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The purpose of this research was to explore mothers' attitudes about the risks and benefits of adolescent Internet use (AIU) for communication in relation to adolescent access to the various communications components of the Internet as well as mothers' subsequent management of such use. Nineteen mothers of early adolescents participated in qualitative interviews regarding adolescent Internet use and mothers' regulation and monitoring of such use. Three maternal profiles emerged based on mothers' attitudes about the risks and benefits of AIU for communication: high affect risk oriented (HARO), low affect risk oriented (LARO), and benefit oriented (BO). Group membership shaped mothers' willingness to allow adolescents access to various components of the Internet as well as the strategies mothers use to maintain boundaries.

MATERNAL ATTITUDES AND BEHAVIORS REGARDING

ADOLESCENT INTERNET USE

by

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CHAPTER I

INTRODUCTION

Over the last fifteen years, the Internet has experienced a tremendous rate of growth. Once reserved only for the military, scientists, government, and universities, the Internet has rapidly become a fixture in a growing number of American homes. The number of American households with Internet access has grown from 18% in 1997 to over 80% in 2003 and families with children are *more* likely to have computers and Internet access than households in general (Day, Janis, & Davis, 2005). Adolescents between the ages of 12 and 18 use the Internet more than any other age group (Day et al.; Lenhart, Madden, & Hitlin, 2005) and are often considered the family "guru" when it comes to using the Internet (Kiesler, Zdaniuk, Lundmark, & Kraut, 2000).

Given the rise in Internet access within American families, as well as high levels of Internet use by and expertise among adolescents, it is importance to consider the extent to which parents allow their adolescents access to the various components of the Internet as well as how parents regulate and monitor such use. Research indicates that mothers are more likely than fathers to be responsible for the everyday care and supervision of their children (Helms & Demo, 2005) and are also typically responsible for the rules and restrictions regarding children's TV viewing (Schmitt, 2000). Given these findings, it is likely that mothers may be the primary gatekeepers when it comes to children's use of computers, the Internet, and other types of home media.

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The purpose of this research was to explore mothers' attitudes about the risks and benefits of adolescent Internet use (AIU) for communication in relation to adolescent access to the various communications components of the Internet as well as mothers subsequent management of such use. Specifically:

1. What attitudes do mothers have regarding the risks and benefits of AIU for communication and do these patterns cluster in meaningful ways?

2. In what ways do mothers' attitudes about AIU for communication influence adolescent access to the various components of the Internet and mothers regulation and monitoring of such use?

3. In what ways do mothers' attitudes about AIU for communication, adolescent access to the various communication components of the Internet, and mothers' regulation and monitoring of such use differ by race/ethnicity?

4. In what ways do mothers' attitudes about AIU for communication, adolescent access to the various communication components of the Internet, and mothers' regulation and monitoring of such use differ by social class?

CHAPTER II

THEORETICAL FOUNDATION

Family Systems Theory is used as the theoretical framework for this study. This framework addresses both the structure of families and the patterns of behaviors that exist within families that shape family members' interactions with each other and their environments. Family systems theory "accounts for all family members and their reciprocal influences on one another, as well as the monitoring and negation of how the external world should be rejected, assimilated, or accommodated" (Jordan, 2002; p. 223).

Family systems theory values understanding of the whole over the individual because of the interconnections among family members and views the interactions and influences of family members and the environment as bidirectional, rather than linear (Whitchurch & Constantine, 1993). Its application to studying Internet within the home promotes the study of whole family functioning and an examination of the cyclical influences that family members have on each other that emerge as patterned and meaningful to family members (Jordan, 2002). With this in mind, this study seeks to examine the influences that mothers' attitudes about the Internet have on adolescent access to the various components of the Internet as well as the patterned and meaningful behaviors of mothers that emerge as they manage such use.

Specifically, this study focused on components of Family Systems theory that provide an important context for mothers' behaviors regarding adolescent use of the

Internet: family boundaries, rules of transformation, and feedback mechanisms. Taken

together these concepts provide a framework for understanding adolescent Internet use by

exploring the permeability of the boundaries between families and the outside world

through the use of the Internet and the subsequent behaviors of mothers.

Family Boundaries

Boundaries can be defined as the borders between those within the system and

those outside of the system (White & Klein, 2002). Within families, boundaries work to

influence the level and nature of the interactions that occur between family members and

their environments which include supra-systems of the family as well as the socio-

cultural, historical, political and economical setting in which the family exists

(Whitchurch & Constantine, 1993).

Family boundaries are characterized by degrees of rigidity or permeability that

influences how much information is allowed into or out of a family system (Whitchurch

& Constantine, 1993). The presence of more rigid boundaries suggests that a family is

less influenced by events and information from the environment and that family members

are isolated from environmental influences whereas the presence of less rigid boundaries

suggests that a family is more influenced and less isolated. Family boundaries and the

permeability of those boundaries are tied to the norms, values and beliefs of the family

(Whitchurch & Constantine). The boundaries families place on privacy, the type and flow

of information in and out of the family, and the family's openness to others and

environmental content and influences are all calibrated by the norms, values and beliefs

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of family members. Families positioned within different social class and/or racial/ethnic groups may develop norms, values and beliefs differently about media use and its value.

The introduction of the Internet into the home challenges traditional physical notions of family boundaries. The Internet has been described as a technology that has "opened a hole in the fence of the family" (Daly, 1996, p. 82). Pre-Internet parents could feel secure knowing that children at home were somewhat protected from information and personal contacts outside the confines of the physical boundaries of home. Internet access means this is no longer the case. Unlike other forms of home media, the Internet brings a new dimension of the outside world into the inner sanctum of the home. Through the World Wide Web and the various components of the Internet such as e-mail, instant messaging and chat-rooms, the Internet enables users of all ages to view information as well as to communicate and interact with individuals – both known and unknown - from across the street or across the world. The instant and interactive nature of the Internet has created public discourse about the images, information, and communications that children and adolescents may encounter on-line. As a result, the type of content and interactions that parents are willing to allow adolescents to access via the Internet is likely to vary depending on the norms, values, and beliefs of parents. Some parents may restrict access altogether based on family values and beliefs while other families may allow access on the same basis of values and beliefs. Mothers' attitudes about the risks and benefits associated with AIU for communication are likely to influence the access that adolescents have to the various communication components of the Internet and the restrictions placed on it use.

The family systems concept of boundaries is critical to the current study in that it provides a foundational basis for our understanding of mothers' attitudes about adolescent Internet use for communication and how those attitudes influence the various ways that mothers allow adolescents to use the Internet.

Rules of Transformation

Family boundaries are established and maintained by rules, "rules that say who can and should do what, where, how and with whom" (Rosenblatt, 1994, p. 76). Family systems theory posits that all systems have rules of transformation that govern behavior (White & Klein, 2002). Whether explicit and implicit, these rules reflect recurring patterns of behavior within families and serve as guidelines for family members' behaviors, roles, patterns of authority, expression of emotions, and communication. Families establish rules for a variety of adolescent behaviors such as the types of television and movies they watch, the music they listen to and the friends they have, all based on family values and beliefs.

When the Internet is brought into the home, parents must also decide how and under which conditions adolescents are allowed to use the Internet and the various communication components. The rules that parents place on adolescent use of the Internet are likely to reflect the family norms, values and beliefs that govern other patterns of behaviors. For example, parents who have the belief that e-mail and instant messaging components are dangerous for children may make a rule that adolescents cannot use such components or use parental controls to control communications. Similarly, parents who have the belief that the Internet can be a valuable tool for

communication may allow access to e-mail and IM but may regulate who adolescents

communicate with. Parents may also have rules about the amount of time that children

can spend on-line as well as the type of information that adolescents are allowed to share

or post on-line.

Families develop rules of transformation regarding adolescent use of the Internet

in an effort to calibrate the boundaries between children and the outside world and are

critical to understanding how the Internet is integrated into family life. This theoretical

concept aides in our understanding of the types of rules that mothers place on adolescent

use of the Internet as well as the circumstances under which mothers feel the need to have

explicit rules for Internet behaviors.

Monitoring Through Feedback Mechanisms

Families make rules in an attempt to sustain homeostasis or normal functioning

and are continuously monitoring the degree to which their functioning is consistent with

those rules. Family systems theory posits that systems maintain homeostasis through

behaviors that are determined by two types of feedback: positive and negative

(Whitchurch & Constantine, 1993). Positive feedback includes behaviors that make

balance less likely and create change, whereas negative feedback maintains balance.

Feedback mechanisms provide information to system components that enable the system

to work properly (Whitchurch & Constantine). Within families, parents monitor

adolescent behaviors in an effort to identify negative feedback or deviations from

expected behaviors. For example, parents may have rules about the types of music

adolescents are allowed to listen to and may listen to the music downloaded on

adolescents' iPods in an effort to determine if family rules are being adhered to. Finding that an adolescent has adhered to the rule and only downloaded appropriate music would provide negative feedback. In contrast, discovering inappropriate music on an iPod would be an example of positive feedback, possibly resulting in changes in how an adolescent would be allowed to download music.

Once the Internet is brought into the home, parents must make decisions about how and under what conditions they will monitor the activities adolescents engage in while on the Internet. The need for monitoring is likely to vary depending on the Internet components that adolescents have access to and the rules placed on its use. The monitoring efforts of mothers whose children do not have access to communication components of the Internet may differ from monitoring efforts of mothers whose children do have access to these components. In addition, unlike other forms of home media, not all parents have the knowledge to monitor adolescent Internet activities. As a result, parents may develop non-technical strategies for gaining knowledge about activities on-line, such as placing computers in open areas of the home in an effort to directly observe adolescent Internet behaviors or sitting with adolescents during their on-line time.

The family systems theory concept of feedback mechanisms and the strategies of monitoring system behaviors are critical to this study as we seek to understand how and under what conditions mothers monitor the activities that adolescents engage in while on-line.

Taken together, family systems concepts of boundaries, rules of transformation, and feedback mechanisms provide a useful framework for exploring mothers' attitudes

about adolescent Internet use and how those attitudes work to influence the components that adolescents have access to as well as the regulation and monitoring strategies mothers use.

CHAPTER III

LITERATURE REVIEW

The rise in Internet access and use among adolescents has stimulated a number of

concerns regarding the extent to which parents may influence adolescent Internet use as

well as parents' regulation and monitoring of such use. Initial research on this topic

focused on parental Internet use, income, education, and age as correlates of adolescent

Internet use; little is known about the manner in which personal attitudes about the

Internet and behaviors of mothers may come to shape adolescent Internet use and

behaviors. Just as the Internet is transforming what it means to grow up in America in the

21st century, it is also transforming what it means to parent an adolescent growing up in a

computer- and Internet-driven society. The Internet is more complicated and interactive

than all other forms of home media and requires parents to develop more sophisticated

and technical methods of regulating and supervising its use. Adolescent access to the

Internet as well as mothers' subsequent regulation and monitoring of adolescent Internet

use is likely to depend on mothers' attitudes regarding the risks and benefits of such use

and the boundaries placed on its use.

Prevalence of Internet Use among Adolescents

The prevalence of adolescent computer and Internet access and use is well

documented (Day et al., 2005; Flemming, Greentree, Cocotti-Muller, Elias, & Morison,

2006; Gross, 2005; Lenhart, Madden, & Hitlin, 2005; Macgill, 2007). Personal computers

were first introduced commercially in the late 1970's and were present in almost one-quarter of American homes with children between the ages of three and seventeen years by 1989, 70% of homes by 2001, and 75% by 2003 (Day et al.). Similarly, the Internet, which became available to the general population in the early 1990s, was used at home by 22% of 3- to 17-year-olds in 1997 and by 63% in 2003 (Day et al.). Current studies suggest that more than 85% of American youth between the ages of 12 and 17 have a home computer or laptop with access to the Internet (Flemming et al.; Gross; Lenhart et al.; Macgill) and that over 51% of adolescents log onto the Internet on a daily basis (Gross; Lenhart et al.).

The Internet provides numerous options that allow adolescents to communicate with other individuals, both known and unknown. These include e-mail, instant messaging (IM), chat rooms, and blogs. Emerging research regarding adolescent use of Internet components suggests that adolescents make frequent use of the Internet for communication (Flemming et al., 2006; Gross, 2005; Lenhart et al., 2005; Macgill, 2007). Findings from a national telephone survey of a randomly generated sample of adolescents between the ages of 12-17 and their guardians indicated that the vast majority (89%) of adolescents had used e-mail and 75% used IM during their on-line time (Lenhart et al.).

As a source of information and entertainment, the Internet enables adolescents to access information on hobbies, culture, and current events; listen to, share, and download music; play on-line games either alone or with other people; shop and make purchases on-line; and engage in a host of other activities (Gross, 2005; Lenhart et al, 2005;

Macgill, 2007). Using detailed daily Internet diaries of 261 7th and 10th graders, Gross reported that adolescents spent much of their time on-line e-mailing and IMing (44 minutes per day), visiting websites (33 minutes per day), and downloading music (31.4 minutes per day). Lenhart et al. indicated that 81% of their sample played games on-line, 76% got news information from the Internet, 43% had made purchases on-line, and 31% used the Internet to access health information.

Early studies examining relationships between adolescents' socio-demographic characteristics and Internet *access* suggest SES and race play an important roles in determining whether or not an adolescent has access to Internet from home (Day et al., 2005; Lenhart et al., 2005; Macgill, 2007). African American adolescents and adolescents from less economically advantaged backgrounds are less likely to have access the Internet at home than European American adolescents and adolescents from more economically advantaged backgrounds. However, race differences in Internet *use* have yet to be documented conclusively. Emerging research suggests that African American adolescents use the Internet less at home than do European Americans and Asian Americans, a difference that is typically attributed to differences in parental income and education (Jackson, 2008; Macgill).

Parental Attitudes Regarding Risks and Benefits of AIU

No studies to date have focused specifically on maternal attitudes about the risks and benefits of adolescent Internet use. Surveys of parents regarding their attitudes towards the Internet suggest that parent have mixed emotions concerning their adolescents' use of the Internet (Lenhart et al., 2005; Macgill, 2007; Mesch, 2006;

Turrow, 1999; Turrow & Nir, 2000). On one hand, parents believe that adolescents need computers and Internet access to do well in school. A national survey of parents of 8- to 17- year olds in 1998 and at the start of 2000 over 80% indicated that the Internet is a place for children to discover useful things and nearly 68% said that children who do not have the Internet are disadvantaged compared to their peers who do (Turrow; Turrow & Nir). More recently, in a 2006 survey of 935 parents of adolescents between the ages of 12-17, 59% indicated they believed that the Internet was a beneficial force in the children's lives (Macgill).

Although many parents believe the Internet can be beneficial to adolescents, parents also believe that there are negative aspects to adolescent use of the Internet. For example, over 77% of parents in Turrow's early studies indicated that parents worried that their children might give out personal information and view sexually explicit images on the Internet. Additionally, over 40% of parents in these studies held the belief that children's exposure to the Internet might interfere with the values and beliefs that parents try to teach children (Turrow, 1999; Turrow & Nir, 2000). Most recently, Lenhart et al. (2005) found that parents were concerned that strangers would contact their children on-line. In a sample of 749 adolescent-parent dyads, more than half of parents expressed concern that strangers would try to contact their children, that adolescents would be exposed to content that parents did not want them to see or watch, and that adolescents would disclose family information to commercial companies (Mesch, 2006). No studies to date have examined possible variations in parental attitudes with respect to racial/ethnic and social class differences.

Parental Regulation of AIU

No studies to date have focused specifically on maternal regulation of adolescent Internet use. Research on parental rules regarding adolescent Internet use suggests that the majority of parents have rules regarding the type of Internet sites adolescents are allowed to visit and as well as the amount of time that adolescents are allowed to spend on-line (Dehue, Bolman, & Vollink, 2008; Lenhart et al., 2005; Macgill, 2007; Mitchell, Finkelhor, & Wolak, 2003; Wang et al. 2005). The findings of a national callback telephone survey of a randomly generated sample of 935 youth between the ages of 12 and 17 and their parents indicated that 68% of parents had content rules and 55% of parents had time-use rules regarding adolescent Internet use (Macgill). Similarly, Mitchell et al. found that parents had rules about the activities adolescents were or were not supposed to engage in on-line, the number of hours spent on-line, and having to ask permission before going on-line.

Beyond having content and time-use rules, many parents use Internet filtering software to limit the Internet material to which adolescents have access (Lenhart et al., 2005, Macgill, 2007, Rideout, 2007; Wang et al., 2005). Filtering software easily allows parents to restrict website access and other on-line communications such as e-mail and IM to only known or allowed users. Fifty-four percent of parents (N=1,100) in a national callback telephone survey indicated using Internet filters as a method of regulating adolescent Internet use (Lenhart et al.). In a similar study, 44% of parents reported installing monitoring software or filters on their home computers (Wang et al.). Focus group findings also suggest that parents perceive a great deal of value in filtering

software. For example, one mother indicated, ''hers is restricted so it is friends only. Unless you have given a person permission, they can't get in. That is a very nice safeguard to have." (Rideout, p. 11).

Parental Monitoring of AIU

No known study to date has specifically addressed the various ways in which mothers monitor adolescent Internet use. However, research concerning parents' overall monitoring of adolescent Internet use indicates that parents use a number of strategies to monitor the activities that adolescents engage in while on-line (Flemming et al., 2006; Lenhart et al., 2005; Macgill, 2007; Rideout, 2007). Some strategies require certain levels of technical knowledge and other strategies do not. For example, many parents place home computers in open areas of the house in an effort to directly observe adolescent Internet behaviors or have Internet safety discussions with their adolescents about appropriate and inappropriate Internet behaviors (Flemming et al.; Lenhart, et al.). Other parents with more technical knowledge monitor adolescent Internet activity by checking web history, reviewing sent or deleted e-mails, and reviewing what adolescents post on-line (Macgill; Rideout). The findings of a national callback telephone survey of a randomly generated sample of 1,008 youth between the ages of 12 and 17 and their parents indicated that 87% of parents checked the names on their adolescents' IM "buddy list", 82% looked at their adolescents' profiles on a social network site, 76% checked which websites their adolescents visited, and 39% read their adolescents' e-mails or looked in their inboxes (Rideout).

Links between Parental Attitudes and Management of AIU

Although research suggests that parents are concerned about adolescent Internet use and make efforts to regulate and actively monitoring what their adolescents do on-line, no research has been conducted to explore associations between perceived or real concerns of parents and the types of rules and monitoring strategies used by parents with respect to Internet use. Research examining parental regulation of other types of home media suggests that parents' attitudes towards the media are strongly related to the type of rules placed on its use. Vandewater et al. (2005), in their study of parental regulation of children's television viewing, reported that parents' negative attitudes towards television were strongly related to the types of rules they set regarding its viewing. Parents with negative attitudes towards television viewing were more likely to have rules about the amount of time children could watch television than were parents with positive attitudes towards television.

Given that parents develop media rules based on their attitudes and concerns regarding the media; it is likely that the same association exists with respect to Internet use as well. This study will consider this possibility by examining associations between mothers' attitudes about the risks and benefits of adolescent Internet use and mothers' regulation and monitoring of such use.

CHAPTER IV

METHODS

Sample

The sample for this study is a subset of 19 mothers who participated in series of

qualitative interviews conducted as part of a larger longitudinal, mixed methods project

following a cohort of 404 elementary children and their mothers from the 3rd grade

through the 7th grade. The larger project focused on how children formulate and maintain

friendships as well as maternal management of those friendships over time. As part of the

larger study, during the 2nd, 3rd, 4th, and 5th years of the study, a subset of 20 mothers–

child dyads were selected to participate in a series of qualitative interviews. A portion of

the interviews conducted in the 5th year of the project included a technology component

focusing on adolescent access and use of the Internet and mothers efforts to regulate and

monitor such use. One mother did not complete this section of the interview resulting in

our final sample of 19.

The qualitative cohort of mothers and adolescents were recruited with efforts to

stratify based on ethnicity and child gender. As a result the final sample for this study

consisted of 10 European American mothers and nine African American mothers; ten of

the mothers had a boy as the target child in the study and nine of the mothers had a girl as

the target child. Mothers' ages ranged from 31 to 52years old. Educational attainment of

the sample varied with four mothers completing high school, nine mothers completing

some college, five mothers obtaining a bachelors degree and one mother obtaining a graduate level degree. Qualitative participants reflected characteristics of the larger, quantitative sample in terms of socioeconomic background and family structure. Twelve mothers were married to the target child's biological father, two were re-married, two mothers were cohabitating with fiancés or boyfriends, and the remaining three mothers were single. Socioeconomic status of the participating families was determined using the Hollingshead Four Factor Index of Social Status (Hollingshead, 1975). Hollingshead scores for the sample ranged from 15 (unskilled laborers) to 66 (major business persons and professionals), with the majority of the scores falling between 34 (skilled craftsmen, clerical, and sales workers) and 51 (medium business personnel and minor professional). As defined by Hollingshead, 15% (n =3) of the families were lower class, 40% (n =8) were middle class, 30% (n =5) were upper middle class, and 15% (n=3) were upper class. Given the small sample size, it was necessary to truncate social status into two groups; lower class status and upper class status. Truncation resulted in eight families identified as lower social status and 11 families identified as upper social status.

Procedures

Interviews were conducted in the spring of 2006 when participating adolescents were in the 7th grade. Interviews were conducted by a graduate and an undergraduate interviewer in families' homes, and interviews lasted approximately 2 hours. All 19 interviews were conducted by the same two female interviewers with one being African American and one European American. Mothers were compensated $50 dollars for their

participation in the qualitative portion on the study. Audio taped interviews were transcribed verbatim by graduate level transcribers.

Mothers responded to a series of questions related to (a) adolescents' computer and Internet use, (b) strategies for regulating and monitoring of computer and Internet use, and (c) perceived risks and benefits of such use. Depending on mothers' answers to these questions, further questions were asked to elicit details concerning each topic. For example, mothers were first asked "Computers are increasingly used for communication; these modes of communication include e-mail and IM (instant messaging). Does your child have access to these modes of communication?" If mothers responded positively, they were then asked a series of questions about such experiences including, "With whom does your child communicate using e-mail or IM?" "Do you have any ways of monitoring or checking up on your child's e-mail or IM?" "Are there circumstances that lead you to do this?" If a mother responded that her adolescent did not have access to computers or the Internet, she was asked a series of questions that probed the reasons why. For example, "Are there any reasons why you prefer that your child not have access to e-mail or IM?" "Are there any circumstances that are preventing you from giving (child's name) access to these types of communications?" "As a parent, what do you think would be the benefits (pluses) and risks (minuses) of your child having access to e – mail or IM?"

Coding Strategy

Access to Internet and Communication Components. Interviews were coded for references to adolescent access and use of the Internet and communication components

such as e-mail and instant messaging. These codes included which components

adolescents had access as well as with whom they communicated. Codes also included

references to why children did not have access to the Internet or communication

components.

 Regulation of AIU. Interviews were coded for mothers' references to regulation

of adolescent Internet activities. These codes included use of parent-controls software as

well as types of explicit rules placed on adolescent use of the Internet or communication

components. Explicit rule codes included how long and when adolescents could use the

Internet as well as with whom adolescent could communicate via e-mail and IM. Codes

also included codes for specific rules regarding adolescent use of the Internet or

communication components.

 Monitoring of AIU. Interviews were coded for maternal strategies for monitoring

adolescent Internet activities. These codes included references to the location of the

family computer as well specific behaviors used by mothers to gain knowledge of

adolescent activities on-line such as checking Internet history or e-mail/IM logs. These

codes also included references for why mothers did not monitor adolescent activities on-

line.

 Risks and Benefits of AIU. Interviews were coded for maternal attitudes about the

risks and benefits of adolescent use of the Internet. Examples of risks included adolescent

exposure to unwanted materials or content and on-line predators. Benefit codes included

references to the ability to communicate with friends as well as improved closeness to

extend family members. These codes also included references to factors influencing

mothers' attitudes about the risks and beliefs of adolescent use of the Internet such as previous experiences with older children and reports heard from news and other media sources.

Data Analytic Strategy

The data analytic strategy for this study included four major levels of analysis: (1) identifying constructs and themes, (2) coding, (3) exploring relationships and patterns, and (4) model development and testing. The first level of analysis included a complex iterative process that began with reading all 19 interviews to gain a sense of what themes were emerging from the narratives of mothers regarding their adolescents' access to and use of the Internet, maternal strategies for regulating and monitoring Internet use, and perceived risks and benefits of adolescent Internet use. Throughout the initial readings of interview transcripts, themes were noted alongside the transcribed text, and memoing was used to record thoughts and ideas that emerged throughout the process.

The second level of analysis involved coding the transcripts based on the themes and categories that emerged from readings of the narratives. Code development began by compiling themes and broader categories into a coding protocol which was used by two coders to code a subset of transcripts. The coders met throughout the coding process to ensure accurate interpretation of the narratives and coding of the transcripts, adding or changing codes as needed. Once a final coding protocol was developed, all 19 transcripts were coded a final time by three coders. Discrepancies in codes were discussed and final codes determined by group consensus. ATLAS.ti, a qualitative data analysis program,

was used to code and group each narrative segment based on the coding protocol developed.

The third level of analysis involved exploring the patterns and relationships that emerged from the narratives of mothers as they discussed their adolescents' use of the Internet and strategies for regulating and monitoring such use. At the onset of this project, I was originally only interested in the Internet components that adolescents had access to and the strategies mothers used to regulate and monitor such use. However, throughout the reading of the transcripts and from the memoing conducted along the way, it became apparent that mothers' emotional reactions to the risks associated with adolescent use of the Internet for communication with others and mothers' beliefs about the benefits of communicating on-line were meaningfully related to how mothers allowed adolescents to use the Internet and its various components and the subsequent need for regulation and/or monitoring of Internet activities. Given the emergent importance of these two constructs throughout the analysis, they became the foundation for the profiles developed depicting mother's attitudes towards AIU to communicate.

Profile development involved categorizing mothers based on emotional reactions to AIU for communication (high, moderate and low) and beliefs about the potential benefits of AIU to communicate. Next, mothers' emotional reactions to AIU (high, moderate and low) were cross-tabulated with mothers' beliefs about the benefits of AIU (yes or no). Mothers who had highly emotional reactions to AIU and who held the beliefs that AIU was not beneficial were labeled as high affect risk oriented. Mothers who had moderate to low emotional reactions and who held the belief that AIU was not beneficial

were labeled as low affect risk oriented. Mothers who had moderate to low emotional reactions and who also held the belief that AIU could be benefits to adolescent communications and relationships were labeled as benefit oriented. Mother profiles were then examined to identify patterns relating to access to the Internet and communication components and maternal strategies for managing adolescent Internet activities on-line. Finally, patterns related to mother attitudes about the risks and benefits of AIU to communicate and the regulation and monitoring of Internet activities were examined in relation to ethnicity and social class.
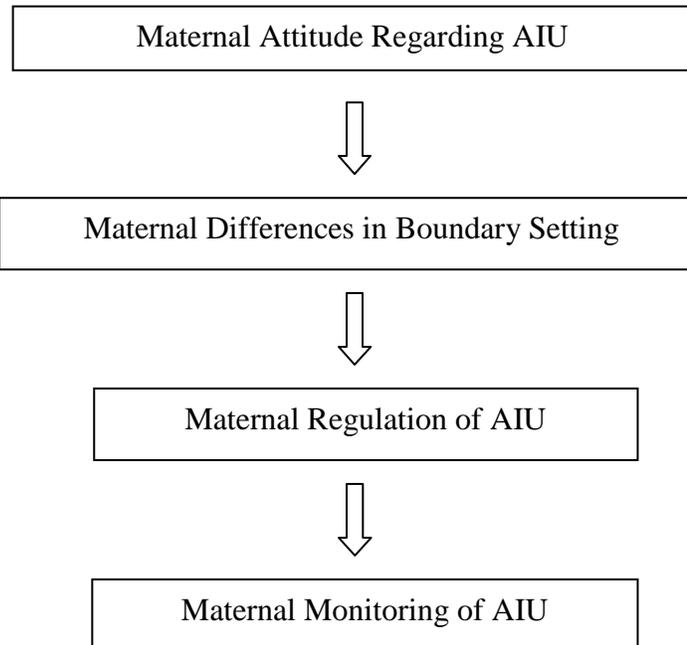
The final level of analysis involved developing a conceptual model that depicted how mothers' attitudes about the risks and benefits of adolescent use of the Internet worked to shape the access that adolescents had to the various communication components of the Internet as well as the strategies mothers used to manage such access. The final model (Figure 1) evolved through an iterative process of reading the transcripts and listening to the audio files of interviews as well as on-going interpretation and analysis of memos and notes taken throughout the analytic process. To ensure the accuracy of the model developed, individual models where developed for each mother depicting the influence of mothers' attitudes about the risks and benefits of AIU on the boundaries placed on adolescent Internet use and the subsequent behaviors of mothers. Overwhelming, individual models represented similar patterns across all interviews and provided the conceptual framework in which this study is based.

CHAPTER V

RESULTS

The focus of this study emerged over the course of the analysis from a broader

interest in the Internet communications components that mothers allowed adolescent

access to use and the management of such use to an emphasis on understanding how

mothers' attitudes about the risks and benefits of AIU for communication work to

influence the access adolescents have to the various communication components of the

Internet and mothers' subsequent use of regulation and monitoring strategies with

respect to such components.   Through the use of qualitative data, rich information was

obtained from narratives of mothers concerning their attitudes about the risks and benefits

of AIU to communicate and the influence of those attitudes on the subsequent access and

management of such use. Three maternal profiles emerged based on mothers' attitudes

about the risks and benefits of adolescent Internet use: high affect risk oriented (HARO),

low affect risk oriented (LARO), and benefit oriented (BO). Group membership shaped

mothers' willingness to allow adolescents access to various components of the Internet as

well as the strategies mothers use to maintain boundaries. This model is depicted in

Figure 1 and is explored in further details in the sections that follow. I will conclude with

a discussion concerning variations observed in relation to race/ethnicity and social class.

Figure 1. Influence of Maternal Attitude on Boundary Setting
and Management of AIU

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│      Maternal Attitude Regarding AIU     │
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┌─────────────────────────────────────────┐
│    Maternal Differences in Boundary Setting │
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        ┌───────────────────────────────┐
        │    Maternal Regulation of AIU  │
        └───────────────────────────────┘
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        ┌───────────────────────────────┐
        │    Maternal Monitoring of AIU  │
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Maternal Attitudes Regarding AIU

Narratives indicated that mothers' attitudes about the risks and benefits of AIU varied depending on the component of the Internet being discussed. All of the mothers in the sample indicated feeling comfortable with adolescents using the Internet as a resource for information or entertainment, mentioned little concern about its use in this manner, and indicated allowing adolescents to use the Internet in this way. However, mothers varied in their responses to questions about AIU as a tool for communication and the associated risks and benefits. Although all mothers expressed concerns for children's safety on-line, mothers' emotional reactions to on-line risks and mothers' beliefs about the benefits of communicating via the Internet positioned mothers into three categories: high affect risk oriented (HARO), low affect risk oriented (LARO), and benefit oriented (BO).

High Affect Risk Oriented. HARO mothers gave highly emotional responses when asked about adolescent use of the Internet to communicate. These mothers used words such as "predators," "perverts," and "crazies" to describe individuals adolescents might encounter online. When asked about adolescent use of the Internet for communication, one HARO mother described the risks: "[I'm] scared that he [will] meet some perverted person or [the] wrong person could influence him or he give out his home number or phone number, just out of blind trust" *(Pamela, HARO, Lower SES African American mother).* When asked why her daughter did not have access to e-mail and IM, another HARO mother indicated "Because I'm gonna tell you there are some crazies out there" *(Carly, HARO, Upper SES European American mother).* HARO mothers were also less

likely to believe that communicating using e-mail or instant messaging could be beneficial to children's relationships or friendships. When asked if e-mail and instant messaging could be beneficial for her son, one HARO mothers replied, "No, no, I wouldn't think it would be a good thing, yet" (*Andrea, HARO, Lower SES African American mother*).

   Low Affect Risk Oriented. LARO mothers were just as likely to speak about Internet related dangers as were HARO mothers, but LARO mothers had moderate to low emotional reactions to perceived risks. These mothers, unlike HARO mothers, were less concerned about adolescents being exposed to "predators" on-line and were more concerned about dangers related to the anonymity of communicating via the Internet, "you don't really know who you are chatting with" (*Tiffany, LARO, Upper SES African American*). Another low affect risk oriented mother indicated "even if it's a computer you can still lie, at least other people can" (*Sonya, LARO, Upper SES African American*). For these mothers, the perceived risks of AIU involved the possibility of exposure to unwanted content as opposed to the possibility of being approached by an on-line predator; "there's always the risk of people sending things that are not appropriate"(*Joan, LARO, Upper SES European American*).

   LARO mothers, similar to HARO mothers, were also less likely to discuss benefits of adolescents using e-mail or instant messaging. When asked about the benefits of communication via e-mail, one LARO mother replied, "No. (Laughs) Not really. Not that he can't pick up a phone and call somebody ever" (*Betty, LARO, Upper SES European American*). Several LARO mothers mentioned that communicating on-line

might be beneficial for adolescents as they get older but was not beneficial at the current

time: "I think that it would be great, I mean, once they get into the workplace" (*Joanne,*

LARO, Lower SES African American).

    Benefit Oriented. BO mother also spoke about Internet related dangers; however,

these mothers spoke in more positive ways about adolescent use of the Internet to

communicate. BO mothers held the belief that communicating via instant message or e-

mail could be beneficial to adolescent relationships and friendships and were more

willing to allow their adolescent children access to these components despite their

potential risks. Several BO mothers spoke about how communicating via e-mail and

instant message had strengthened their children's relationships with extended family

members, "as far as the situation with family members I feel like he's able to

communicate with them more, " (*Carla, BO, Lower SES European American*). Another

BO mother spoke about how her son "e-mails and IMs his cousins. He's got one in

Oregon and two in New York so he talks to them." (*Linda, BO, lower SES European*

American). In the following excerpt one BO mother discussed how instant messaging

allowed her daughter to stay in touch with friends:

> There's some girls at school, some of the ones that she
> doesn't really see that much, . . . there's a little boy that
> she, um, used to go to day care with—I'm friends with his
> mom—she talks with him.
> (*Angie, BO, Upper SES European American mother*)

    Mother's narratives suggested that mothers' thoughts about the risks and benefits

of AIU shaped their thinking concerning the permeability of boundaries between families

and the outside of world and the behaviors and strategies that mothers engaged in to maintain those boundaries. Specifically, mothers' willingness to allow adolescents access to various components of the Internet as well as their beliefs regarding the need for regulating or monitoring activities on-line varied based on group membership.

Maternal Differences in Boundary Setting

Mothers' narratives indicated that mothers' attitudes about the risks and benefits of AIU shaped their beliefs regarding the permeability of boundaries between families and the outside world. Fifteen of our nineteen mothers indicated their adolescents had home access to the Internet and four mothers indicated that their adolescents did not have home access to the Internet. Eight mothers indicated adolescents had e-mail and instant messaging accounts, one mother reported adolescent access to e-mail but not instant messaging, and six mothers reported adolescent access only to the Internet. Narratives indicated that group membership shaped mothers' willingness to allow adolescents access to various components of the Internet as well as the strategies mothers use to maintain boundaries. These strategies varied based on levels of permissible interactions and communications on-line and ranged from not allowing access to communication components, using parental control software to restrict types of communications and interactions engaged in while on-line, and allowing adolescent unrestricted access to such components.

Restricted Access. In an effort to control adolescents' possible interactions and communications on-line, several mothers spoke of restricting adolescents from having their own e-mail and instant messaging accounts. These mothers believed that by

restricting access to communications components, they would be able to limit

adolescents' exposure to on-line risks. The following mother had considered allowing her

adolescent access to e-mail and instant messaging but decided against it:

> I started to set them up with that but, you know, I think
> maybe I want a little bit more control then that . . . because
> I think that the internet with access to others, I mean; there
> are some people out there that's not very nice
> (*Carly, HARO, Upper SES European American mother*)

Some mothers were willing to allow adolescents opportunities to use parents' e-

mail accounts to communicate with select groups of individuals but not have their own

accounts. When asked if her son used e-mail or IM, one mother gave the following

response, "he doesn't have his own account, he would have to go through ours" (Mary,

HARO, Upper SES European American mother). This type of restricted use allowed

mothers to closely monitor communications via e-mail. "She uses my e-mail address for

Emily to send [e-mails] to, it comes up and I tell Lauren. She goes and reads it and I let

her do it on-line but that way I know what she's getting" (*Carly, HARO, Upper SES*

European American mother).

All of the mothers who restricted access to e-mail and IM as a specific strategy

for maintaining boundaries between families and the outside world and controlling

possible on-line interactions and communications of adolescents were HARO mothers

who perceived AIU as risky. These mothers acted on their concerns by restricting access

to various communication components and essentially closing boundaries between

families and outsiders, thus minimizing possible risky interactions.

Parental Control Software. Another strategy mothers used to maintain boundaries regarding adolescent interactions and communications on-line was through the use of parent- control software. Twenty-six percent (n = 4) of the mothers in our sample indicated utilizing parental- control software to limit on-line activities and interactions; however, these mothers did not all use controls in the same manner. Only one mother who spoke of using parental controls also indicated restricting access to e-mail and IM. The other three mothers allowed access to e-mail and IM but limited the individuals with whom adolescent could communicate. With the use of parental controls, these mothers had more control over the types of interactions and communications adolescents had on-line. With this increased control, mothers were willing to allow access. ". . . he is restricted from getting incoming e-mails but he could e-mail and IM with his girlfriend" *(Pamela, HARO, Lower SES African American).*

Of the four mothers who indicated utilizing parental controls, two were HARO and two were BO mothers. Differences were observed between HARO and BO mothers as they discussed the use of parental control software. HARO mothers were more likely to indicate the use of parental controls early on in discussion of Internet use rather than waiting to be asked by interviewers. For example, when the interviewer asked one of the HARO mothers if her adolescent had access to e-mail or IM, she quickly replied; "mm-mm (negative), mm-mm (negative). Everything's blocked" (*Keisha, HARO, Lower SES African American*). Similarly, the other HARO mother who used parental control software mentioned so as soon as she was asked about e-mail and IM access.

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Interviewer:    Does he have e-mail?
Mother:         Yes, but he's restricted.
Interviewer:    Does he have instant messaging?
Mother:         Uh-huh (affirmative), yeah, but he's restricted.
                (*Pamela, HARO, Lower SES African American*)
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Unlike these HARO mothers, BO mothers who indicated using parental control software did so much later in the conversation and when directly asked by the interview about rules and guidelines for AIU. For example, after discussing particular rules set in place for her family, Stacy mentioned the use of parental controls almost as an after-thought: "Oh, and we have blocks on the computers as far as like what they have access to" (*Stacy, BO, Upper SES, European American*). Similarly, after discussing her particular rules, Linda then added "I have things set on my computer so rules like that are not an issue…I have parental control software" *(BO, Lower SES, European American).*

Unrestricted Access. Six mothers in our sample indicated allowing adolescent children to use e-mail and/or IM without the presence of parental controls. These mothers indicated feeling comfortable with the various ways their adolescents used e-mail and IM. For example, when asked how often and for what purpose her son used e-mail and IM, Carla gave the following reply "I'd say he might be on daily, every other day he's on it. Instant messaging is more for people around here, it seems like. And then e-mail, he's got cousins in Virginia and things like that" *(Carla, BO, Lower SES, European American).* When asked the same question, another mother replied, "I don't know if she communicating with her friends via e-mail, 'cause they AIM, they instant message like crazy. They always on AIM" (*Brenda, LARO, Lower SES, African American*).

Analysis examining patterns in access and mothers' attitudes about the risks and benefits of AIU indicated that mothers who were more willing to allow adolescents access to communication components of the Internet without the use of parental controls were mothers identified as low affect risk oriented or benefits oriented mothers. Increased willingness to permit this type of Internet access is likely due to the less emotional responses to risks associated with communications on-line

Variations in Access to e-mail and IM

Mothers' willingness to allow adolescents access to the various components of the Internet was also influenced by child interest. All three LARO mothers whose adolescents did not have their own e-mail or instant-messaging accounts spoke about adolescent lack of interest as the primary reason for this. When asked why her son did not have access to e-mail or instant messaging, one LARO mother indicated "it's just not come up yet" (*Betty, LARO, Upper SES European American mother*). Another low affect oriented mother spoke about how her son was set up for e-mail and instant messaging but showed no interest in using them:

> Interviewer: Does he have access to e-mail or instant messaging?
> Mother: We have IM, I've set him up but, you know, he doesn't use it.
> Interviewer: Okay, what about e-mail?
> Mother: I mean he could have one, I mean, we have it to where he could have one. He's never asked for it and I've never offered it so, I mean, and it's not like I'm trying to keep it from him. I just, he's just not interested in it (*Joan,* LARO, *Upper SES European American)*

These LARO mothers acknowledged that communicating via the Internet would likely become an issue for discussion in their families in the near future; "Right now, his friends are doing…I'm sure that's gonna be one of the things that comes soon" (*Joanne, LARO, lower SES*, *European American).* However, at the time of these interviews, these mothers considered it "one less thing I have to worry about" (*Joan*, LARO, *Upper SES European American).*

Maternal Regulation of AIU

Not all mothers indicated actively regulating the activities that adolescent engaged in while on-line. In fact, over 66% of the mothers in this sample indicated making no such efforts. Narratives of mothers indicated that mothers' thoughts about the need for explicit rules regarding interactions and communications on-line were related to mothers' attitudes about the risks and benefits of AIU and boundaries placed on adolescent use of such components. Mothers who actively regulated adolescent interactions and communications on-line discussed using contact-limiting and access-limiting rules to do so.

No Efforts to Regulate. Ten mothers in our sample indicated having no specific rules for adolescent activities on-line. Six of these ten mothers were mothers of adolescents who did not have their own e-mail or IM accounts. Since these adolescents did have access to e-mail and IM, many of the online risks associated with AIU were eliminated. These mothers had little to say regarding their efforts to regulate adolescent interactions and communications on-line because adolescents never had the opportunity to engage in such activities. As a result, these mothers felt they didn't need any specific

rules, "…he doesn't have access to anything" (Keisha, HARO, Lower SES, African American). When examined in relation to mothers' attitudes about the risks and benefits of AIU, three of these mothers were labeled as HARO and three labeled as LARO. The three HARO mothers restricted access to communication components and the three LARO mothers had children not interested in using such components. These findings suggest that mothers who actively restricted adolescent access to e-mail and instant messaging were less likely to have specific rules about adolescent Internet activities on-line.

Similarly, mothers who restricted access to e-mail and IM that using parental controls were also less likely to have rules regarding interactions and communications on-line because the use of parental controls had in a sense closed the permeability of boundaries between their children and the outside world. The majority of mothers who used parental control software indicated making no further efforts to regulate adolescent activities on-line. Two mothers did indicate placing restrictions on when adolescents could use the Internet but made no specific rules about on-line behaviors. The following except illustrates such a maternal strategy:

> Interviewer: How frequently does he use either e-mail or chatting?
> Mother: On the weekends. Uh, he does it, well he's not really allowed to do it during the week.
> Interviewer: Ok, is that a rule that you've set up?
> Mother: Mm-hm [affirmative].
> Interviewer: Do you have any other rules or guidelines?
> Mother: I have things set on my computers so that rules like that aren't an issue. [laughs]
> Interviewer: Ok, like software-
> Mother: I have the parenting-control software, Mm-hm (*Linda, BO, Lower SES, European American mother).*

When examined in relation to mothers' attitudes about the risks and benefits of adolescent use of Internet communication components, the two mothers who indicated using time-restraint rules to regulate when and how long adolescents could use the Internet were both labeled as BO mothers. The two remaining mothers who had no rules regarding adolescent activities on-line were HARO mothers. These finding suggest that mothers who use parental control software to maintain the boundaries placed on AIU are less likely to actively regulate the activities adolescent engage in once on-line.

Efforts to Regulate. The five mothers in our sample who set rules for adolescent Internet activities overwhelmingly indicated regulating with whom adolescent could communicate via the Internet as well as the modes of such communication. Mothers indicated using *contact-limiting* rules in an effort to limit possible communications and interactions adolescents might have with unknown individuals. "He can only e-mail people that we know" (*Sarah, LARO, Upper SES, European American*). Some mothers seemed to be more concerned about interactions and communications that might occur via IM than those from e-mail. The following exchange illustrates such thinking:

Interviewer: Do you have any rules or guidelines about how he uses e-mail?
Mother: No, I guess I don't.
Interviewer: What about instant messaging?
Mother: I've, you know, of course, said don't talk to someone that you don't necessarily know
(*Carla, BO, Lower SES European American)*

Another mother went beyond limiting communication and interactions to only known individuals and restricted her daughter to IMing within her core group of friends only.

> We have agreed that she won't be IMing anyone that's not
> in her circle of friends, period. No friends of friends. If they
> are not her friends then she has not business on AIM with
> them. No friends of friends, no, hmm-mmm
> (*Brenda, LARO, Lower SES African American*).

Mothers also used *access-limiting* rules to regulate areas of the Internet that adolescent were not allowed to use. Three mothers in our sample spoke of using *access-limiting* rules in an effort to restrict adolescents from using Internet components such as chat rooms, "she's not allowed in chat rooms" (*Angie, BO, Upper SES European American mother*). Stacy *(BO, Upper SES American mother)* had the following rely when asked if her daughter was allowed to use chat rooms, "that is off limits and out of the question." An overwhelming number of mothers in our sample spoke about the risks of chat rooms but only those mothers whose adolescents had access to chat rooms indicated having specific rules about their use.

An examination of the relation between maternal efforts to regulate adolescent Internet activities and mother attitudes indicated that of the five mothers who made efforts to regulate the activities and interactions of adolescents on-line, four mothers were identified as BO and one as LARO. These numbers suggest that mothers who have moderate to low emotional reactions to the risks associated with AIU and who perceive potential benefits to it use are more likely to allow access to communication components and, as a result, were more likely to actively regulate its use.

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Maternal Monitoring of AIU

Similar to the patterns observed regarding regulation of AIU, not all mothers indicated monitoring the activities that adolescents engaged in while on-line. Eight mothers spoke of specific strategies for monitoring adolescent activities on-line and seven mothers did not. Six of these mothers allowed adolescents access to e-mail and IM while two mothers indicated that their adolescents did not have access to e-mail and IM. Narratives indicated that mothers' thoughts about the need for monitoring adolescent interactions and communications on-line were related to mothers' attitudes about the risks and benefits of AIU and boundaries placed on adolescent use of such components. Mothers who spoke of monitoring adolescent activities discussed using both technical and non-technical methods to gain knowledge of adolescent activities on-line.

No Monitoring. Analysis of mothers' narratives indicated that mothers' beliefs regarding the need for monitoring Internet activities were indicative of the boundaries and regulations placed on its use. HARO and LARO mothers whose adolescents did not have access to communication components of the Internet were less likely to speak about specific strategies for monitoring adolescents' activities on-line since activities and interactions were restricted. For these mothers, even the location of the computer was not used as a tool for monitoring. The following excerpt illustrated this phenomenon:

> Interviewer: Is there a specific reason why you have it
> [the computer] in your room?
> Mother: Mm. No. I mean, it's just-
> Interviewer: You just keep it in there?
> Mother: Yeah.
> (*Andrea, Lower SES African American mother*)

Regardless of profile, mothers who used parental controls were also less likely to monitor adolescent activities on-line. When asked if she ever reviewed her son's e-mails or history, one HARO mother replied, "No, no, since I had him restricted, he couldn't get much" (*Pamela, HARO, Lower SES African American mother*). Mothers who used parent-control software felt secure enough not to use other monitoring strategies. The following BO mother explained why using parental controls made her feel she did not need to read her son's e-mails or IMs

> Mm. No, um, cause with the parental controls that, that we have on there, he, uh, not so many people can e-mail him [laughs] or IM him. …I set up the account for him and gave him their addresses and their IMs, so, you know, or I know who, you know, he's talking to because I set it up for him *(Linda, BO, Lower SES European American)*

Technical Monitoring. Technical monitoring strategies consisted of checking Internet history to gain knowledge of web sites adolescents visited while on-line as well as checking e-mail/IM logs to gain knowledge of communications sent and received. One mother spoke of her husband's efforts to monitor Internet activities, "... my husband always goes in after the kids are on the computer and he looks at the history to see exactly where they've been, so [as to] kind of get a grasp on things, you know" (*Tiffany, LARO, Upper SES African American)*. Another mother discussed how she would often check her son's e-mail account to gain knowledge of his activities:

> Mother:　　　　I have his account number and I look at it, so.
> Interviewer:　Ok, so you have his password.
> Mother:　　　　Mm-hm.
> Interviewer:　How often would you say you do that?

Mother: [pause] I don't know, I don't know but I look at it often enough to know when he's doing something he isn't supposed to do
(*Sarah, LARO, Upper SES European American*)

Non-technical Monitoring. Some mothers used non-technical methods for monitoring activities engaged in online such as placing the family computer in an area of the home that allowed them to walk by and observe on-line activities. In the following excerpt, one mother whose daughter did not have access to e-mail and IM discussed the location of the family computer as a way to monitor activities online:

…the reason why it's right there in the open is so that we can kind of keep tabs on what they're doing. I mean, not that we go up there and stand over their shoulder but I could walk back and forth or I could sit over here and I can see what she's looking at, you know. And kind of monitor it, you know and that's what, what we do.
(*Carly, HARO, Upper SES European American*)

Other mothers spoke of sitting down with adolescents at the computer and watching or talking to children to learn about their activities. One mother said," yeah, sometimes I sit out there with her when she's talking to people. You know, sometimes she'll be like, 'mom, stop' and other times she lets me" *(Angie, BO, Upper SES European American)*.

An examination of the relation between maternal monitoring of adolescent Internet activities and mother attitudes indicated that all eight mothers who made efforts to monitor the activities and interactions of adolescents on-line were identified as BO or LARO. This suggests that mothers who have moderate to low emotional reactions to the risks associated with AIU and who perceive its use as potentially beneficial were more

likely to allow access to communication components, but were also more likely to actively regulate Internet use and, as a result, to monitor what adolescents did on-line.

Ethnic and Social Class Differences

In addition to varying in terms of the ways in which they thought about AIU and the manner in which they regulated and monitored such use, mothers also varied by on race/ethnicity and social class. It was of interest to consider whether the patterns reported here might look different within families that varied according to these demographic characteristics. Specifically, we examined racial/ethnical and social class differences in maternal attitudes, maternal regulation and maternal monitoring of AIU. Differences were observed in maternal attitudes based on both race/ethnicity and social class. Patterns in mothers' regulation of adolescent Internet use showed variations with respect to race/ethnicity but not SES. There were no racial/ethnic differences in the types of monitoring strategies used by mothers. However, maternal monitoring efforts did indicate variations with respect to SES.

Maternal Attitudes Regarding AIU. Mothers' patterns of thinking about adolescent use of the Internet to communicate were cross-tabulated by both ethnicity and socioeconomic status. Of the six African American mothers who currently indicated having access to Internet, two were labeled as HARO, three as LARO and one as BO. Of the nine European American mothers, two were labeled HARO, three as LARO and four as BO. In terms of SES, two low SES mothers were labeled as HARO, two as LARO and one as BO. Of the ten upper SES mothers, two were labeled as HARO, five as LARO and

three as BO. These patterns suggested that African American mothers and mothers from less economically advantaged backgrounds were more likely to have higher emotional reactions to AIU and less likely to have beliefs that the Internet could be beneficial to children.

Maternal Regulation of AIU. Patterns in mothers' regulation of adolescent Internet use were cross-tabulated by both race/ethnicity and socioeconomic status and showed slight variations with respect to race but not SES. African American mothers who allowed unrestricted access to Internet components were less likely to have explicit rules regarding Internet behaviors than were European American mothers. Of the three African American mothers who allowed unrestricted access to e-mail and IM, only one mother spoke of having specific rules for behaviors on-line. On the other hand, all three of the European American mothers who allowed unrestricted access to Internet components spoke of having specific rules for adolescent behaviors on-line.

Maternal Monitoring of AIU. Patterns in mothers' monitoring of adolescent Internet use were cross-tabulated by both race/ethnicity and socioeconomic status There were no ethnic/racial differences in the types of monitoring strategies used by mothers. However, maternal monitoring efforts did indicate variations with respect to SES. Low SES mothers who allowed access were less likely to speak of monitoring efforts compared to upper SES mothers. Of the eight mothers who mentioned monitoring adolescent activities on-line, seven were high SES mothers and only one low SES.

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CHAPTER VI

DISCUSSION

Qualitative interviews with mothers of early adolescent children indicated that mothers think about and manage adolescent use of the Internet in different ways. Mothers' attitudes about the risks and benefits of adolescent Internet use shaped the manner in which they thought about the permeability of boundaries (defined in terms of AIU) between families and the outside world and the mechanisms they put in place to maintain this permeability. I discuss findings as they relate to mothers' attitudes regarding the risks and benefits of AIU to communicate, maternal regulation and monitoring of Internet use, and racial/ethnical and social class differences. I will conclude with a discussion regarding the use and application of Family Systems Theory as the theoretical foundation for this study.

Maternal Attitudes Regarding AIU

Unique to this study was its consideration of mothers' attitudes about the risks and benefits of AIU for communication as shaping mothers' behaviors as they related to adolescent access and use of the Internet and its various communication components. Historically, research that has considered the role of parents with respect to adolescent Internet usage has focused on identifying parental beliefs about the risks and benefits of adolescent use of the Internet (Lenhart et al., 2005; Mesch, 2006; Turrow, 1999; Turrow & Nir, 2000). Given the increase public discourse around AIU as well as previous

research that has indicated that parents have both positive and negative thoughts about the AIU, it is important to consider how such attitudes shape subsequent maternal behaviors with respect to their children's use of internet components.

According to family systems theory, the boundaries families place between themselves and the outside world, the type and flow of information into and out of the family, and the family's openness to others and environmental content and influences are all shaped by the norms, values, and beliefs of family members. Vandewater et al. (2005), found this to be true in their study of children's television viewing, reporting that parents' negative attitudes towards television were strongly related to the types of boundaries placed on its use. Parents with negative attitudes towards television viewing differed in the boundaries placed on television viewing compared to parents with more positive attitudes towards television.

Focusing on the Internet, results from this study provide evidence that maternal attitudes about AIU for communication are associated with boundaries mothers set with respect to their children's use of the Internet. When the Internet is brought into the home, parents must decide the type of information and communications they are willing to allow adolescents to participate in on-line based on the norms and values established within the family system and parents' beliefs about the media itself. Results from this study suggest that mothers who perceived AIU as more risky and providing little benefit were more likely to address their concerns by restricting adolescents' access to the various components of the Internet. In contrast, mothers with less emotional responses to possible Internet risks and who held beliefs that Internet communications could be

beneficial were more likely to allow their children access to Internet communication components. Closed boundaries with respect to communications and interactions on-line have clear implications for adolescents growing up in a media rich environment. Emerging research suggests that adolescents who do not have access to the Internet or skills in using various Internet communication tools may lack many of the necessary skills needed to function adequately in future educational and work environments (Berkowitz, 2002; Leu, Kinzer, Coiro, & Cammack, 2004). Ironically, many adolescents have access to the Internet and e-mail at school even when it is not allowed at home. Providing no Internet access at home or restricting home access, eliminates the possibly of parents providing insights regarding how to responsibly and safely use Internet communication components as well as providing guidelines for its use.

Extending the work of Vandewater et al. (2005), this study also considered the implications of mothers' attitudes about the risks and benefits of AIU with respect to behaviors of mothers regarding regulation and management of adolescent activities on-line. As illustrated in Figure 1, results from this study indicated that mothers' attitudes about the risks and benefits of AIU shaped the boundaries mothers set in place regarding the access adolescents had to e-mail and instant messaging. These boundaries in turn shaped mothers' perceived needs to regulate and monitor such activities. Such influences are discussed in the following sections.

Maternal Regulation of AIU

Mothers in this sample who attempted to actively regulate the activities their adolescents engaged in while on-line did so using a variety of contact-limiting and

access-limiting rules. Similar to the efforts reported by Wang, Bianchi, & Raley, (2005), Lenhart et al. (2005) and Macgill (2007), some mothers indicate using *contact-limiting* rules in an effort to limit possible communications and interactions adolescents might have with unknown individuals. Additionally, similar to efforts reported by other researchers (Dehue et al., 2008; Lenhart et al.,; Macgill,; Mitchell et al., 2003), some mothers indicated using *access-limiting* rules to regulate adolescents' access to areas of the Internet. For example, mothers using access-limiting strategies might restrict access to social network sites or chat rooms.

In addition to documenting the types of rules that mothers engage in an effort to regulate AIU, this study also identified motivating factors that might explain mothers' decisions to not have rules regarding adolescent interactions and communications on-line. As illustrated in Figure 1, results from this study suggest that mothers' attitudes about the risks and benefits of AIU influences the boundaries mothers set regarding the access adolescents have to e-mail and instant messaging. These boundaries then shaped the need mothers felt to regulate and monitor such activities. From a family systems perspective, families develop rules of transformation in an effort to regulate the boundaries between children and the outside world. If mothers feel they have adequately insulated adolescents from undesirable communications via the Internet, the need for regulation on Internet use becomes unnecessary in the minds of mothers because the opportunities for potentially dangerous or inappropriate interactions have been eliminated. In other words, mothers whose children do not have access to these components or mothers who use parental control software to restrict on-line interactions and communications may not actively

regulate the activities adolescents engage in on-line. Mothers who don't feel the need to close the boundaries where the Internet is concerned will attempt to regulate Internet usage through a variety of strategies. As a result, mothers with adolescents who have access to e-mail and instant messaging are more likely to have rules regarding interactions and communications on-line than mothers' whose adolescents do not have access to these components.

Maternal Monitoring of AIU

Mothers in this sample who attempted to monitor the activities adolescents engaged in while on-line did so using a variety of technical and non-technical strategies. Similar to the strategies reported by Wang et al. (2005), Lenhart et al. (2005) and Macgill (2007), some mothers indicated using non-technical strategies of monitoring such as placing home computers in open areas of the house or occasionally sitting with the adolescent while on-line in an effort to directly observe adolescent Internet behaviors. Similar to findings from Macgill and Rideout (2007), mothers in this sample also indicated using technical means to monitor adolescent Internet activity such as checking web history, reviewing sent or deleted e-mails, and reviewing what adolescents posted on social network sites.

Findings from this sample also indicated that not all mothers engage in strategies to monitor adolescent Internet activities. Similar to findings reported by Wang et al. (2005) and Rideout (2007), nearly 50% of the mothers in this sample did not indicate engaging in efforts to monitor adolescent Internet activities. While other studies have examined variables associated with parental monitoring of adolescent Internet use, few

have gone beyond documenting socio-demographic differences in monitoring. The current study sought to extend previous research by examining how mothers' attitudes about the risks and benefits of AIU might be related to the behaviors of mothers regarding monitoring of AIU. Results from this study suggests that mothers' attitudes about the risks and benefits of AIU is meaningfully related to the boundaries mothers set regarding the access adolescents have to e-mail and instant messaging. These boundaries then shape mothers' feelings regarding the need to regulate and monitor AIU.

From a family systems perspective, families make rules in an attempt to sustain homeostasis or normal functioning and are continuously monitoring the degree to which their functioning is consistent with these rules. Mothers in our sample who indicated that their adolescents had restricted access to the communication components of the Internet, or who used parental control software, were less likely to engage in monitoring activities than were mothers who allowed their adolescents unrestricted access to these components. Our findings suggests that if mothers feel they have adequately insulated adolescents from potential risks associated with using the Internet by restricting access or using parental control software to limit interactions and communications, they are less likely to monitoring the communications and interactions of adolescents on-line. As a result, mothers whose adolescent children have access to e-mail and instant messaging are more likely to have rules regarding interactions and communications on-line and are more likely to monitor on-line activities than mothers whose children do not have access to these components.

Ethnic and Social Class Variations

With regard to socio-demographic characteristics and Internet *access*, this study confirmed that race plays an important role in determining whether or not an adolescent has access to the Internet from home (Day et al., 2005; Lenhart et al., 2005; Raine et al., 2005; Macgill, 2007). All four of the families in this sample who did not have access to the Internet were African American families. Historically, studies examining racial differences in Internet access utilizing adult samples have indicated that European Americans adults have access to the Internet at higher rates than other ethnic groups. For example, Raine et al. (2005) reported in a study of 2,200 adults 18 and older that African American adults were less likely than European American and Hispanic adults to have home Internet access (67%, 59%, 43% respectively). Given that African American adults overall have lower rates of Internet access at home, it not surprising that African American adolescents' access to the Internet would follow a similar pattern.

While this study did detect racial differences regarding home Internet access, findings indicated that there were no differences in access to the Internet between lower and upper SES families. Of the four families that did not have home Internet access, two were upper SES and two were lower SES. Historically, research has indicated that lower SES families are less likely to have Internet access than higher SES families. However, with the cost of technology and Internet access coming down, a family's ability to afford such technology continues to increase. More recent studies suggest educational attainment and computer use outside the home are stronger indicators of access to the

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Internet at home than is income (Lee & Horrigan, 2005; Rothbaum, Martland, & Jannsen; 2008).

This study detected racial/ethnic and social class differences in mothers' attitudes about the risks and benefits of AIU and management of adolescent activities on-line. Patterns suggested that African American mothers and mothers from less economically advantaged backgrounds had more emotional reactions to AIU and were less likely to have beliefs that the Internet could be beneficial to children. As a result, these mothers were less likely to actively regulate adolescent activities on-line and less likely to engage in monitoring once adolescents were on-line. Given that previous research (Day et al., 2005; Lenhart et al., 2005; Macgill, 2007) examining racial/ethnical and social class differences has indicated that African American adults and adults from less economically advantaged backgrounds use the Internet at lower rates than other racial and social class groups, these finding are not surprising. A recent study examining socio-economic differences in parental Internet use and skills found that the higher the SES level, the greater Internet use and skills (Rothbaum et al., 2008). Additionally, Lindbarger and Cherlin (2003) found that parents with low SES backgrounds were less comfortable with the Internet. This lack of Internet use, skills and comfort may influence mothers' abilities to understand and manage the activities adolescents engage in while on-line. Internet skills and understanding also are likely to have implications for maternal regulation and monitoring of Internet use. Mothers who do not know how to use the Internet will likely not have the skills necessary to detangle myths from realities regarding AIU as well as the skills necessary to utilize technical methods of monitoring. Mothers who are more

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fearful of potential risks may not monitor the activities that adolescents engage in because they feel they may not have the necessary expertise or knowledge to do so.

Given that (a) this is the first study conducted that has considered such racial/ethnical and social class differences in maternal attitudes concerning AIU and behaviors related to monitoring such use and (b) the sample size for this study was small, conclusions regarding such differences are tentative. Further research on this topic should seek to understand how parents from a variety of different backgrounds perceive the Internet and its various communication tools, as well as how those perceptions might shape AIU.

Applicability of Family Systems Theory

The current study was framed by key components of family systems theory. The use of family systems theory calls for an examination of whole -family functioning and the cyclical influences that family members have on each other that emerge as patterned and meaningful to family members (Jordan, 2002). Given the complexities related to studying whole-family functioning within a qualitative analysis, this study admittedly reflects a fragmented view of the family processes. From a family systems perspective, limiting interviews to just mothers and not other members of the family system limited my ability to study whole family functioning and findings reflect only a fragmented view of the bidirectional processes involving adolescents', their mothers, and other family members. Despite this limitation, my decision to focus only on mother interview data provided a beginning point for understanding from a family system perspective how families manage new technologies within their homes.

While the assumptions of family system theory were difficult to integrate into the design of this study, the concepts of the theory were much easier to apply. Given that this study sought to examine the influence of mothers' beliefs about the risks and benefits of AIU on the subsequent management of such use, family systems concepts including family boundaries, rules of transformation, and feedback mechanisms were valuable in shaping understanding of how mothers thought about and managed AIU.

It has been argued that family systems theory is not a theory at all and provides little in the way of predictive value (Rosenblant, 1994; White & Klein, 2002). Yet others have suggested that family systems provides a conceptual framework that offer "an explanation for retrospectively observed patterns of a phenomena" (Jordan; 2002, pp 202). It is in this regard that I utilized a family system approach to frame the current study. I sought to understand through qualitative interviews an explanation for the pattern of behaviors that emerged in families regarding adolescent use of the Internet and mothers' management of such use. Key concepts from a family systems perspective provided insight concerning the interpretation of mother's beliefs concerning AIU and how they came to be expressed in concrete actions related to such use. With the addition of multiple family perspectives, it is likely that a family systems approach would provide an even more comprehensive framework within which to study the complexities and interrelatedness of AIU and family member perspectives regarding such use.

Limitations

While the findings from this study suggest racial/ethnic and social class variations in the regulation and monitoring efforts of mothers, the small sample size limited my ability to conduct an in-depth examination of processes specific to such sub-groups.

Additionally, the decision to only include mothers in this study may have provided a limited view at the processes at work here. Given that research has indicated that men use the Internet at higher rates than women (Hargittai & Shafer, 2006) and that fathers are more likely than mothers to use technical methods of monitoring AIU, such as checking website logs (Wang et al, 2005), it is likely that a different picture might have emerged had fathers been included in the sample. It is also possible that adolescents experiences with and use of the Internet might influence mothers' attitudes about the risks and benefits of AIU and the management of AIU in ways not detected here. While this study focused solely on mothers, future research should include data provided by fathers, adolescents, and other family members (e.g., siblings).

Conclusions

Despite the extreme prevalence of Internet usage among contemporary adolescents, researchers have been slow to conduct research focusing on the manner in which such use unfolds within the context of the family. Results from the current study have implications that extend beyond current knowledge concerning AIU to potentially shape the work of applied professionals such as parent educators who work directly with families on issues related to use of technology in the home. Parent educators are increasingly involved in the development of Internet safety programs. Results of this

study suggest that such efforts should take into consideration mothers' attitudes regarding AIU rather than merely developing universal regulation and monitoring strategies that might not work for all families. Family educators might also focus attention on ways to dispel parental misconceptions regarding risks of AIU and partner with parents to determine realistic and appropriate levels of regulation and monitoring to accompany this new learning and communication tool.

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