

**Externalizing behaviors on the Internet versus in-person among youth: Associations with parental monitoring, discipline, and emotional closeness**

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\* Thank you for your interest in this presentation. Please note that analyses included herein are preliminary. More recent, finalized analyses can be found in: Ybarra, M. L., & Mitchell, K. J. (2004). Youth engaging in online harassment: Associations with caregiver-child relationships, internet use, and personal characteristics. *Journal of Adolescence*, 27(3), 319-336, or by contacting ISK for further information.

## Primary Research Objective

Identify the differences and similarities of caregiver-child relationships among externalizing youth that act out on the Internet versus in person.

## Analytic Methods

### Exploratory data analyses

- Compute cross tabs and  $\chi^2$  statistics to establish basic relationships
- Investigate different variable definitions for significance and interpretability

### Multinomial logistic regression

- Estimate conditional odds of externalizing behaviors (Internet only, in-person only, Internet+in-person) versus no externalizing behavior based upon various aspects of caregiver-child relationships. Estimate robust standard deviations due to clustering of responses within household.
- Test for effect modification among relationship aspects.

## Sample description

- The Youth Internet Safety Survey (YISS) is a nationally representative telephone survey of 1,501 youth and one caregiver.
- The survey was conducted between Fall of 1999 and Spring of 2000 by the University of New Hampshire's Crimes Against Children Research Center
- Inclusion criteria consisted of the following:
  - Regular Internet use (at least 3 times in the previous 3 months)
  - Between the ages of 10 and 17 years old
  - English speaking
  - Spent time at that residence for at least 2 weeks in the previous year
  - Caregiver and youth informed consent

## Measures and Indicators

Measurement category	Specific measures	
	Youth-report	Caregiver-report
Caregiver-child relationships	Emotional closeness, monitoring, discipline	Emotional closeness, monitoring, discipline
Demographics	Race/ethnicity	Age, gender, place of residence, household income, caregiver marital status, number of people living in household
Psychosocial characteristics*	Academic failure, depressive symptomatology, life challenge**, physical abuse, sexual victimization	

\*Refers to the previous year except for depressive symptoms, which are current (noted within the previous month)  
\*\*Includes death in immediate family, divorce, loss of job, and relocation within the previous year

## Externalizing behaviors

### Acting out on the Internet\*

- Making rude or nasty comments to another person (14%, N=215)
- Playing a joke or annoying another person (14%, N=212)
- Harassing or embarrassing another person (1%, N=19)

### Acting out in-person\*

- Stealing from another person (8%, N=122)
- Damaging property (6%, N=87)
- Physically assaulting another person (5%, N=71)
- Police contact (4%, N=61)

\*All behaviors refer to occurring at least once in the previous year

## Variable Definitions

Psychosocial and demographic measures included in the current analyses were chosen based upon indication of significant relationship to in-person externalizing behaviors in the literature. Specific variable definitions are expounded upon below. Missing values (less than one percent of the sample for all variables except household income) were replaced by imputation based upon best-set regression.

### Caregiver-child relationships

Youth and caregiver respondents were each asked to rate their daily interactions. Of the nine questions asked, three aspects of the care-giver relationship was identified: 1) emotional closeness (i.e., how well caregiver and child get along, caregiver trust of child, discussing problems with caregiver when feeling sad or in trouble, and frequency of having fun together), 2) monitoring (i.e., frequency with which caregiver knows where child is, and with whom child is spending time), and 3) discipline (i.e., frequency of 'nagging' child, taking away privileges, and yelling). Each response was measured on a four-point Likert scale ranging from very badly, somewhat badly, fairly well, and very well on emotional indicators, and never/rarely, sometimes, most of the time, and all of the time for monitoring and discipline indicators.

One variable was created for each of the above three aspects of the caregiver-child relationship by summing the scores of the associated variables, and then dichotomizing each variable: extremely poor relationship (1 standard deviation below the mean) versus average /above average relationship (scores centered on the mean and higher).

## Variable Definitions (cont.)

### Psychosocial characteristics

**Academic failure** was youth-reported and refers to receiving at least one failing grade in a class in the previous year.

**Depressive symptomatology**: Nine dichotomous (yes/no) questions based upon the nine DSM-IV symptoms of major depression were asked of each youth respondent. Each item referred to the previous month with one exception: anhedonia (i.e., "feeling bummed out") however, was restricted to nearly every day, all day for the previous two week. A variable reflecting depressive symptomatology was created to compare youth with five or more symptoms versus fewer.

**Physical or sexual victimization**: Youth were asked whether they had been "forced or made to do sexual things by someone else" and whether a "grown-up taking care of you hit, beat, kick, or physically abused you in any way". Youth responding positively to at least one of the two questions were categorized as 'victimized' and compared to youth responding negatively to both questions.

**Life challenge**: Four indications of life challenge in the previous year were asked of each youth: death in the immediate family, moving to a new community, caregiver divorce, or loss of a caregiver's job. Youth endorsing two or more events were compared to those indicating one or fewer.

### Demographic characteristics

Youth reported the race and ethnicity to which they most identified. This was categorized into four groups: non-Hispanic White, non-Hispanic Black, Hispanic, and other. Demographic location of the household was asked of the caregiver and categorized by large city versus all else (i.e., suburb, large town, small town, or rural area). Caregivers additionally reported the youth's age and gender, marital status (currently married versus all else), and household income. Income was dichotomized at \$75,00 and above (one standard deviation above the mean) versus less.

## Results: Caregiver-child relationships

Among young, regular Internet users:

- Indications of poor caregiver-child relationships tend to be related to externalizing behaviors whether they are reported by the caregiver or the youth. Youth report is generally associated with a greater magnitude in conditional odds.
- Though the mean scores of youth- and caregiver-reported relationships are similar\*, youth-reported aspects are more influential in the final analyses.

*Aspect of caregiver-child relationship	Caregiver-report Mean (SD)	Youth-report Mean (SD)	T-test
Emotional closeness (Range: 4-16)	13.45 (1.70)	12.17 (2.25)	P<0.001
Discipline (Range: 3-12)	9.43 (1.60)	9.80 (1.65)	P<0.001
Parental monitoring (Range: 2-8)	7.33 (0.90)	6.93 (1.19)	P<0.001

Lower scores indicate poorer relationship. Each aspect was dichotomized in the final analyses: 1 SD below the mean and lower versus higher scores.

## Results: Caregiver-child relationships

After adjusting for significant characteristics, among young, regular Internet users:

- A general trend for increased conditional odds of acting out in either environment given poor caregiver-child relationships is still observed.
- The magnitude of the adjusted estimates are often similar for in-person only and in-person+Internet externalizing youth.
- Though of smaller magnitude, many of the conditional odds associated with Internet-only externalizing youth are significantly elevated as well.

## Additional findings

Among young, regular Internet users:

- Relative to youth not exhibiting externalizing behaviors, those that act out in-person only, as well as Internet+in-person, are likely facing significant psychosocial challenge, including:
  - Sexual or physical victimization,
  - Depressive symptomatology, and
  - Academic failure.
- Males are not significantly more likely than females to be acting out exclusively on the Internet versus not acting at all. In contrast, the adjusted conditional odds of externalizing in-person or Internet+in-person are more than two times higher for males versus females compared to non-externalizing youth.

## Summary

Among young, regular Internet users:

- Poor caregiver-child relationships are associated with increased odds of acting out, both on the Internet and in-person.
- The magnitude of risk associated with most characteristics is highest for youth engaging in Internet+in-person externalizing behaviors, perhaps indicating greater personal challenge for this group of youth.
- Youth engaging in externalizing behaviors in-person are likely facing significant psychosocial challenges, including depressive symptomatology, victimization, and academic failure.

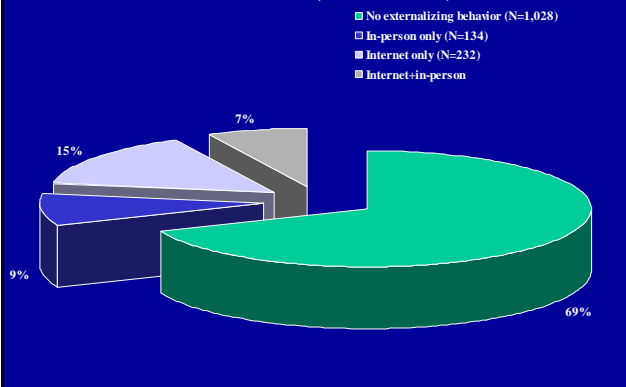
## Conclusions

- Poor caregiver-child relationships appear to be associated with general externalizing among young, regular Internet users.
- Targeted online interventions aimed at youth acting out towards others on the Internet may also reach youth acting out in other environments.
- Further research is needed to understand how youth with significant psychosocial challenge are navigating and interacting with others online.

## Strengths & Limitations

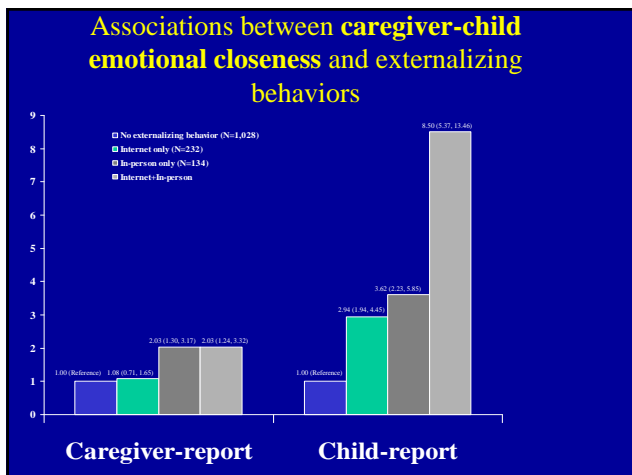
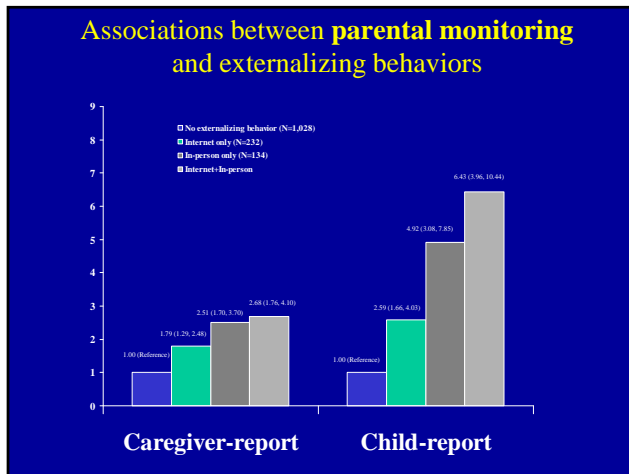
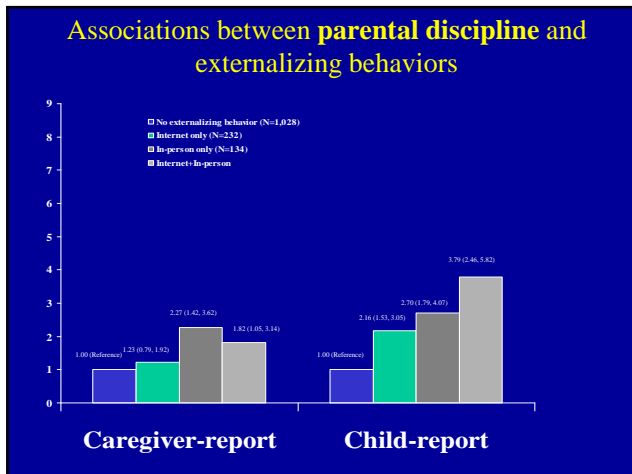
- **Limitations**
  - These cross sectional data preclude temporal inferences.
  - Because of the relative infancy of Internet research, replicated and validated scales and questions are lacking.
  - Only English-speaking respondents were included, preventing generalization to households speaking different languages.
  - Though most missing data imputed represented less than 1% of the sample, household income was missing 7% of responses.
- **Offsetting Strengths**
  - This is the most detailed survey of youth Internet usage and experiences to date.
  - The data are both timely and nationally representative of young, English-speaking regular Internet users across the US.
  - Given the general newness of the field, extreme care was taken in crafting the survey tool, including focus groups and pilot testing.
  - Stringent data quality controls led to very little missing data.

## YISS study sample of externalizing behaviors (N=1,501)



YISS sample characteristics (N=1,501)

Sample characteristics	No externalizing behavior (N=1028) % (N)	Internet Only (N=232) % (N)	In-person only (N=134) % (N)	Internet+in-person (N=107) % (N)
<b>Caregiver-child relationships</b>				
Youth-report				
Frequent discipline	13.5% (140)	25.4% (69)	29.9% (40)	37.4% (40)
Poor emotional closeness	6.8% (70)	17.7% (41)	20.9% (28)	38.3% (41)
Poor monitoring	6.2% (64)	14.7% (34)	24.6% (33)	29.9% (32)
Caregiver-report				
Poor monitoring	18.2% (187)	28.5% (66)	35.5% (46)	37.4% (40)
Poor emotional closeness	12.5% (128)	13.4% (31)	22.4% (30)	22.4% (24)
Frequent discipline	10.0% (103)	12.1% (28)	20.2% (27)	18.8% (18)
<b>Psychosocial characteristics</b>				
Academic Failure	29.5% (303)	29.3% (68)	56.7% (76)	51.4% (55)
Depressive symptomatology (5+ 5x5)	5.2% (53)	7.8% (18)	15.7% (21)	23.4% (25)
Physical or sexual victimization	0.9% (9)	2.2% (5)	6.7% (9)	10.3% (11)
<b>Demographic characteristics</b>				
Age (14+ y.o.)	57.3% (589)	78.0% (181)	64.2% (86)	81.3% (87)
Male	49.5% (509)	50.0% (116)	69.4% (93)	70.1% (75)
Number of people in household (5-14 vs. fewer)	33.6% (345)	36.6% (85)	39.6% (53)	36.5% (39)
Income (\$75,000+)	22.3% (229)	26.7% (62)	16.4% (22)	31.8% (34)
Marital status (married)	20.2% (208)	19.8% (46)	32.8% (44)	19.6% (21)
Household location (large city)	13.2% (136)	18.5% (43)	20.2% (27)	9.4% (10)
Life challenge (2-4 vs. fewer)	6.2% (64)	5.2% (12)	12.7% (17)	7.5% (8)
Race / Ethnicity				
Non-Hispanic White	72.6% (746)	78.0% (181)	59.0% (79)	71.0% (76)
Other	10.7% (110)	10.3% (24)	11.9% (16)	9.4% (10)
Hispanic	6.3% (65)	8.2% (19)	11.9% (16)	6.5% (7)
Non-Hispanic Black	10.4% (107)	3.5% (8)	17.2% (23)	13.1% (14)



### Multinomial logistic model of youth characteristics related to externalizing behaviors among young regular Internet users (N=1,501)

	Internet only (N=232)		In-person only (N=134)		Internet+in-person (N=107)	
	COR (CI)*	P-value	COR (CI)	P-value	COR (CI)	P-value
<b>Caregiver-child relationships</b>						
Youth-report						
Poor emotional closeness	2.03 (1.16, 3.57)	0.01	2.78 (1.47, 5.26)	<0.01	5.23 (2.74, 9.99)	<0.001
Frequent discipline	1.84 (1.24, 2.73)	<0.01	1.43 (0.89, 2.30)	Ns	1.71 (1.05, 2.77)	0.03
Poor monitoring	1.54 (0.82, 2.89)	Ns	3.01 (1.64, 5.52)	<0.001	2.94 (1.46, 5.91)	<0.01
Poor monitoring X emotional closeness	1.19 (0.41, 3.47)	Ns	0.33 (0.10, 1.06)	0.06	0.48 (0.16, 1.48)	Ns
Caregiver-report						
Poor monitoring	1.38 (0.94, 2.01)	0.10	1.56 (1.00, 2.44)	0.05	1.40 (0.83, 2.36)	Ns
Frequent discipline	1.23 (0.77, 1.96)	Ns	1.72 (1.04, 2.84)	0.04	1.63 (0.88, 3.01)	Ns
Poor emotional closeness	0.69 (0.44, 1.10)	ns	1.11 (0.66, 1.84)	Ns	0.87 (0.47, 1.60)	Ns
<b>Psychosocial characteristics</b>						
Physical or sexual victimization	1.44 (0.46, 4.49)	Ns	4.50 (1.58, 12.82)	<0.01	6.59 (2.54, 17.08)	<0.001
Depressive symptomatology (5+ Six)	1.06 (0.57, 1.96)	Ns	2.16 (1.13, 4.15)	0.02	3.44 (1.86, 6.38)	<0.001
Academic Failure	0.95 (0.67, 1.34)	Ns	2.02 (1.37, 2.99)	<0.001	1.68 (1.07, 2.66)	0.03
Life challenge (2 or more)	0.85 (0.43, 1.66)	Ns	1.20 (0.63, 2.32)	Ns	0.90 (0.35, 2.27)	Ns
<b>Demographic characteristics</b>						
Age (14+ y.o.)	2.29 (1.51, 3.26)	<0.001	1.14 (0.76, 1.72)	Ns	2.35 (1.33, 3.97)	<0.01
Household location (large city)	1.70 (1.12, 2.59)	0.01	1.41 (0.83, 2.38)	Ns	0.71 (0.33, 1.57)	Ns
Income (\$75,000+)	1.21 (0.85, 1.71)	Ns	0.92 (0.56, 1.53)	Ns	1.88 (1.17, 3.02)	<0.01
Marital status (married)	1.08 (0.73, 1.60)	Ns	1.40 (0.89, 2.18)	Ns	0.96 (0.53, 1.72)	Ns
Male	0.96 (0.71, 1.29)	Ns	2.22 (1.45, 3.40)	<0.001	2.63 (1.60, 4.35)	<0.001
Race/Ethnicity						
Non-Hispanic White	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Hispanic	1.15 (0.63, 2.09)	Ns	1.54 (0.79, 3.00)	Ns	0.99 (0.36, 2.69)	Ns
Non-Hispanic Other	0.89 (0.55, 1.44)	Ns	1.09 (0.60, 1.98)	Ns	0.71 (0.33, 1.50)	Ns
Non-Hispanic Black	0.24 (0.10, 0.54)	<0.01	1.31 (0.73, 2.34)	Ns	1.20 (0.59, 2.43)	Ns

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