology is the “silo” mentality of resources and the integration of education, health, nutrition, and social well-being information as a single resource for parents. Based on the research a comprehensive resource model is presented that integrates essential maturational and academic development for children. Additionally, the use for improved metrics and their development is provided.*

### INTRODUCTION

It is essential for the future of any society to foster the health and well-being of the next generation. Today's children will become tomorrow's parents, members of the workforce and leaders. Societies must invest in children by providing a plethora of resources and services, including healthcare,

nutrition and early education programs. In the U.S. approximately \$8.5 billion will be spent in 2014-2015 on Head Start related programs (U.S. Department of Health & Human Services, 2014), and in Arkansas an additional \$112 million is allocated by the legislature to support additional early childhood programs. As part of these various programs parents are provided with many

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resources, but there is limited parent support on how to effectively use these services to improve the health and well-being of their child. Technology is an empowering force that provides a new global resource for parents on how to improve the quality of lives, safety, nutritional habits, and emotional well-being of their children. The purpose of this chapter is to provide a review for parents on available web-based technology and other resources to support their role as caregivers in developing a healthy life-plan for their children.

## **TECHNOLOGY INNOVATIONS AND ALIGNMENT WITH RESEARCH FOR PARENTS**

A review of the literature, resources, and theory around early childhood programs provides limited scientifically based research on how to improve the healthy lifestyle and well-being of children. Further, many of these programs are more focused on the marketing of products or services for children than heuristic diagnostic evaluations of the development of the child. Our goal in this book chapter is to create a resource for parent's that synthesizes effective use of research, metrics, information from on-line applications and web-based resources to help parents and their children. For example, is your child able to stand by himself/herself at 10 months of age? This is an important developmental question that should be supported with recommendations that are child centered and guided by active research in early childhood. If you are asked about the diet of your children are you able to identify their specific dietary needs? If you report their most recent meal or snack is there a resource that recommends specific fruits, their nutritional value, and amounts to provide to improve their overall diet? Presently, many online resources make "global" recommendations for many health and well-being questions, but they are not individualized to a specific child.

The expansion of web-based technologies has created an excellent mechanism for providing answers to questions on health and well-being to parents. However, parents need a resource on how to use technology more effectively and one that is focused on them as parents. A web-based system that individualizes recommendations and interventions for a specific child is possible through current technology and web-based platforms. It is our hope that this chapter will provide a synthesis of research on early childhood development and present an innovative model of how to provide a much needed web-based technology resource for parents on the health and well-being of their children.

According to research, at least 200 million children under the age of five do not reach their full potential in cognitive and socio-emotional development due to the lack of healthy food and inadequate mental stimulation during their first five years (Grantham-McGregor, Cheung, Cueto, Glewwe, Richter, & Strupp, 2007) Further, a strong connection has been demonstrated between a child's development early in life and the level of success the child will experience later in life. The development that occurs from birth to five years provides the foundation for a child's future development physically, cognitively, and professionally (Engle, 2007). However, access to the necessary resources and information on a healthy lifestyle may be a limiting factor for many parents. The proliferation of technology, the World Wide Web, and on-line support platforms may represent an opportunity to transcend poverty and geography by providing information to families, schools, and health and human services. Additionally, the availability of the internet via computers, tablets, IPADS or phones has made it possible to transcend geographical or poverty "boundaries" that have limited access to important resources for many families. The next few sections provide a review of the research on health and nutrition and the value it may provide to families.

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