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SUPPLEMENTARY MATERIAL **OPEN ACCESS**

Emotional and Behavioral Difficulties and Academic Motivation in Rural Adolescents: An Ecological-Psychosocial Model

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DATA COLLECTION INSTRUMENT

CHILD IDENTIFICATION

Full Name: _____
Date of Birth: _____
Sex: Male / Female (select one): _____
Grade: _____

PARENT IDENTIFICATION

Full Name: _____
Sex: _____
Occupation: _____
Highest Level of Education: _____
Mother's Age, years: _____
Father's Age, years: _____

SCHOOL

School Name: _____
Code: _____

Signatures

Child	Parent	Validator / Researcher

INFORMED CONSENT FORM

Study: Screen-Time Control Model: The Effect of Parenting Style on Adolescents' Learning Motivation, with Psychosocial Consequences and Sleep Disturbance as Mediators

Principal Investigator: Dr. Fransisca Iriani Roesmala Dewi, M.Si

Institution: Universitas Tarumanagara

A. Study Information

I have received an oral and/or written explanation from the researcher regarding the purpose, benefits, methods, and potential risks or discomfort that may arise from participation in this study. This study aims to understand the effect of parenting style on adolescents' screen time and its impact on learning motivation, psychosocial health, and sleep quality.

This study involves two forms of participation by parents/guardians:

[1] Permission for your child to complete a questionnaire concerning device-use habits, sleep quality, and learning motivation.
[2] Your own participation as a parent in completing a questionnaire on parenting style and perceptions of your child's device use.

All data obtained will be kept confidential and used solely for academic purposes and scientific publication.

B. Risks and Benefits

Participation in this study poses no medical risk. The interview or questionnaire may cause mild emotional discomfort; however, participation is voluntary and may be discontinued at any time without consequence.

The benefit of this study is to provide scientific understanding of the relationship between parenting style and adolescents' screen time, which may serve as a basis for developing educational interventions for parents and students.

C. Consent Statement

Please tick (√) the appropriate box:

☐ I agree to allow my child to participate in this study.

☐ I do not agree to allow my child to participate in this study.

☐ I agree, as a parent, to complete the questionnaire and be interviewed if necessary.

☐ I do not agree to be interviewed or complete the questionnaire.

Child's Name: _____

Parent/Guardian's Name: _____

Relationship to Child: _____

Parent's Date of Birth: _____

Telephone/Mobile Number (optional): _____

Parent/Guardian's Signature: _____

Date: _____

Researcher's Statement

I, the undersigned, declare that I have explained the entire study to the respondent in language that is easy to understand and have provided sufficient time for questions.

Researcher's Name: _____

Signature: _____

Date: _____

CHILD SECTION

Welcome and Instructions

Hello, everyone!

Thank you for being willing to help us with this study. This questionnaire was created to understand your habits when using devices (such as mobile phones or computers), how you have been feeling recently, and how motivated you are to learn.

Do not worry—there are no right or wrong answers. Please answer honestly according to your actual situation, because every answer is very important to us.

Your answers will be kept confidential and used only for scientific purposes. If there is a question you do not understand, please ask the teacher or adult assisting you.

Enjoy completing the questionnaire, and thank you for your participation!

CHILD QUESTIONNAIRE

A. Personal Information

Full Name: _____

Age: _____

Sex: _____

B. Questionnaire for Screen Time of Adolescents (QueST)

Instructions:

[1] Record time as accurately as possible based on your usual daily routine and your actual activities within a 24-hour period, adding the total hours and minutes spent sleeping and using electronic media.

[2] If unsure, use your average over the past two weeks.

No.	Activity	On a typical day, how much time do you spend...	Day Off Hours / Minutes	School Day Hours / Minutes
1	Studying	...studying, watching video classes, reading, conducting research, or doing school and extracurricular assignments on a computer, television, tablet, smartphone, or other electronic device?		
2	Sleeping	...sleeping, including both daytime naps and nighttime sleep?		
3	Watching videos	...watching TV shows, films, soap operas, news, sports programs, or other videos on a computer, television, tablet, smartphone, or other electronic device?		
4	Playing video games	...playing video games on a game console, computer, television, tablet, smartphone, or other electronic device?		
5	Using social media/chat applications	...using social media such as Facebook, Instagram, Twitter, Snapchat, or TikTok, or chat applications such as WhatsApp, Telegram, or Messenger on a computer, television, tablet, smartphone, or other electronic device?		

C. The Social Connectedness Scale–Revised

Tick (√) one response for each statement according to your condition during the past month.

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I feel comfortable in the presence of strangers.	☐	☐	☐	☐	☐
2	I feel in tune with the world.	☐	☐	☐	☐	☐
3	Even among my friends, there is no sense of brotherhood/sisterhood.	☐	☐	☐	☐	☐
4	I fit in easily in new situations.	☐	☐	☐	☐	☐
5	I feel close to people.	☐	☐	☐	☐	☐
6	I feel disconnected from the world around me.	☐	☐	☐	☐	☐
7	Even around people I know, I do not feel that I belong.	☐	☐	☐	☐	☐
8	I see people in general as friendly and approachable.	☐	☐	☐	☐	☐
9	I feel like an outsider.	☐	☐	☐	☐	☐
10	I feel understood by the people I know.	☐	☐	☐	☐	☐
11	I feel distant from people.	☐	☐	☐	☐	☐
12	I am able to relate to and connect with my peers.	☐	☐	☐	☐	☐
13	I have little sense of togetherness with my peers.	☐	☐	☐	☐	☐
14	I feel involved in other people's lives.	☐	☐	☐	☐	☐
15	I feel that interacting with society is meaningless.	☐	☐	☐	☐	☐
16	I am able to connect with other people.	☐	☐	☐	☐	☐
17	I see myself as a loner.	☐	☐	☐	☐	☐
18	I feel disconnected from most people.	☐	☐	☐	☐	☐
19	My friends feel like family.	☐	☐	☐	☐	☐
20	I do not belong to anyone or any group.	☐	☐	☐	☐	☐

D. WHO-5 Well-Being Index

Tick (√) one response for each statement according to how you have felt during the past two weeks.

No.	Statement	All of the Time (10–13 days)	Most of the Time (8–9 days)	More than Half (4–7 days)	Some of the Time (1–3 days)	At No Time
WHO 1	I have felt cheerful and in good spirits.	☐	☐	☐	☐	☐
WHO 2	I have felt calm and relaxed.	☐	☐	☐	☐	☐
WHO 3	I have felt active and vigorous.	☐	☐	☐	☐	☐
WHO 4	I woke up feeling fresh and rested.	☐	☐	☐	☐	☐
WHO 5	My daily life has been filled with things that interest me.	☐	☐	☐	☐	☐

E. Strengths and Difficulties Questionnaire (SDQ)

Tick (√) one response for each statement according to how you have felt during the past month.

No.	Statement	Not True	Somewhat True	Certainly True
1	I try to be nice to other people. I care about their feelings.	☐	☐	☐
2	I am restless; I cannot stay still for long.	☐	☐	☐
3	I often have headaches, stomach-aches, or other pains.	☐	☐	☐
4	I usually share with others (food, games, pens, *etc.*).	☐	☐	☐
5	I get very angry and often lose my temper.	☐	☐	☐
6	I would rather be alone than with people my age.	☐	☐	☐
7	I usually do what other people tell me to do.	☐	☐	☐
8	I worry a lot about many things.	☐	☐	☐
9	I am helpful if someone is hurt, upset, or feeling ill.	☐	☐	☐
10	I am constantly fidgeting or squirming.	☐	☐	☐
11	I have one good friend or more.	☐	☐	☐

Table contd.....

No.	Statement	Not True	Somewhat True	Certainly True
12	I fight a lot. I can make other people do what I want.	☐	☐	☐
13	I am often unhappy, sad, or tearful.	☐	☐	☐
14	Other people my age generally like me.	☐	☐	☐
15	I am easily distracted; I find it difficult to concentrate.	☐	☐	☐
16	I am nervous in new situations. I easily lose confidence.	☐	☐	☐
17	I am kind to younger children.	☐	☐	☐
18	I am often accused of lying or cheating.	☐	☐	☐
19	Other children or young people pick on me or bully me.	☐	☐	☐
20	I often volunteer to help others.	☐	☐	☐
21	I think before I act.	☐	☐	☐
22	I take things that are not mine from home, school, or elsewhere.	☐	☐	☐
23	I get along better with adults than with people my own age.	☐	☐	☐
24	I have many fears; I am easily scared.	☐	☐	☐
25	I finish the work I am doing. My attention is good.	☐	☐	☐

F. Academic Motivation Scale (AMS-HS 28)

Tick (√) one response for each statement according to your academic motivation during the past semester. Why do you go to school?

No.	Statement	A Strongly Disagree	B Disagree	C Somewhat Agree	D Agree	E Strongly Agree
1	Because I need a diploma to obtain a high-paying job in the future.	☐	☐	☐	☐	☐
2	Because I experience pleasure and satisfaction while learning new things.	☐	☐	☐	☐	☐
3	Because I believe education will help me be better prepared for my chosen career.	☐	☐	☐	☐	☐
4	Because I genuinely enjoy going to school.	☐	☐	☐	☐	☐
5	Honestly, I do not know; I feel that I am wasting my time at school.	☐	☐	☐	☐	☐
6	Because I feel pleased when I overcome challenges in my studies.	☐	☐	☐	☐	☐
7	To prove to myself that I am capable of completing school.	☐	☐	☐	☐	☐
8	So that I can obtain a more prestigious job in the future.	☐	☐	☐	☐	☐
9	Because I enjoy discovering things I have never seen before.	☐	☐	☐	☐	☐
10	Because one day it will enable me to enter a field of work that I like.	☐	☐	☐	☐	☐
11	Because school is enjoyable for me.	☐	☐	☐	☐	☐
12	I once had good reasons for attending school, but now I wonder whether I should continue.	☐	☐	☐	☐	☐
13	Because I feel pleased when I achieve my personal goals.	☐	☐	☐	☐	☐
14	Because when I succeed at school, I feel important.	☐	☐	☐	☐	☐
15	Because I want to live comfortably in the future.	☐	☐	☐	☐	☐
16	Because I enjoy broadening my knowledge about things that interest me.	☐	☐	☐	☐	☐
17	Because it will help me make better decisions about my career choices.	☐	☐	☐	☐	☐
18	Because I enjoy discussions with interesting teachers.	☐	☐	☐	☐	☐
19	I do not know why I attend school and, honestly, I do not care.	☐	☐	☐	☐	☐
20	Because I feel satisfied when I successfully complete difficult academic activities.	☐	☐	☐	☐	☐
21	To show myself that I am an intelligent person.	☐	☐	☐	☐	☐
22	So that I can earn a better salary in the future.	☐	☐	☐	☐	☐
23	Because my studies allow me to continue learning many things that interest me.	☐	☐	☐	☐	☐
24	Because I believe my education will improve my competence as a worker.	☐	☐	☐	☐	☐
25	Because I feel very happy when reading interesting material.	☐	☐	☐	☐	☐
26	I do not know; I do not understand what I am doing at school.	☐	☐	☐	☐	☐
27	Because pursuing excellence in my studies gives me personal satisfaction.	☐	☐	☐	☐	☐
28	Because I want to prove that I can succeed in my studies.	☐	☐	☐	☐	☐

H. Depression Anxiety Stress Scale for Youth (DASS-Y)

Tick (√) one response for each statement according to how you have felt during the past seven days.

No.	Statement	Not True	A Little True (sometimes)	Quite True (often)	Very True (almost always)
1	I got angry or upset over small things.	☐	☐	☐	☐
2	I felt dizzy, as if I might faint.	☐	☐	☐	☐
3	I did not enjoy anything.	☐	☐	☐	☐
4	I found it difficult to breathe (*e.g.,* rapid breathing) even though I was not exercising.	☐	☐	☐	☐
5	I hated my life.	☐	☐	☐	☐
6	I felt that I overreacted to situations.	☐	☐	☐	☐
7	My hands trembled.	☐	☐	☐	☐
8	I felt stressed about many things.	☐	☐	☐	☐
9	I felt very afraid.	☐	☐	☐	☐
10	There was nothing enjoyable that I could look forward to.	☐	☐	☐	☐
11	I was easily irritated.	☐	☐	☐	☐
12	I found it difficult to relax.	☐	☐	☐	☐
13	I could not stop feeling sad.	☐	☐	☐	☐
14	I became upset when someone interrupted me.	☐	☐	☐	☐
15	I felt as if I was about to panic.	☐	☐	☐	☐
16	I hated myself.	☐	☐	☐	☐
17	I felt worthless.	☐	☐	☐	☐
18	I became angry very easily.	☐	☐	☐	☐
19	I felt my heart beating very fast even though I had not been exercising.	☐	☐	☐	☐
20	I felt afraid for no clear reason.	☐	☐	☐	☐
21	I felt that life was very bad.	☐	☐	☐	☐

Thank you very much for taking the time to complete this questionnaire honestly and thoughtfully. Your answers are very meaningful and will help us better understand how adolescents today face digital challenges, learn, and maintain their mental and physical health. You have contributed to important research—we greatly appreciate it!

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PARENT SECTION

Welcome

Welcome, Parent/Guardian!

Thank you for your willingness to participate in this study. The following questionnaire aims to gather information about the home media environment, children's use of digital media, and the parenting styles applied. The data you provide will be valuable in understanding how parenting and digital-media use influence adolescents' psychosocial health, learning motivation, and sleep quality. Please complete every section honestly and fully according to your actual circumstances. All data will be kept confidential and used only for academic purposes.

PARENT QUESTIONNAIRE

A. Identification and Sociodemographic Information

Parent's Name: _____

Date of Birth: _____

Age: _____

Sex: _____

Address: _____

National Identity Number (NIK/KTP): _____

_____

Marital Status: _____

Highest Level of Education: _____

Monthly Income: _____

Number of Dependants: _____

Number of Children: _____

Child's Name: _____

Child's Grade: _____

School Name: _____

Child's Date of Birth: _____

Is there a caregiver/domestic assistant? _____

B. Parenting Styles and Dimensions Questionnaire—Short Version (PSDQ)

Tick (√) the response that is most appropriate.

Response	Meaning
Always (AL)	The activity is performed at all times.
Often (OF)	The activity is performed much of the time.
Sometimes (SO)	The activity is performed and not performed with approximately equal frequency.
Rarely (RA)	The activity is performed only a few times.
Never (NE)	The activity is never performed.

There are no right or wrong answers. Every response is valid as long as it reflects your actual parenting practices.

No.	Statement	NE	RA	SO	OF	AL
1	I am responsive to my child's feelings and needs.	☐	☐	☐	☐	☐
2	I use physical punishment to discipline my child.	☐	☐	☐	☐	☐
3	I consider my child's wishes before asking the child to do something.	☐	☐	☐	☐	☐
4	When my child asks why something must be done, I say it is because I said so, because I am the parent, or because that is what I want.	☐	☐	☐	☐	☐
5	I explain how I feel about my child's good and bad behavior.	☐	☐	☐	☐	☐
6	I slap my child when the child disobeys rules.	☐	☐	☐	☐	☐
7	I encourage my child to talk about feelings and problems.	☐	☐	☐	☐	☐
8	I find it difficult to discipline my child.	☐	☐	☐	☐	☐
9	I encourage my child to express feelings freely, even when disagreeing with me.	☐	☐	☐	☐	☐
10	I punish my child by withholding privileges but provide little explanation (*e.g.*, watching TV, playing with friends, or gaming).	☐	☐	☐	☐	☐
11	I explain why rules must be obeyed.	☐	☐	☐	☐	☐
12	I comfort my child and show understanding when the child is upset.	☐	☐	☐	☐	☐
13	I yell or shout when my child behaves inappropriately or misbehaves.	☐	☐	☐	☐	☐
14	I praise my child for good behavior.	☐	☐	☐	☐	☐
15	I allow my child to do things that may cause harm.	☐	☐	☐	☐	☐
16	I explode in anger and take it out on my child.	☐	☐	☐	☐	☐
17	I use threats as punishment more often than other approaches.	☐	☐	☐	☐	☐
18	I consider my child's preferences when making family plans (*e.g.*, vacations).	☐	☐	☐	☐	☐
19	I discipline my child calmly while still showing affection, such as hugging or kissing.	☐	☐	☐	☐	☐
20	I threaten punishment but do not actually carry it out.	☐	☐	☐	☐	☐
21	I respect my child's opinions by encouraging the child to express them.	☐	☐	☐	☐	☐
22	I allow my child to participate in making family rules.	☐	☐	☐	☐	☐
23	I scold and criticize my child to improve the child's behavior.	☐	☐	☐	☐	☐
24	I pamper my child (*e.g.*, putting on the child's socks, shoes, or clothes).	☐	☐	☐	☐	☐
25	I explain in advance why rules must be obeyed.	☐	☐	☐	☐	☐
26	I use threats as punishment with little or no consideration.	☐	☐	☐	☐	☐
27	I spend time with my child in a warm and close atmosphere.	☐	☐	☐	☐	☐
28	I punish my child by isolating the child alone with little or no explanation.	☐	☐	☐	☐	☐
29	I help my child understand the impact and consequences of behavior by encouraging discussion of the consequences of the child's own actions.	☐	☐	☐	☐	☐
30	I openly scold or criticize my child when behavior does not meet expectations.	☐	☐	☐	☐	☐
31	I explain the consequences of my child's behavior.	☐	☐	☐	☐	☐
32	I slap my child when I dislike what the child does or says.	☐	☐	☐	☐	☐

C. DASS-42 Questionnaire

The following questionnaire consists of 42 statements designed to assess the extent to which you have experienced various psychological symptoms during the past two weeks.

Read each statement carefully, then select the number that best describes how often you experienced the feeling or condition: 0 = Never; 1 = Sometimes; 2 = Often; 3 = Very often.

During the past two weeks, how often were you bothered by the following?	Never 0	Sometimes 1	Often 2	Very Often 3
Becoming upset by trivial things	☐	☐	☐	☐
Dryness of the mouth	☐	☐	☐	☐
Being unable to see anything positive in an event	☐	☐	☐	☐
Experiencing breathing difficulty (rapid or difficult breathing)	☐	☐	☐	☐
Feeling unable to continue with an activity	☐	☐	☐	☐
Tending to overreact to situations	☐	☐	☐	☐
Weakness in the limbs	☐	☐	☐	☐
Difficulty relaxing	☐	☐	☐	☐
Excessive anxiety in a situation but relief when it ends	☐	☐	☐	☐
Pessimism	☐	☐	☐	☐
Becoming upset easily	☐	☐	☐	☐
Feeling that a great deal of energy is used because of anxiety	☐	☐	☐	☐
Feeling sad and depressed	☐	☐	☐	☐
Impatience	☐	☐	☐	☐
Fatigue	☐	☐	☐	☐
Loss of interest in many things (*e.g.*, eating, walking, socializing)	☐	☐	☐	☐
Feeling unworthy	☐	☐	☐	☐
Being easily offended	☐	☐	☐	☐
Sweating (*e.g.*, sweaty hands) without heat or physical exercise	☐	☐	☐	☐
Fear without a clear reason	☐	☐	☐	☐
Feeling that life is not worthwhile	☐	☐	☐	☐
Difficulty resting	☐	☐	☐	☐
Difficulty swallowing	☐	☐	☐	☐
Being unable to enjoy the things I do	☐	☐	☐	☐
Changes in heartbeat and pulse without physical exercise	☐	☐	☐	☐
Feeling hopeless and in despair	☐	☐	☐	☐
Becoming angry easily	☐	☐	☐	☐
Panicking easily	☐	☐	☐	☐
Difficulty calming down after something upsetting	☐	☐	☐	☐
Fear that unfamiliar tasks will hinder me	☐	☐	☐	☐
Difficulty becoming enthusiastic about many things	☐	☐	☐	☐
Difficulty tolerating interruptions to what I am doing	☐	☐	☐	☐
Being in a tense state	☐	☐	☐	☐
Feeling worthless	☐	☐	☐	☐
Being unable to tolerate anything that prevents you from continuing	☐	☐	☐	☐
Feeling afraid	☐	☐	☐	☐
Having no hope for the future	☐	☐	☐	☐
Feeling that life is meaningless	☐	☐	☐	☐
Becoming restless easily	☐	☐	☐	☐
Worrying about situations in which you might panic and embarrass yourself	☐	☐	☐	☐
Trembling	☐	☐	☐	☐
Difficulty initiating activities	☐	☐	☐	☐

Closing

Thank you for taking the time to complete this questionnaire honestly and fully. The information you have provided is extremely valuable to the progress and quality of our research in understanding the dynamics of digital-media use, parenting, and their effects on adolescent development. We greatly appreciate your participation and contribution in supporting this research to improve education and the psychosocial well-being of our children in the future.

RESEARCHER SECTION

RESEARCHER DATA VALIDATION FORM

Study Title: Screen-Time Control Model: The Effect of Parenting Style on Adolescents' Learning Motivation, with Psychosocial Consequences and Sleep Disturbance as Mediators

Respondent Code: _____

Questionnaire Completion Date: _____

Validator/Researcher's Name: _____

A. Data Quality Evaluation

Assessment Criterion	Rating (√)
The child's questionnaire is complete and contains no blank sections.	☐ Yes ☐ No
The parent's questionnaire is complete and contains no blank sections.	☐ Yes ☐ No
Signed informed consent is available (child and parent).	☐ Yes ☐ No
The response format follows the instructions (uses √, valid time in hours/minutes, *etc*.).	☐ Yes ☐ No
There is no extreme repetitive response pattern (*e.g*., all responses are '1' or '5').	☐ Yes ☐ No
The data contain no illogical entries (*e.g*., screen time >24 hours/day).	☐ Yes ☐ No
There is no indication that the form was completed by another party rather than the valid child/parent respondent.	☐ Yes ☐ No

B. Data Validity Status

☐ ACCEPTED – The data meet all validity and completeness criteria.

☐ EXCLUDED – The data cannot be used for the following reason(s):

Reasons for Exclusion (select all that apply):

☐ The questionnaire is incomplete / important sections are blank.

☐ The parent's signed informed consent is unavailable.

☐ Illogical entries are present (*e.g*., total time >24 hours, age inconsistent with educational level, *etc*.).

☐ The response pattern is invalid (all responses identical or completed carelessly).

☐ The respondent answered dishonestly or there is evidence that the responses are not authentic.

☐ The form was completed by someone other than the intended respondent (*e.g*., the child's entire questionnaire was completed by a parent).

Additional Researcher Notes

.....

.....

Validator/Researcher's Signature: _____

Validation Date: _____