



IMPACT OF PARENTAL RISK PERCEPTION ON ANXIETY AND SMARTPHONE MONITORING PRACTICES IN BANGLADESH

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ABSTRACT

This study investigates the impact of school-driven technology demands (Distance Learning Context [DLC]) and Parental Risk Perception (PRP) on Smartphone Monitoring Practices (SMP) among homemaker mothers in Uttara, Dhaka, Bangladesh (N = 120), while explicitly evaluating the mediating role of Parental Anxiety (PA). Data were analyzed using multiple linear regression, Pearson correlation.

Multiple regression analysis revealed that DLC ($B = .621, p < .001$) and PRP ($B = .462, p < .001$) significantly predicted maternal anxiety, accounting for 94.7% of its total variance ($R^2 = .947$). Bivariate correlation demonstrated a near-perfect positive relationship between parental anxiety and home monitoring practices ($r = .958, p < .001$). Furthermore, Hayes PROCESS mediation analysis confirmed that parental anxiety significantly mediates the relationship between risk perception and home monitoring behaviors ($ab = 1.2482, 95\% \{ \text{Bootstrap CI} \} [1.0931, 1.4114]$). Crucially, the negative direct path ($c' = -0.1620, p = .018$) demonstrates that cognitive awareness of digital risk alone does not drive active supervision; rather, parental anxiety acts as the indispensable emotional trigger compelling mothers to monitor device use.

KEYWORDS

Digital Distance Learning; Parental Risk Perception; Parental Anxiety; Smartphone Monitoring; Homemaker Mothers; Hayes PROCESS Mediation; Bangladesh.

INTRODUCTION

In recent years, mobile technology has become an essential part of school education worldwide. The shift toward digital and distance learning forced schools to rely heavily on smartphones to deliver lessons, assign homework, and communicate with students (Dhawan, 2020; Selwyn, 2016). While this digital transition ensured that education could continue outside the classroom, it also brought school demands directly into the home environment. For families in developing contexts like Bangladesh, this rapid digital adoption has created unprecedented challenges in everyday domestic life.

In Bangladeshi households, homemaker mothers play the primary role in supervising children's daily routines, education, and moral development. Unlike parents who work outside the home during office hours, homemakers bear the continuous responsibility of managing

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household chores while simultaneously overseeing their children's activities (Spinelli et al., 2020). When schools require students to use smartphones for educational tasks, these mothers are placed on the front lines of digital supervision. However, many mothers view smartphones with deep concern, fearing that uncontrolled device access could expose their children to cyber risks, inappropriate content, health issues, and academic distraction (Stiglic & Viner, 2019).

This tension creates a complex psychological and behavioral dilemma. On one hand, mothers must allow smartphone access so their children can complete schoolwork. On the other hand, high Risk Perception—the belief that mobile devices pose serious moral, physical, and social threats—triggers significant Parental Anxiety (Sorbring, 2014). Rather than feeling supported by educational technology, many mothers experience constant stress, restlessness, and emotional exhaustion as they struggle to differentiate between genuine studying and unproductive screen time (Coyne et al., 2017).

To cope with this emotional strain, parents adopt various Home Monitoring Practices, ranging from strict time limits and device lockouts to intrusive surveillance and physical co-viewing (Hawk et al., 2010). While previous literature has extensively examined digital media mediation in Western contexts (Nikken & Schols, 2015), little research explores how school-driven smartphone requirements impact the domestic atmosphere in South Asian households—particularly among homemaker mothers managing multi-child families.

Furthermore, existing studies often view parental monitoring as a direct response to perceived risk. Grounded in Cognitive Appraisal Theory (Lazarus & Folkman, 1984), this study argues that Parental Anxiety acts as a critical mediating variable that transforms perceived risk and distance learning pressure into supervisory action (Coyne et al., 2017). Understanding this emotional mechanism is vital for developing realistic educational policies that do not overburden families.

To address these gaps, this study investigates the impact of parental risk perception and distance learning demands on home monitoring practices among homemaker mothers in Bangladesh, examining the mediating role of parental anxiety. Specifically, this research addresses three key objectives:

1. To evaluate how school technology requirements and perceived digital risks contribute to parental anxiety among homemakers.
2. To examine how parental anxiety influences the monitoring strategies mothers use at home.
3. To determine whether parental anxiety mediates the relationship between risk perception and monitoring practices.

By examining these dynamics, this paper contributes to the growing literature on educational technology and digital parenting in South Asia. Practically, the findings offer insights for educators and policymakers to design digital learning frameworks that support students without causing domestic conflict or emotional strain on parents. Following is a brief literature review covering each of above core variables in our study.

LITERATURE REVIEW

Distance Learning Context (DLC)

The rapid adoption of mobile-assisted educational technology has redefined traditional boundaries between school and home (Dhawan, 2020; Selwyn, 2016). In distance and blended learning environments, educational institutions rely heavily on mobile messaging platforms (e.g., WhatsApp, Facebook Groups) and digital documents to assign coursework. While this shift ensures educational continuity, literature indicates that it shifts significant administrative and operational responsibilities onto parents—a phenomenon known as institutional reliance

(Spinelli et al., 2020). In South Asian households, where space and technological devices are frequently shared among multiple family members, school-mandated digital activities create daily routine disruptions and elevate household friction.

Parental Risk Perception (RP)

Risk perception refers to an individual's subjective assessment of the severity and likelihood of potential negative outcomes (Lazarus & Folkman, 1984). In digital parenting literature, parental risk perception is multi-dimensional, spanning moral, physical, and cyber safety concerns:

Moral and Cultural Risks

Parents express concern that unmonitored smartphone use exposes children to content that contradicts religious, ethical, or family values (Livingstone & Third, 2017; Smahelova et al., 2015).

Health and Physical Risks

Excessive screen time is widely linked by parents to vision impairment, sleep disruption, physical inactivity, and device addiction (Lissak, 2018; Stiglic & Viner, 2019).

Cyber Safety Risks

Fears surrounding cyberbullying, online harassment, and exposure to harmful online strangers remain major drivers of parental apprehension (Mishna et al., 2012; Sorbring, 2014).

Parental Anxiety (PA)

Grounded in Cognitive Appraisal Theory (Lazarus & Folkman, 1984), anxiety functions as the emotional reaction triggered when an individual perceives a situational demand as threatening or overwhelming. Rather than acting purely rationally, parents experience significant affective strain—including feelings of restlessness, guilt, and fear of loss of control—when managing their children's technology use (Coyne et al., 2017). Literature highlights that distance learning intensifies this anxiety because parents must simultaneously facilitate necessary academic device use while fearing the risks associated with unmonitored access. In this study, Parental Anxiety operates as a mediator, serving as the internal psychological mechanism through which external demands (DLC) and cognitive appraisals (RP) translate into outward supervisory actions.

Smartphone Monitoring Practices (SMP)

Parental monitoring encompasses the behavioral strategies parents deploy to supervise, track, and regulate their children's activities (Kerr & Stattin, 2000). In digital media research, monitoring practices are broadly categorized into three distinct operational styles:

Restrictive Monitoring

Enforcing strict rules regarding device custody, daily time limits, and forbidden applications.

Intrusive Surveillance

Privacy-invasive actions, such as unannounced inspection of personal text messages, browser histories, and social media logs (Hawk et al., 2010; Laird et al., 2003).

Active / Co-Viewing Monitoring

Constructive and instructional involvement, such as physically sitting alongside the child during screen time or engaging in direct dialogue about online tasks (Austin, 1993; Nikken & Schols, 2015).

METHODOLOGY

Research Design

A quantitative, cross-sectional survey design was employed to evaluate the structural relationships between distance learning technology requirements, parental risk perceptions,

parental anxiety, and home monitoring practices (Creswell & Creswell, 2018). A cross-sectional approach was deemed appropriate as it allowed for the simultaneous assessment of multiple latent constructs across a diverse sample of households at a single point in time (Saunders et al., 2019). Furthermore, a correlational and explanatory research framework was utilized to test directional hypotheses and mediating mechanisms without manipulating the natural domestic environment (Hair et al., 2019).

Data Collection and Analysis

Sample and Data Collection Procedure

Data were collected from a purposive sample of $N = 120$ homemaker mothers residing in Dhaka, Bangladesh, whose children were enrolled in secondary high schools. To ensure contextual diversity across schooling environments, respondents were sampled across four distinct institutional strata: general middle-income households, high-income English Medium households, middle-income Bangla Medium households, and middle-income Madrasa households in Uttara.

The primary data collection was executed using a bilingual (English and Bengali) structured questionnaire administered both physically and digitally via Google Forms. Prior to administration, participant consent was obtained, and complete anonymity was assured. A forward-backward translation process and a pilot test with 10 mothers were conducted to verify semantic clarity and cultural appropriateness.

Data Analysis Techniques

Primary data were coded, cleaned, and analyzed using SPSS. Preliminary data screening involved checking for missing values. Normality was checked too. To address the specific research questions, descriptive statistics, Pearson's correlation, multiple linear regression, and One-Way Analysis of Variance (ANOVA) were performed.

Table 3.1: Mapping Research Questions to Statistical Analysis Techniques

Research Question (RQ)	Variables Analyzed	Statistical Analysis Technique
RQ1: To evaluate how school technology requirements and perceived digital risks contribute to parental anxiety among homemakers.	IV1: Distance Learning Context (DLC) IV2: Parental Risk Perception (RP) DV: Parental Anxiety (PA)	Multiple Linear Regression Analysis
RQ2: To examine the relationship between parental anxiety and monitoring strategies of mothers use at home.	IV: Parental Anxiety DV: Smartphone Monitoring Practices	Pearson Correlation (r)

RQ3: To determine whether parental anxiety mediates the relationship between risk perception and monitoring practices.	IV: Parental Risk Perception (RP) Mediator: Parental Anxiety (PA) DV: Smartphone Monitoring Practices (SMP)	Hayes PROCESS Macro (Model 4) for Indirect Mediation Effects (Bootstrapping, 5,000 resamples)
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Instrumentation

The survey instrument comprised two main parts: Section A collected demographic and contextual profile data (education level, child's grade, device sharing setup, daily phone study hours), while Section B measured the core theoretical constructs using a 5-point Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

Distance Learning Context (DLC)

The DLC scale assessed the domestic operational strain imposed by institutional reliance on digital platforms and homework scheduling. The 6 items of the scale was adapted from Spinelli et al. (2020). Sample items included: *"My child's school heavily relies on smartphone platforms to assign homework"* and *"Managing my child's smartphone assignments frequently disrupts my daily household chores."*

Parental Risk Perception (RP)

The RP scale measured mothers' subjective appraisals of potential digital harm across moral/cultural, health/physical, and cyber safety domains. Adapted from Stiglic and Viner (2019), this 6-item scale included items such as: *"I fear that unrestricted smartphone use will expose my child to immoral content"* and *"I believe excessive smartphone screen time is causing vision problems or physical weakness in my child."*

Parental Anxiety (PA)

The PA scale measured affective stress, internal restlessness, and fear of loss of digital control. Grounded in Cognitive Appraisal Theory (Lazarus & Folkman, 1984), 6 items were adapted from the Parental Anxiety Scale for Digital Media Use. Sample items included: *"I feel a strong sense of internal restlessness ('disturbed feeling') whenever my child is holding the smartphone"* and *"My stress levels spike when I cannot see what specific screen or app my child is looking at."*

Smartphone Monitoring Practices (SMP)

The SMP scale evaluated parental supervisory behaviors across three distinct sub-dimensions: Restrictive Monitoring (3 items), Intrusive Surveillance (2 items), and Active/Co-viewing Monitoring (2 items). The items were synthesized from validated scales by Hawk et al. (2010). Sample items included: *"I keep the phone locked or in my personal custody, only releasing it for specific assignments"* (Restrictive) and *"I physically sit right next to my child while they are completing their online school assignments"* (Active).

ANALYSIS AND RESULTS

Descriptive Analysis of Demographic Variables

A descriptive analysis of the demographic characteristics ($N = 120$) indicated that the participating mothers were well-educated, with the majority holding a Bachelor's degree

(39.2%, $n = 47$) or a Master's degree (27.5%, $n = 33$), followed by those who completed Higher Secondary Certificate (HSC) education (23.3%, $n = 28$) and Secondary education (10.0%, $n = 12$). Regarding their children's schooling, 53.3% ($n = 64$) were enrolled in secondary high school (Grades 9–10), while 46.7% ($n = 56$) were in junior high school (Grades 6–8). In terms of smartphone access arrangements at home, 37.5% ($n = 45$) of children relied on their mother's personal device, 32.5% ($n = 39$) possessed their own dedicated device, and 30.0% ($n = 36$) shared a smartphone with their siblings.

Table 1: Demographic Characteristics of Participants ($N = 120$)

Demographic Variable	Category	n	Percentage
Mother's Education	Secondary	12	10.0
	Higher Secondary Certificate (HSC)	28	23.3
	Bachelor's Degree (BA)	47	39.2
	Master's Degree (MA)	33	27.5
Child's Grade Level	Grade 6–8 (Junior High)	56	46.7
	Grade 9–10 (Secondary High)	64	53.3
Device Sharing Setup	Mother's Device	45	37.5
	Own Device	39	32.5
	Siblings' Device	36	30.0

This study had three key objectives:

1. To evaluate how school technology requirements and perceived digital risks contribute to parental anxiety among homemakers.
2. To examine how parental anxiety influences the specific monitoring strategies mothers use at home.
3. To determine whether parental anxiety mediates the relationship between risk perception and monitoring practices.

To fulfill the first research objective, Multiple Linear Regression Analysis was employed.

Multiple Regression Analysis for RQ1

Diagnostic checks confirmed that the necessary statistical assumptions for multiple linear regression were satisfied:

Normality of Residuals

The regression standardized residual histogram demonstrated an approximately normal bell-shaped curve. Furthermore, the Normal P-P Plot showed that observed cumulative probabilities closely aligned with the diagonal expected line.

Homoscedasticity and Linearity

The standardized residual scatterplot against standardized predicted values revealed a random, rectangular distribution of residuals. No noticeable patterns or funneling were found.

Multicollinearity

Multicollinearity diagnostics indicated no collinearity issues. The Tolerance values for both predictors were 0.631 (well above the 0.20 cut-off), and the Variance Inflation Factor (VIF) values were 1.585 (well below the conservative threshold of 3.0 or 5.0). The Condition Index reached a maximum of 22.605.

Overall Model Fit and Explained Variance

The overall regression model was statistically significant, $F(2,117) = 1049.295, p < .001$. The model yielded an exceptionally high multiple correlation coefficient of $R = .973$ and a coefficient of determination of $R^2 = .947$. This demonstrates that 94.7% of the variance in Parental Anxiety is explained simultaneously by Distance Learning Context and Parental Risk Perception (Adjusted $R^2 = .946, SE = 0.18755$).

Table 4.1: Model Summary for Multiple Regression Predicting Parental Anxiety ($N = 120$)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	R ² Change	F Change	df 1	df 2	Sig. F Change (p)
1	.973 ^a	.947	.946	0.18755	.947	1049.295	2	117	< .001

Note. Predictors: (Constant), Parental Risk Perception, Distance Learning Context. Dependent Variable: Parental Anxiety.

Table 4.2: ANOVA Summary Table

Model	Sum of Squares	df	Mean Square	F	Sig. (p)
Regression	73.820	2	36.910	1049.295	< .001 ^b
Residual	4.116	117	0.035		
Total	77.936	119			

Parameter Estimates and Individual Predictors

Both independent variables were positive, statistically significant predictors of Parental Anxiety:

Distance Learning Context: Showed a strong positive and statistically significant influence on parental anxiety ($B = 0.532, SE = 0.023, \beta = .621, t = 23.213, p < .001$). Standardized beta coefficients ($\beta = .621$) indicate that distance learning context is the relative strongest predictor in the model. For every 1-unit increase in distance learning operational demands, parental anxiety increases by 0.532 units.

Parental Risk Perception: Also significantly contributed to predicting parental anxiety ($B = 0.705, SE = 0.041, \beta = .462, t = 17.271, p < .001$). For every 1-unit increase in perceived digital risk, parental anxiety increases by 0.705 units.

Table 4.3: Regression Coefficients and Collinearity Statistics ($N = 120$)

Predictor Variable	Unstandardized B	Std. Error	Standardized Beta (β)	t-statistic	Sig. (p)	Tolerance	VIF
(Constant)	-1.422	0.143	—	-9.952	< .001	—	—
DLC	0.532	0.023	.621	23.213	< .001	.631	1.585
PRP	0.705	0.041	.462	17.271	< .001	.631	1.585

Note. Dependent Variable: Parental Anxiety

Bivariate Correlation Analysis for RQ2

To address Research Question 2—examining the relationship between parental anxiety and the smartphone monitoring strategies mothers use at home—a Pearson bivariate correlation analysis was conducted.

Statistical Output and Bivariate Association

The analysis evaluated $N = 120$ homemaker mothers across the study sample. The Pearson correlation coefficient revealed an extremely strong, positive, and statistically significant linear relationship between Parental Anxiety and Smartphone Monitoring Practices ($r = .958, p <$

.001).

Table 4.4: Pearson Correlation Matrix Between Parental Anxiety and Smartphone Monitoring Practices ($N = 120$)

Variable	1	2	p-value	N
1. SMP	1	.958**	< .001	120
2. PA	.958**	1	< .001	120

Note. . Correlation is significant at the 0.01 level (2-tailed)

Strength and Direction of Effect: The correlation coefficient of $r = .958$ indicates a nearly perfect positive association between the two constructs. This demonstrates that higher levels of affective distress, restlessness, and fear of digital harm in mothers are

almost directly aligned with increased implementation of smartphone monitoring behaviors. This suggests that as mothers' emotional anxiety regarding digital media use intensifies, their engagement in home supervisory and monitoring practices increases proportionally.

Statistical Significance

The two-tailed significance test yielded $p = .000$ ($p < .001$), confirming that this strong association is highly statistically significant and not an artifact of sampling error.

Coefficient of Determination

(r^2): Squaring the correlation coefficient ($r^2 = .958^2 = .9177$) reveals that 91.8% of the shared variance in home monitoring strategies is directly associated with parental anxiety levels among homemaker mothers.

Mediation Analysis for RQ3 (Hayes PROCESS Model 4)

To address the third Research Question determining whether Parental Anxiety mediates the relationship between Parental Risk Perception and Smartphone Monitoring Practices—a mediation analysis was conducted using Andrew F. Hayes' PROCESS Macro (Model 4) with 5,000 bias-corrected bootstrap resamples.

**Hayes PROCESS Model 4 -
Mediation Path Diagram
(Generic)**

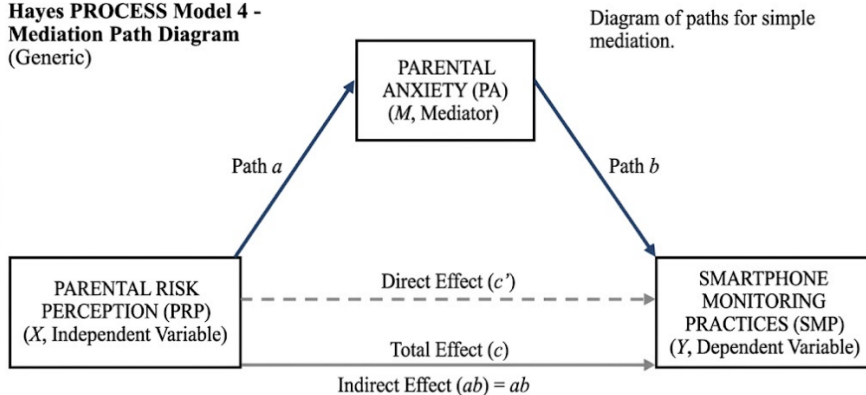


Figure 1. Generic Mediation Model for Simple Mediation
* $p < 0.05$, ** $p < 0.001$ (not applied to generic model)

Descriptive Statistics and Bivariate Correlations

Descriptive statistics across the sample ($N = 120$) showed high mean scores for Smartphone Monitoring Practices ($M = 4.22, SD = 0.75$), Parental Risk Perception ($M = 4.32, SD = 0.53$), and Parental Anxiety ($M = 3.58, SD = 0.81$). Pearson correlation coefficients revealed strong, positive, and statistically significant relationships among all three constructs:

- Risk Perception and Parental Anxiety: $r = .839, p < .001$
- Risk Perception and Monitoring Practices: $r = .769, p < .001$
- Parental Anxiety and Monitoring Practices: $r = .958, p < .001$

Regression Paths and Indirect Mediation Effect

The PROCESS mediation model evaluated three regression equations:

Path a: Parental Risk Perception significantly predicted Parental Anxiety, $F(1,118) = 280.63, p < .001, R^2 = .704$. For every 1-unit increase in perceived digital risk, parental anxiety increased by 1.281 units ($a = 1.281, SE = 0.077, t = 16.752, p < .001, 95\% CI [1.130, 1.433]$).

Path b : Controlling for risk perception, Parental Anxiety significantly predicted Smartphone Monitoring Practices ($b = 0.974$, $SE = 0.044$, $t = 22.028$, $p < .001$, 95% CI [0.887,1.062]).

Direct Effect (c'): Controlling for parental anxiety, the direct effect of Risk Perception on Monitoring Practices was negative and statistically significant ($c' = -0.162$, $SE = 0.068$, $t = -2.399$, $p = .018$, 95% CI [-0.296, -0.028]).

Total Effect (c): The total unmediated effect of Risk Perception on Monitoring Practices was positive and statistically significant ($c = 1.086$, $SE = 0.083$, $t = 13.085$, $p < .001$, 95% CI [0.922,1.251]).

The Indirect Mediation Effect ($a \times b$)

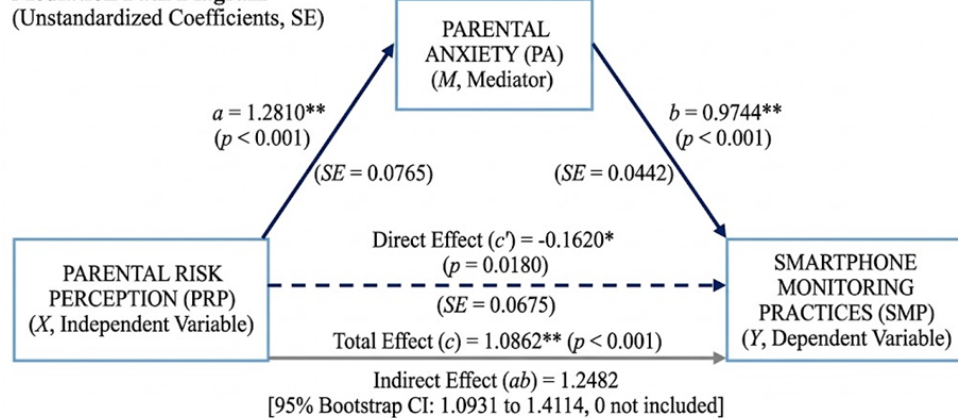
The primary test of mediation—the indirect effect of Parental Risk Perception on Smartphone Monitoring Practices via Parental Anxiety—yielded a path coefficient of 1.2482 (Boot $SE = 0.0805$). The 95% bias-corrected bootstrap confidence interval ranged from 1.0931 to 1.4114. Because this interval does not cross zero, Parental Anxiety is a statistically significant mediator in the relationship between perceived digital risks and home monitoring behaviors.

Table 4.5: Hayes PROCESS Model 4 Mediation Results ($N = 120,5,000$ Bootstrap Samples)

Model Path	Coefficient (B)	SE	t-statistic	p-value	95% CI [LL,UL]
Path a : PRP → PA	1.2810	0.0765	16.7520	< .001	[1.1296,1.4325]
Path b : PA → SMP	0.9744	0.0442	22.0282	< .001	[0.8868,1.0620]
Direct Effect (c'): PRP → SMP	-0.1620	0.0675	-2.3992	.0180	[-0.2958, -0.0283]
Total Effect (c): PRP → SMP	1.0862	0.0830	13.0850	< .001	[0.9218,1.2506]
Indirect Effect ($a \times b$): PRP → PA → SMP	1.2482	0.0805	—	—	[1.0931,1.4114]

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit. Bootstrap sample size = 5,000.

**Hayes PROCESS Model 4 -
Mediation Path Diagram**



Empirical Model & Interpretation

The total model explains 92.07% of the variance in Smartphone Monitoring Practices ($R^2 = .9207, F(2,117) = 679.54, p < .001$).

The empirical paths are summarized as followed:

Indirect Path ($a \times b$): $1.2810 \times 0.9744 = 1.2482$

Total Effect Formula ($c = c' + ab$): $-0.1620 + 1.2482 = 1.0862$

Theoretical Meaning of Findings:

Anxiety as the Core Engine: Perceived digital risk alone does not automatically lead to effective monitoring. Instead, Risk Perception strongly generates Parental Anxiety ($a = 1.2810$), which then directly drives active and restrictive monitoring strategies ($b = 0.9744$).

Negative Direct Effect ($c' = -0.1620$): When Parental Anxiety is controlled, the remaining direct relationship between risk perception and monitoring practices turns slightly negative. This indicates that without the emotional activation of anxiety, merely perceiving a risk does not compel mothers to engage in active monitoring—it is the emotional strain and anxiety that propels parents into action.

DISCUSSION

This study investigated the structural relationships among Distance Learning Context (DLC), Parental Risk Perception (PRP), Parental Anxiety (PA), and Smartphone Monitoring Practices (SMP) among homemaker mothers in Bangladesh. The empirical findings provide substantial support for the conceptual model. The multiple regression results confirmed that both distance learning demands ($\beta = .621$) and parental risk perceptions ($\beta = .462$) are strong, positive predictors of parental anxiety ($R^2 = .947, p < .001$). School-mandated smartphone reliance introduces operational strain into the home (e.g., managing shared devices, homework schedules via messaging apps), which directly exacerbates domestic stress and maternal emotional restlessness.

Bivariate correlation analysis demonstrated a very strong positive association between parental anxiety and home monitoring practices ($r = .958, p < .001$). As mothers experience higher emotional distress and fear of digital harm, their implementation of

supervisory behaviors—including restrictive rules, device lockouts, intrusive checking, and co-viewing—increases proportionally.

Grounded in Cognitive Appraisal Theory (Lazarus & Folkman, 1984), Hayes PROCESS Model 4 mediation analysis revealed that parental anxiety significantly mediates the relationship between risk perception and monitoring practices ($ab = 1.2482, 95\% \text{ CI } [1.0931, 1.4114]$). Interestingly, the negative direct effect ($c' = -0.1620, p = .018$) indicates that cognitive awareness of digital risk alone does not automatically translate into active supervision. Instead, parental anxiety serves as the essential emotional trigger that compels homemaker mothers to take supervisory action.

Practical & Policy Implications

Educational institutions and policymakers must recognize that unmanaged digital homework requirements place a heavy psychological and operational burden on homemaker mothers. Schools should establish structured digital guidelines—such as setting clear offline hours for homework delivery—to reduce domestic friction and alleviate maternal anxiety.

CONCLUSION

This study highlights the critical role of parental anxiety in shaping digital parenting within South Asian households. As smartphones become indispensable for secondary education, homemaker mothers find themselves managing a complex balance between supporting their children's academic needs and protecting them from digital risks. The empirical findings demonstrate that school technology requirements and perceived digital risks jointly drive parental anxiety, which in turn acts as the key emotional mechanism driving home smartphone monitoring practices. By understanding this mediating pathway, educators and policymakers can design balanced digital learning frameworks that support student achievement while safeguarding the emotional well-being of families.

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Appendix: Questionnaire

PARENTAL IMPACT OF DIGITAL DISTANCE LEARNING QUESTIONNAIRE

Instructions: Please select the option that best reflects your agreement with each statement. There are no right or wrong answers; we are interested in your genuine experiences as a mother.

SECTION 1: DEMOGRAPHIC & CONTEXTUAL PROFILE

1. Mother's Highest Level of Education:

- ☐ Primary Education or below
- ☐ Secondary School Certificate (SSC / Dakhil)
- ☐ Higher Secondary Certificate (HSC / Alim)
- ☐ Bachelor's Degree / Honors
- ☐ Master's Degree or above

2. Child's Current Educational Level:

- ☐ Junior High School (Class 6 – Class 8)
- ☐ Secondary High School (Class 9 – Class 10)

3. Primary Smartphone Arrangement at Home:

- ☐ Child shares the mother's personal smartphone
- ☐ Child uses their own personal smartphone
- ☐ Child shares a phone with father or siblings

4. Estimated Daily Time Child Spends on Smartphone for Homework/Schoolwork:

- ☐ Less than 1 hour
- ☐ 1 – 2 hours
- ☐ 2 – 3 hours
- ☐ More than 3 hours

SECTION 2: CORE STUDY MEASURES

Rating Scale: 1 = **Strongly Disagree (SD)** | 2 = **Disagree (D)** | 3 = **Neutral (N)** | 4 = **Agree (A)** | 5 = **Strongly Agree (SA)**

CONSTRUCT 1: DISTANCE LEARNING CONTEXT (DLC)

Code	Statement
DLC1	My child's school heavily relies on smartphone platforms (e.g., WhatsApp, Facebook Groups) to assign homework and lessons.
DLC2	I feel forced to hand over my smartphone to my child because schoolwork cannot be done without it.
DLC3	Teachers assume that mothers are always available at home to manage the technical needs of schoolwork.
DLC4	Managing my child's smartphone assignments frequently disrupts my daily household chores and routine.
DLC5	Educational technology requirements have turned our quiet home environment into a stressful classroom space.
DLC6	I prefer traditional paper textbooks over the digital PDFs and online notes sent by the school.

CONSTRUCT 2: PARENTAL RISK PERCEPTION (RP)

Code	Statement
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RP1	I fear that unrestricted smartphone use will expose my child to immoral content that contradicts our religious or cultural values.
RP2	I worry that my child will lose interest in family bonding, traditional studies, and religious practices due to phone use.

Code	Statement
RP3	I believe excessive smartphone screen time is causing vision problems, headaches, or physical weakness in my child.
RP4	I fear that using smartphones for study will eventually turn into a long-term device addiction.
RP5	I fear my child may become a target for cyberbullying, online scams, or bad influences on social media.
RP6	I believe the internet is fundamentally unsafe for high school students without continuous adult oversight.

CONSTRUCT 3: PARENTAL ANXIETY (PA) — [MEDIATOR]

Code	Statement
PA1	I feel a strong sense of internal restlessness ("disturbed feeling") whenever my child is holding the smartphone.
PA2	My stress levels spike when I cannot see what specific screen or app my child is looking at.
PA3	I feel constant guilt or worry that I am failing as a mother if I don't supervise every minute of phone use.
PA4	I worry that my child knows more about smartphone technology than I do, leaving me unable to protect them.
PA5	The smartphone is the main cause of arguments and loss of peace between me and my child.
PA6	By the end of the day, I feel mentally drained from constantly worrying about my child's digital safety.

**CONSTRUCT 4: SMARTPHONE MONITORING PRACTICES (SMP) —
[DEPENDENT VARIABLE]**

Code	Statement
SMP1	I enforce strict rules on how many minutes or hours my child can keep the phone, even for schoolwork.
SMP2	I keep the phone locked or in my personal custody, only releasing it for specific assignments.

Code	Statement
SMP3	I forbid my child from installing social media apps or games on the smartphone.
SMP4	I regularly inspect my child's private messages, browser history, and photo gallery without asking.
SMP5	I ask my husband or an elder relative to inspect the device to make sure nothing is hidden from me.
SMP6	I physically sit right next to my child while they are completing their online school assignments.
SMP7	I frequently ask my child to explain step-by-step what educational task they are completing on screen.