Revved Up Kids
FULL EVALUATION REPORT

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PROGRAM DESCRIPTIONS

Revved Up Kids Self-Defense Workshop (RUK Workshop)

The *Revved Up Kids Self-Defense Workshop* was developed to teach children in K-5th grade about the dangers posed by predators. The workshop presents information in a non-frightening way and gives elementary-aged children the tools they need to recognize and avoid dangerous situations and protect themselves if they are ever faced with a threat. It also teaches participants basic defensive tactics that can be used to escape an attack situation. The workshop empowers children and teaches them that they can resist and escape a predator, even if they are smaller and weaker. Because children at this age require continual reinforcement about things they learn, this workshop is treated as the beginning of an ongoing family safety dialogue.

RUK Workshop Logistics:

- Single session, 45-60 minutes
- To be attended by children in Kindergarten through 5th grade

Workshop Content and Activities:

- Basic understanding of who predators are
- Everyday awareness and safety techniques
- Physical self-defense tactics training and practice on high, middle, and low body targets
- Take home resource for parents and monthly follow-up communication via email to reinforce learning

Revved Up Kids Basic Class (RUK Basic)

The *Revved Up Kids Basic* class was developed to teach children ages 6 to 10 about the dangers posed by predators. The class presents information in a non-frightening way and gives children the tools they need to recognize and avoid dangerous situations and protect themselves if they are ever faced with a threat. The class empowers children and teaches them that they can resist and escape a predator, even if they are smaller and weaker.

Children and their parents are encouraged to attend this single-session class together. Because children at this age require continual reinforcement about things they learn, this class is treated as the beginning of an ongoing family safety dialogue. *Revved Up Kids Basic* helps parents to learn how to begin open conversations with their children about important topics that are often difficult to discuss.

RUK Basic Logistics:

- Single session, 3-hour class
- To be attended by children between ages 6 and 10 and their parents

Class Content and Activities:

- Parent educational webinar
- Child safety quiz
- Be SMART video-based awareness training
- Be STRONG full force physical self-defense training
- Comprehensive parent resource packet
- Child ID/fingerprinting kit for each participant

INITIAL PROCESSES & DISCOVERY

Meetings were scheduled between the Evaluator and Program Developers to discuss the intervention and associated logistics. During these meetings, the interventions' history, philosophy, and rationale were discussed and outlined. Following these initial meetings, intervention materials were shared with the Evaluator to provide program context and specifics about the interventions (i.e., content, format, activities). The Evaluator reviewed materials including PowerPoint presentations and educational film clips (developed by the Program Developers) used during the interventions; facilitator scripts used to lead the interventions; participant recruitment materials and parent waivers; and associated instruments and resources provided to participants/families. Conversations between the Evaluator and Program Developers occurred to identify the common and unique elements associated with the RUK Workshop and RUK Basic interventions. Following this review of materials, the Evaluator virtually observed a RUK Workshop to witness the intervention implementation in real time. The Evaluator also observed a mock training session of the RUK Basic intervention.

EVALUATION INSTRUMENTS

Using the information received during this initial discovery phase, the Evaluator developed a series of instruments to be used in the evaluation. Multiple iterations of the instruments were created to ensure essential elements of the program were evaluated, the wording/phrasing was age-appropriate, and changes associated with participants' knowledge and awareness about dangerous situations and people could be measured.

The following evaluation instruments were developed:

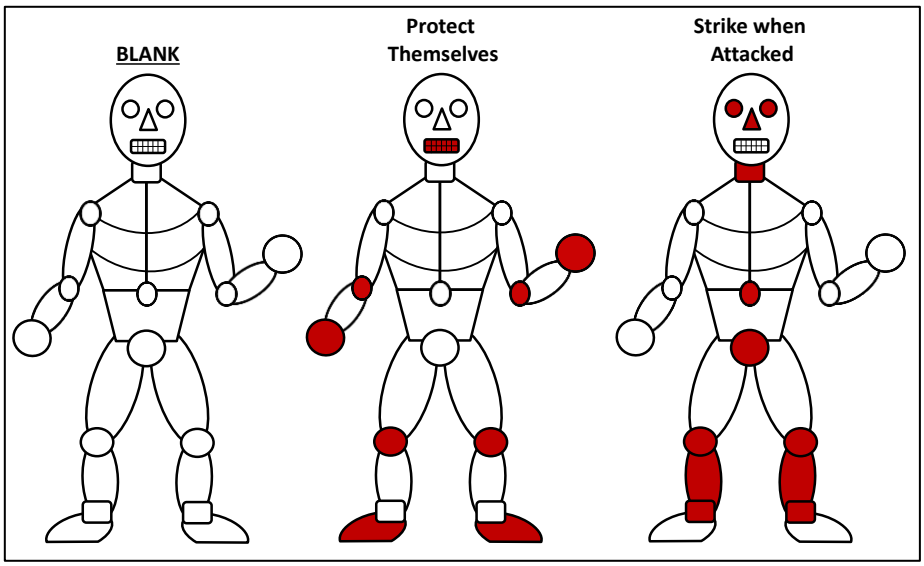
- Parent/Guardian Demographics Instrument: This instrument contained 27 items and was completed by the participant's parent or guardian at the time of registration. Detailed information was collected from the parent/guardian to: (1) collect more accurate information (because of participants' young ages and reading comprehension abilities); and (2) reduce time needed for data collection during the intervention. Information collected using this instrument included:
    - Demographics of the participant (age, sex, grade, race/ethnicity)
    - Household composition of the child's home (who they reside with)
    - Participation in extracurricular activities (sports, clubs, lessons, after care)
    - Prior participation in predator safety training programs
    - Abuse-related risk factors (free/discounted meals at school, self-esteem, shyness, fighting/bullying)
    - Past abuse (physical, verbal/emotional, sexual, neglect)
    - Demographics of the parent/guardian (sex, relationship to child, education, employment status, household income)

- Participant Outcomes Instrument: This instrument contained 37 close-ended items and two knowledge-based activities emphasizing what was learned during the interventions. Participants completed these instruments at four time points (time points described in more detail below). Information collected using this instrument included:
    - Recognize-related knowledge items
        - Example: All bad grown-ups are scary
        - Example: All bad grown-ups are strangers
        - Example: I know if someone tells me a tricking lie
    - Avoid-related knowledge items
        - Example: It is okay to keep a secret from my parents
        - Example: I know when it's okay to help a grown-up
    - Escape-related knowledge items
        - Example: I should tell my parents if someone tries to hurt me
        - Example: I can unfreeze my body with my safe voice
    - Self-Defense: Body parts participants can use to protect themselves (see schematic below)
    - Self-Defense: Body parts participants can strike when being attacked (see schematic below)

Visual analogues were used for items asking about participants' knowledge and awareness related to recognizing, avoiding, and escaping dangerous situations and people. Visual analogues were utilized based on the reading comprehension levels of youth participants engaged in the intervention. Examples of visual analogues used are provided below.

Do you think these things are safe or not safe?	 Not Safe	 Don't Know	 Safe
Do you think these things are true or false?	 False	 Don't Know	 True

During the self-defense portions of the interventions, a visual schematic was used to assess knowledge about body parts participants can use to protect themselves and body parts participants can strike when being attacked. Participants completed this activity two times, once for protecting themselves, once for striking when attacked. Participants were asked to place an "x" on the body parts associated for each purpose. This schematic was developed by the Evaluator specifically for this evaluation. The image was created to mimic the human form without evoking fear or guiding participant responses (to be neutral based on age, sex, race/ethnicity, etc.). The blank schematic (provided to the participants) and correct responses by purpose (shaded in red) are provided here.



EVALUATION DESIGN

The Evaluator created an evaluation design to identify the effectiveness of the RUK Workshop and RUK Basic over time. Using convenience recruitment methods, the Program Developers enrolled students in one of three conditions: (1) control group (students not receiving the intervention); (2) RUK Workshop (1-hour intervention); and (3) RUK Basic (3-hour intervention). The inclusion of a control group in this evaluation design was important to examine intervention effects of participants relative to students not participating in the intervention. Target recruitment goals for each condition were identified pre-implementation to over-recruit participants to ensure adequate power during statistical analyses (accounting for under-recruitment and attrition over time).

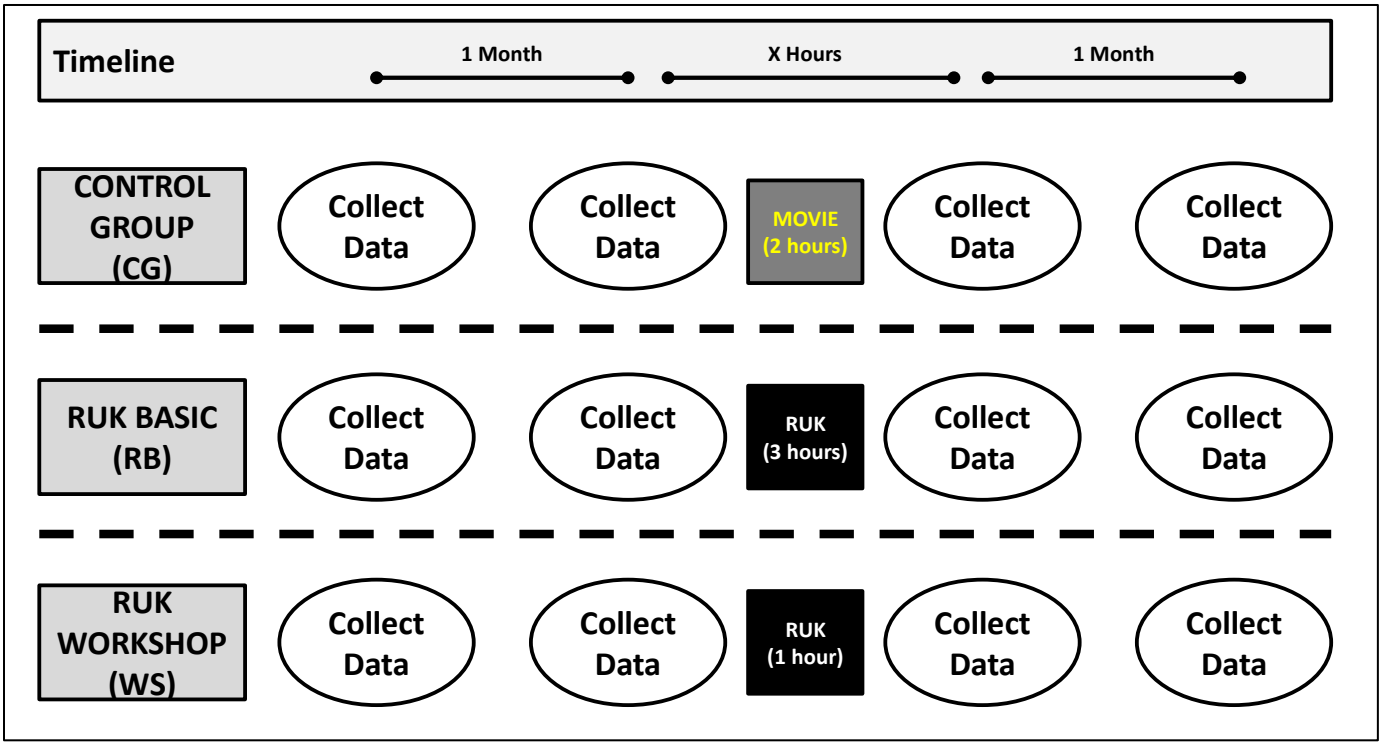
For the two intervention conditions, data were collected from participants at four time points:

- One month prior to intervention (pre-baseline)
- Immediately before the intervention (baseline)
- Immediately after the intervention (post-test)
- One month after the intervention (follow-up)

For the control condition, data were also collected from students at four time points. However, because there was no intervention in this condition (either 1- or 3-hours), control condition participants completed the pre- and post-test approximately two hours apart. During these two hours, the control condition participants engaged in other activities (e.g., going about their daily school activities, watching a movie) and were not presented information related to RUK intervention content.

Because the two RUK interventions were developed for school-aged children between Kindergarten and 5th grades, this evaluation included participants enrolled in 2nd and 4th grades as proxy targets for all elementary-age students.

A general depiction of the evaluation design is provided below.



DATA COLLECTION

RUK Workshop and RUK Basic sessions were hosted for 2nd and 4th graders from September 2015 to April 2016. Community-based organizations were recruited to participate in this evaluation because of their access and service provision to school-aged youth. Randomization was *not* used to assign students to their respective conditions. A total of 23 groups were reached during this initiative:

- Control Group Condition (CG): Five groups (no intervention provided to these students)
  - Public elementary school serving students from pre-kindergarten to 5th grade
- RUK Workshop Condition (WS): Twelve groups (participated in 1-hour sessions)
  - Salvation Army Boys & Girls Club after school program
  - Private schools serving students from kindergarten to 12th grade
  - Public charter school after school program
  - Girl Scout Troop with students from private school serving kindergarten to 12th grade
- RUK Basic Condition (RB): Six groups (participated in 3-hour sessions)
  - Girl Scout Troops with students from public & private schools and faith-based schools

Parental or guardian consent was obtained by the Program Developers prior to data collection and intervention participation. Because of the Evaluator's limited interaction with program participants (involvement solely surrounding the data collection, processing and analyses), this evaluation was deemed to be a "non-human subjects" project by the Institutional Review Board at The University of Georgia.

Data collection was performed by a contract project administrator and contract data collected hired by RUK. Data collectors underwent a basic training about data collection procedures. A script was provided to the data collector to facilitate these processes.

If a student preferred not to participate in the evaluation, they were removed from the classroom. However, these students were able to participate in the actual intervention (those in the RUK conditions), if they wanted.

Questionnaires and pencils were distributed to participants. Explanations about the visual analogue response choices were provided to participants before beginning. Based on the reading comprehension of students this age, and to accomplish this task efficiently, the data collector read the instrument directions and items aloud verbatim to the participants. Visual analogue images were placed on an easel at the front of the room. Data collectors were instructed not to answer questions posed by the participants during data collection; rather, they informed the participant: "just do the best you can, and if you don't know the answer or if the question seems strange to you, it's okay to circle 'don't know'."

RUK Data Tracking Log						
CONTROL CONDITION (no intervention)						
Session	Group	Parent Demo	Pre-Baseline	Baseline	Post-Test	Follow-Up
301	CG01	38	138	142	141	131
302	CG01	27	29	30	31	31
303	CG01	32	29	33	32	32
304	CG01	20	32	30	30	30
305	CG01	12	16	15	15	16
TOTALS		*129*	*244*	*250*	*249*	*240*
RUK BASIC (3-hour)						
Session	Group	Parent Demo	Pre-Baseline	Baseline	Post-Test	Follow-Up
101	RB01	12	13	7	9	10
102	RB02	11	11	8	8	7
103	RB03	11	7	9	9	6
104	RB04	12	9	12	12	9
105	RB05	0	0	10	8	0
106	RB06	4	8	4	4	3
TOTALS		*50*	*48*	*50*	*50*	*35*
RUK WORSKHOP (1-hour)						
Session	Group	Parent Demo	Pre-Baseline	Baseline	Post-Test	Follow-Up
201	WS01	14	11	14	10	7
212	WS01	0	1	0	0	0
204	WS03	24	21	0	14	15
205	WS04	28	20	17	16	13
206	WS05	19	18	17	17	18
207	WS05	19	18	18	18	18
208	WS06	28	30	24	24	0
211	WS07	8	19	21	20	11
212	WS07	5	11	12	9	9
208	WS08	0	0	0	0	19
209	WS08	0	33	33	34	33
210	WS08	1	4	43	24	18
TOTALS		*146*	*186*	*199*	*186*	*161*
OVERALL TOTALS		325	478	499	485	436

CASE PROCESSING

On the day of data collection, students were asked to write their names on the evaluation instruments. However, this information was not shared with the Evaluator. Rather, to maintain confidentiality during the evaluation process, participants were assigned unique identifiers instead of using their names. Unique identifiers were based on a combination of the condition, session site (group), and participant grade level. The Project Administrator created a master list of participants in each group and their unique identifier so their completed instruments could be matched over the four data collection time points. Once completed instruments were catalogued by the Project Administrator, each instrument was de-identified by "blacking out" the participant name with a marker and covering that area with a shipping label containing the unique identifier.

Completed instruments were then placed in envelopes and mailed to the Evaluator. Based on this unique identifier, the Evaluator knew the participants' condition, group, and grade level, which was then used to merge data for each participant over all four time points. To ensure data time points were not confused, different colors of paper were used (white = pre-baseline, blue = baseline, yellow = post-test, green = follow-up). All these processes were engaged to ensure confidentiality and accuracy when logging and concatenating the data into an analytic dataset.

Data were entered by four data enterers. To ensure uniformity across data enterers, these four individuals underwent a comprehensive data entry and management training hosted by the Evaluator prior to initiating the data entry process. All data remained in a locked location when not being accessed, and data enterers had to 'check out' data to be entered. Once data were into MS Excel, the data from each data enterer was shared with the Evaluator. The Evaluator then concatenated these MS Excel spreadsheets into one SPSS dataset for statistical analyses. Prior to analyses, the Evaluator performed a 5% data quality check from each data enterer. This means that 5% of all instruments were randomly selected by the Evaluator and the hard copy was identified. The Evaluator then compared the data entered to the information on the original instrument. Discrepancies were noted and corrected, if appropriate. Limited errors were identified during this process, thus confirming accurate data entry.

STATISTICAL ANALYSES

Using the data collected with the Parent/Guardian Demographics Instrument & Participant Outcomes Instrument, basic frequencies and descriptives were performed for all participants, which were then compared by condition.

For the purposes of this report, participant data collected at baseline, post-test, and follow-up were analyzed.

- Comparing data from baseline to post-test shows changes from immediately before the intervention to immediately after the intervention.
- Comparing data from post-test to follow-up shows changes from immediately after the intervention to one month after the intervention (tapering).
- Comparing data from baseline to follow-up shows changes from immediately before the intervention to one month after the intervention (maintenance of intervention effects over time).

A series of paired-sample t-tests and chi square tests were performed to identify changes in participant knowledge over time. Repeated measures ANOVA controlling for group were performed to identify the relative advantage of the RUK interventions compared to those not receiving an intervention (control condition). These analyses were performed twice: once for RUK Workshop and once for RUK Basic. P-values < 0.05 were used to identify statistically significant relationships.

SAMPLE CHARACTERISTICS

Based on the reading level of the participants, parents and guardians were asked to provide information about their participant by completing the Parent/Guardian Demographics Instrument at the time of registration.

Instruments were not completed by all parents or guardians; thus, this information does not represent all students in the three groups. Therefore, the figures reported in this "Sample Characteristics" section represent a substantially smaller proportion of students who participated in the study. Significant differences reported do not necessarily reflect differences in the actual study sample.

Overall, data were analyzed from 183 parents and guardians (about their 2nd and 4th grade students):

- Control Group Condition (CG): 92 participants
- RUK Workshop Condition (WS): 59 participants
- RUK Basic Condition (RB): 32 participants

The majority of students were registered for the program by females (91.9%) or an individual who identified as a biological parent of the student (97.3%). The majority of individuals registering the student had at least a college or university education (93.3%) and reported an annual household income of $100,000 or more (76.3%).

The sample characteristics are provided in the table below. This information was reported by the parent or guardian of the child.

Sample Characteristics (reported by parents and guardians)						
	Total	CG	WS	RB	χ^2	P
Year Student was Born (n = 183)					28.01	<0.001
2005	24.6%	16.3%	32.2%	34.4%		
2006	25.1%	17.4%	32.2%	34.4%		
2007	21.3%	30.4%	5.1%	25.0%		
2008	29.0%	35.9%	30.5%	6.3%		
Student's Gender (n = 183)					27.92	<0.001
Female	67.2%	51.1%	74.6%	100.0%		
Male	32.8%	48.9%	25.4%	0.0%		
Student's Grade in School (n = 182)					22.73	<0.001
2nd	48.9%	66.3%	32.8%	28.1%		
4th	51.1%	33.7%	67.2%	71.9%		
Student's Ethnicity (n = 181)					0.49	0.783
Non-Hispanic	95.0%	94.4%	96.6%	93.8%		
Hispanic	5.0%	5.6%	3.4%	6.3%		
Student's Race (n = 182)						
American Indian or Alaska Native	2.1%	0.0%	5.2%	3.1%	11.20	0.024
Asian	13.2%	7.6%	22.4%	12.5%	6.83	0.033
Black or African American	16.5%	6.5%	27.6%	25.0%	13.51	0.001
White	71.4%	88.0%	48.3%	65.6%	28.21	<0.001
Students Currently Live With (n = 182)						
Biological Mother	97.3%	97.8%	96.6%	96.9%	0.22	0.895
Biological Father	85.2%	91.3%	75.9%	84.4%	6.73	0.035
Biological Siblings (older)	30.8%	33.7%	25.9%	31.3%	1.03	0.598
Biological Siblings (younger)	27.1%	27.2%	21.1%	37.5%	7.80	0.099
Grandparent	4.4%	7.6%	1.7%	0.0%	2.86	0.239

- A significantly smaller proportion of students in the CG Condition were born in 2005, a significantly smaller proportion of students in the WS Condition were born in 2007, and a significantly smaller proportion of students in the RB Condition were born in 2008.
- The RB Condition was comprised of only females.
- A significantly smaller proportion of students in the CG Condition were in 4th grade.
- There were significant differences by Condition in terms of race. A larger proportion of students in the CG Condition were white, whereas, larger proportions of the WS and RB Conditions were non-white.
- A significantly larger proportion of students in the CG Condition lived with their biological father.

General risk factors associated with the sample are provided in the table below. This information was reported by the parent or guardian of the child.

Risk Factors of Sample (reported by parents and guardians)	Total	CG	WS	RB	χ^2	P
Student Receives Free or Discounted Lunches at School (n = 169)					21.84	<0.001
No	90.5%	98.8%	75.0%	93.8%		
Yes	9.5%	1.2%	25.0%	6.3%		
Student Ever Participated in Predatory Safety Training Program (n = 175)					3.84	0.427
No	91.4%	90.0%	90.6%	96.9%		
Yes	8.6%	10.0%	9.4%	3.1%		
Student been Bullied in Past 12 Months (n = 177)					5.07	0.281
No	78.5%	80.0%	80.0%	71.9%		
Yes	21.5%	20.0%	20.0%	28.1%		
Student been in Physical Fight in Past 12 Months (n = 177)					0.88	0.645
No	94.9%	95.6%	92.7%	96.9%		
Yes	5.1%	4.4%	7.3%	3.1%		
Student has been the Victim of: (n = 177)						
Physical Abuse	0.6%	1.1%	0.0%	0.0%	0.97	0.615
Verbal or Emotional Abuse	5.1%	2.2%	7.3%	9.4%	3.23	0.199
Sexual Abuse	0.0%	0.0%	0.0%	0.0%	--	--
Neglect	0.0%	0.0%	0.0%	0.0%	--	--
Student NOT Participating Extracurricular Activites Weekly (n = 182)						
Sports	11.0%	8.7%	15.5%	9.4%	14.13	0.293
Clubs or Organizations (at school)	35.2%	41.8%	32.1%	21.9%	15.99	0.192
Clubs or Organizations (outside of school)	29.5%	31.1%	38.9%	9.4%	20.79	0.008
Practicing or Taking Lessons (outside of school)	44.1%	52.7%	31.5%	40.6%	15.79	0.106
After Care (at school or elsewhere)	49.1%	55.1%	40.7%	46.9%	19.03	0.088

As can be seen, this sample was at low risk for most general risk factors.

- 9.5% receives free or discounted lunches at school
- 21.5% had been bullied in the past 12 months
- 5.1% had been in a physical fight in the past 12 months
- 0.6% and 5.1% had been victims of physical or verbal/emotional abuse, respectively

Approximately 9% of students previously participated in a Predatory Safety Training Program. Many of the students participated in at least one extracurricular activity. Most of the students participated in a sport or club/organization.

- A significantly larger proportion of students in the WS Condition received free or discounted lunches at school.
- A significantly smaller proportion of students in the RB Condition participated in clubs/organizations outside of school.

FINDINGS

Students were asked to provide information about their knowledge related to predator safety and self-defense by completing the Participant Outcomes Instrument. This instrument was completed at four time points; however, only three time points were assessed for this report (baseline, post-test, and follow-up).

Overall, data were analyzed from 414 2nd and 4th grade students. Approximately 44% of participants were in 2nd grade, and approximately 56% participants were in 4th grade. Approximately 52% of participants were female, and approximately 48% of participants were male.

The distribution of participants by condition is reported below:

- Control Group Condition (CG): 219 participants
- RUK Workshop Condition (WS): 150 participants
- RUK Basic Condition (RB): 45 participants

The table below reports the average scores (mean) and standard deviations (SD) for knowledge-related outcomes by condition. Data are presented at baseline, post-test, and follow-up. General changes can be observed here in this table; however, the statistical significance of changes are shown in subsequent tables.

Average Scores Across Time

CONTROL CONDITION

	Baseline (n=219)		Post-Test (n=219)		Follow-Up (n=189)	
	Mean	SD	Mean	SD	Mean	SD
Recognize Knowledge Score (13 items)	7.77	2.30	8.03	2.28	8.12	2.41
Avoid Knowledge Score (17 items)	13.47	2.79	13.64	3.00	13.54	3.06
Escape Knowledge Score (4 items)	2.15	1.00	2.23	1.03	2.20	1.07
Protect Self: Total Correct (9 body parts)	2.96	1.11	3.22	1.24	3.35	0.91
Protect Self: Total Incorrect (26 possible)	11.13	7.48	13.05	7.58	14.11	7.43
Protect Self: Total Marks (35 possible)	16.39	8.97	18.80	9.10	20.11	8.68
Strike: Total Correct (12 body parts)	0.67	0.55	0.79	0.51	0.83	0.58
Strike: Total Incorrect (23 possible)	3.52	4.53	4.77	5.99	5.59	6.26
Strike: Total Marks (35 possible)	7.46	4.73	9.05	6.28	9.85	6.37

RUK WORKSHOP CONDITION

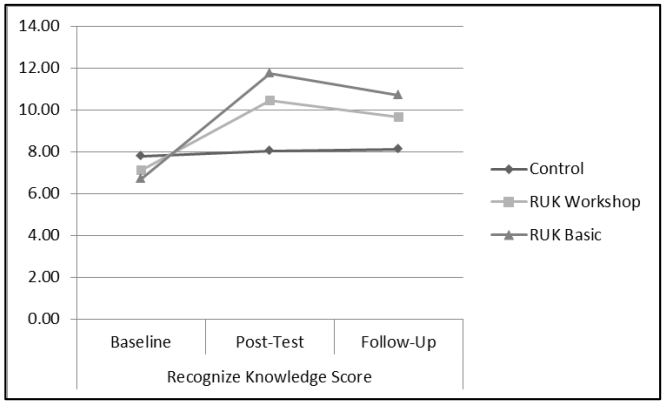
	Baseline (n=150)		Post-Test (n=150)		Follow-Up (n=111)	
	Mean	SD	Mean	SD	Mean	SD
Recognize Knowledge Score (13 items)	7.11	2.49	10.44	2.12	9.66	2.31
Avoid Knowledge Score (17 items)	13.48	2.94	15.18	1.77	14.83	2.00
Escape Knowledge Score (4 items)	2.14	1.04	3.61	0.69	3.54	0.77
Protect Self: Total Correct (9 body parts)	3.13	1.81	4.65	1.82	3.89	1.74
Protect Self: Total Incorrect (26 possible)	8.61	6.72	2.13	3.36	4.64	6.05
Protect Self: Total Marks (35 possible)	12.91	8.34	8.79	3.41	10.48	6.76
Strike: Total Correct (12 body parts)	1.67	1.74	2.29	1.83	1.87	1.61
Strike: Total Incorrect (23 possible)	3.86	4.06	1.75	2.01	2.12	2.81
Strike: Total Marks (35 possible)	7.38	4.38	6.16	1.94	6.48	2.98

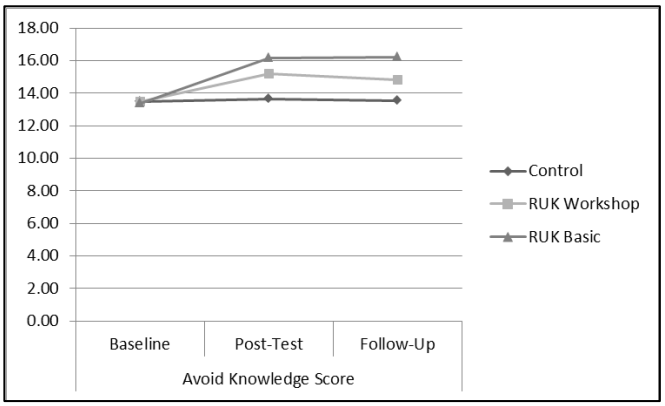
RUK BASIC CONDITION

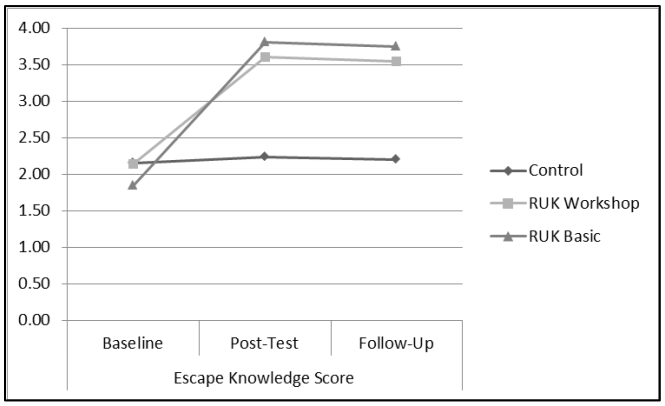
	Baseline (n=45)		Post-Test (n=45)		Follow-Up (n=27)	
	Mean	SD	Mean	SD	Mean	SD
Recognize Knowledge Score (13 items)	6.71	2.23	11.76	1.82	10.70	2.07
Avoid Knowledge Score (17 items)	13.40	2.05	16.13	1.10	16.22	0.89
Escape Knowledge Score (4 items)	1.84	0.88	3.80	0.63	3.74	0.59
Protect Self: Total Correct (9 body parts)	3.67	2.15	7.16	1.09	6.15	1.66
Protect Self: Total Incorrect (26 possible)	7.73	6.42	1.47	2.01	4.04	4.60
Protect Self: Total Marks (35 possible)	11.33	7.81	8.60	2.03	10.07	4.68
Strike: Total Correct (12 body parts)	3.64	1.46	4.47	0.69	4.56	0.64
Strike: Total Incorrect (23 possible)	2.16	2.84	1.33	1.52	1.11	2.01
Strike: Total Marks (35 possible)	5.67	3.30	5.76	1.68	5.67	2.18

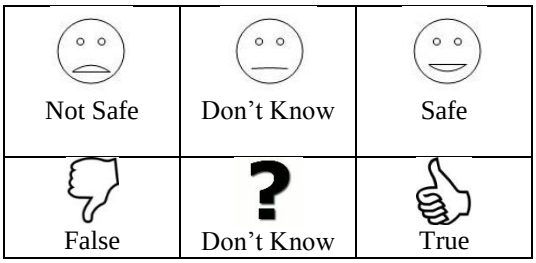
KNOWLEDGE SCORE CHANGES BY CONDITION

The graphics below provide visual evidence of the Recognize, Avoid, and Escape, Knowledge score changes by condition over time.









Recognize Knowledge

- CG scores remained relatively consistent over time. This confirms recognize-related knowledge was not influenced because this group did not receive a RUK intervention.
- WS and RB scores improved from baseline to post-test and tapered at 1-month follow-up. The average follow-up scores remained higher than average scores at baseline.

Avoid Knowledge

- Generally, the baseline avoid-related knowledge was high across conditions (~13.4 out of 17 points).
- CG scores remained relatively consistent over time. This confirms avoid-related knowledge was not influenced because this group did not receive a RUK intervention.
- WS scores improved from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up scores remained higher than average scores at baseline.
- RB scores improved from baseline to post-test and maintained at 1-month follow-up.

Escape Knowledge

- CG scores remained relatively consistent over time. This confirms escape-related knowledge was not influenced because this group did not receive a RUK intervention.
- WS and RB scores improved from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up scores remained higher than average scores at baseline.

RECOGNIZE KNOWLEDGE SCORE IMPROVEMENTS (baseline to post-test)

This table presents the proportion of students who answered the Recognize Knowledge items (n = 13) correctly at both baseline and post-test. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test (improved).

Across conditions, a large proportion of students correctly answered 1 item at baseline and post-test (80% or higher).

Compared to those in the WS or RB conditions, smaller proportions of students in the CG condition answered items correctly at post-test.

Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved for 12 of the 37 items.

The proportion of students who improved by 1 or more points on the Recognize Knowledge (scores ranged from 0 to 13 points) from baseline to post-test are as follows:

- CG: 35.6% (n = 78 of 219)
- WS: 89.3% (n = 134 of 150)
- RB: 100% (n = 45 of 45)

Recognize Knowledge Scale Improvements by Condition (baseline to post-test)

	CG (n=219)	WS (n=150)	RB (n=45)	χ^2	P
Being aware of the people near me				4.43	0.619
Correct at Both	86.3%	78.7%	84.4%		
Improved	5.0%	6.7%	6.7%		
My tummy keeps me safe				219.02	<0.001
Correct at Both	9.6%	17.3%	4.4%		
Improved	3.2%	58.0%	86.7%		
All bad grown-ups are liars				163.54	<0.001
Correct at Both	13.2%	16.7%	20.0%		
Improved	7.8%	55.3%	77.8%		
All bad grown-ups look scary				26.06	<0.001
Correct at Both	80.4%	68.7%	73.3%		
Improved	4.1%	11.3%	17.8%		
A bad grown-up can be a kid				180.45	<0.001
Correct at Both	10.5%	16.0%	8.9%		
Improved	3.2%	56.7%	68.9%		
All bad grown-ups are strangers				38.67	<0.001
Correct at Both	52.5%	56.7%	51.1%		
Improved	10.0%	26.7%	26.7%		
Bad grown-ups may try to trick me				18.48	0.005
Correct at Both	81.7%	82.7%	82.2%		
Improved	6.8%	14.0%	17.8%		
Using my side eyes helps me see people around me				58.61	<0.001
Correct at Both	69.9%	76.0%	71.1%		
Improved	6.4%	21.3%	28.9%		
I know if someone tells me a tricking lie				38.71	<0.001
Correct at Both	54.3%	35.3%	51.1%		
Improved	9.1%	29.3%	33.3%		
I know if someone tells me a trouble lie				47.00	<0.001
Correct at Both	54.3%	38.7%	46.7%		
Improved	6.8%	27.3%	40.0%		
I know if someone tells me a scary lie				34.18	<0.001
Correct at Both	62.1%	43.3%	55.6%		
Improved	9.1%	27.3%	33.3%		
I know the difference between a secret and a surprise				33.39	<0.001
Correct at Both	76.3%	67.3%	48.9%		
Improved	10.0%	20.0%	44.4%		
I know if someone is a bad grown-up				33.96	<0.001
Correct at Both	49.3%	25.3%	35.6%		
Improved	14.2%	30.0%	40.0%		

AVOID KNOWLEDGE SCORE IMPROVEMENTS (baseline to post-test)

This table presents the proportion of students who answered the Avoid Knowledge items (n = 17) correctly at both baseline and post-test. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test (improved).

Across conditions, a large proportion of students correctly answered 7 items at baseline and post-test (85% or higher).

Compared to those in the WS or RB conditions, smaller proportions of students in the CG condition answered items correctly at post-test.

Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved for 10 of the 17 items.

The proportion of students who improved by 1 or more points on the Avoid Knowledge (scores ranged from 0 to 17 points) from baseline to post-test are as follows:

- CG: 35.2% (n = 77 of 219)
- WS: 66.0% (n = 99 of 150)
- RB: 88.9% (n = 40 of 45)

Avoid Knowledge Scale Improvements by Condition (baseline to post-test)

	CG (n=219)	WS (n=150)	RB (n=45)	χ^2	P
Telling my parents where I am going				5.52	0.479
Correct at Both	96.8%	94.7%	93.3%		
Improved	0.9%	2.7%	0.0%		
Keeping a secret from my parents				42.10	<0.001
Correct at Both	74.4%	83.3%	93.3%		
Improved	3.2%	12.7%	4.4%		
Talking to a stranger				8.03	0.236
Correct at Both	95.4%	95.3%	100.0%		
Improved	0.5%	2.7%	0.0%		
Helping someone find their lost dog				66.44	<0.001
Correct at Both	45.7%	48.7%	51.1%		
Improved	7.3%	22.7%	46.7%		
Going inside a neighbor's house without permission from my parents				14.32	0.026
Correct at Both	92.7%	90.0%	93.3%		
Improved	0.9%	5.3%	6.7%		
Letting my parents know where I am all the time				1.47	0.961
Correct at Both	95.0%	95.3%	95.6%		
Improved	2.7%	2.7%	4.4%		
Calling my parents when I change my plans				9.20	0.162
Correct at Both	89.0%	90.7%	97.8%		
Improved	4.6%	6.7%	2.2%		
Letting people into my safe space				32.28	<0.001
Correct at Both	70.8%	81.3%	82.2%		
Improved	6.4%	12.0%	17.8%		
Practicing my safety skills				8.76	0.188
Correct at Both	90.9%	92.0%	91.1%		
Improved	1.4%	4.0%	4.4%		
Keeping my side eyes turned off				53.68	<0.001
Correct at Both	66.7%	74.7%	64.4%		
Improved	8.2%	20.7%	31.1%		
Walking on the sidewalk looking down at my feet				11.45	0.075
Correct at Both	88.1%	89.3%	93.3%		
Improved	3.7%	8.0%	2.2%		
It is okay to keep a secret from my parents				40.71	<0.001
Correct at Both	70.8%	75.3%	95.6%		
Improved	6.8%	18.7%	4.4%		
I can use a crayon to make safe space				33.35	<0.001
Correct at Both	59.8%	54.0%	60.0%		
Improved	6.4%	21.3%	28.9%		
I can use my side eyes to stay safe				60.36	<0.001
Correct at Both	69.9%	76.7%	71.1%		
Improved	5.0%	19.3%	28.9%		
I know when it's okay to help a grown-up				12.35	0.055
Correct at Both	52.1%	40.7%	40.0%		
Improved	11.9%	20.0%	28.9%		
I can walk smart				53.65	<0.001
Correct at Both	55.7%	46.7%	28.9%		
Improved	11.0%	17.3%	55.6%		
I can keep my safe space				58.98	<0.001
Correct at Both	61.2%	67.3%	55.6%		
Improved	8.7%	25.3%	40.0%		

ESCAPE KNOWLEDGE SCORE IMPROVEMENTS (baseline to post-test)

Escape Knowledge Scale Improvements by Condition (baseline to post-test)					
	CG (n=219)	WS (n=150)	RB (n=45)	χ^2	P
I should tell my parents if someone tries to hurt me				6.07	0.416
Correct at Both	95.9%	92.0%	95.6%		
Improved	1.4%	3.3%	2.2%		
My safe voice is quiet				171.70	<0.001
Correct at Both	26.5%	34.0%	28.9%		
Improved	6.8%	53.3%	66.7%		
I can unfreeze my body with my safe voice				197.22	<0.001
Correct at Both	22.4%	23.3%	11.1%		
Improved	7.8%	63.3%	84.4%		
I can use my safe voice if I feel scared				84.60	<0.001
Correct at Both	53.0%	50.7%	44.4%		
Improved	9.1%	40.7%	46.7%		

This table presents the proportion of students who answered the Escape Knowledge items (n = 4) correctly at both baseline and post-test. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test (improved).

Across conditions, a large proportion of students correctly answered 1 item at baseline and post-test (90% or higher).

Compared to those in the WS or RB conditions, smaller proportions of students in the CG condition answered items correctly at post-test.

Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved for 3 of the 4 items.

The proportion of students who improved by 1 or more points on the Escape Knowledge (scores ranged from 0 to 4 points) from baseline to post-test are as follows:

- CG: 19.2% (n = 42 of 219)
- WS: 80.0% (n = 120 of 150)
- RB: 93.3% (n = 42 of 45)

RECOGNIZE KNOWLEDGE SCORE IMPROVEMENTS (baseline to follow-up)

This table presents the proportion of students who answered the Recognize Knowledge items (n = 13) correctly at baseline, post-test, and 1-month follow-up. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test and 1-month follow-up (improved/retained).

Compared to those in the WS or RB conditions, smaller proportions of students in the CG condition answered items correctly at post-test and follow-up for all items.

Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved/retained knowledge for 13 of the 13 items.

The proportion of students who improved by 1 or more points on the Recognize Knowledge (scores ranged from 0 to 13 points) from baseline to 1-month follow-up are as follows:

- CG: 41.3% (n = 78 of 189)
- WS: 84.7% (n = 94 of 11)
- RB: 88.9% (n = 24 of 27)

Recognize Knowledge Scale Improvements by Condition (baseline to follow-up)

	CG (n=189)	WS (n=111)	RB (n=27)	χ^2	P
Being aware of the people near me				17.34	0.001
Correct at All Times	70.3%	54.7%	51.1%		
Improved/Retained	2.7%	4.0%	4.4%		
My tummy keeps me safe				184.41	<0.001
Correct at All Times	8.2%	10.0%	4.4%		
Improved/Retained	0.5%	34.7%	35.6%		
All bad grown-ups are liars				118.61	<0.001
Correct at All Times	6.8%	8.0%	11.1%		
Improved/Retained	4.1%	24.0%	31.1%		
All bad grown-ups look scary				40.14	<0.001
Correct at All Times	65.3%	49.3%	42.2%		
Improved/Retained	3.7%	5.3%	4.4%		
A bad grown-up can be a kid				148.77	<0.001
Correct at All Times	6.8%	10.7%	6.7%		
Improved/Retained	0.0%	34.0%	28.9%		
All bad grown-ups are strangers				40.11	<0.001
Correct at All Times	42.5%	35.3%	31.1%		
Improved/Retained	4.1%	13.3%	17.8%		
Bad grown-ups may try to trick me				18.94	0.001
Correct at All Times	68.9%	60.0%	46.7%		
Improved/Retained	3.7%	8.0%	13.3%		
Using my side eyes helps me see people around me				44.20	<0.001
Correct at All Times	56.6%	56.7%	46.7%		
Improved/Retained	3.7%	14.7%	13.3%		
I know if someone tells me a tricking lie				52.34	<0.001
Correct at All Times	43.8%	22.0%	20.0%		
Improved/Retained	5.9%	14.7%	17.8%		
I know if someone tells me a trouble lie				57.13	<0.001
Correct at All Times	42.9%	23.3%	17.8%		
Improved/Retained	4.6%	12.0%	22.2%		
I know if someone tells me a scary lie				39.70	<0.001
Correct at All Times	49.8%	29.3%	28.9%		
Improved/Retained	5.9%	10.7%	17.8%		
I know the difference between a secret and a surprise				34.05	<0.001
Correct at All Times	60.3%	46.0%	26.7%		
Improved/Retained	6.4%	9.3%	24.4%		
I know if someone is a bad grown-up				38.70	<0.001
Correct at All Times	35.2%	12.7%	17.8%		
Improved/Retained	7.8%	9.3%	20.0%		

AVOID KNOWLEDGE SCORE IMPROVEMENTS (baseline to follow-up)

This table presents the proportion of students who answered the Avoid Knowledge items (n = 17) correctly at baseline, post-test, and 1-month follow-up. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test and 1-month follow-up (improved/retained).

Compared to those in the WS or RB conditions, smaller proportions of students in the CG condition answered items correctly at post-test and follow-up for most items.

Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved/retained knowledge for 12 of the 17 items.

The proportion of students who improved by 1 or more points on the Avoid Knowledge (scores ranged from 0 to 17 points) from baseline to 1-month follow-up are as follows:

- CG: 37.6% (n = 71 of 189)
- WS: 55.9% (n = 62 of 111)
- RB: 85.2% (n = 23 of 27)

Avoid Knowledge Scale Improvements by Condition (baseline to follow-up)

	CG (n=189)	WS (n=111)	RB (n=27)	χ^2	P
Telling my parents where I am going				19.64	0.001
Correct at All Times	82.6%	70.0%	55.6%		
Improved/Retained	0.9%	0.7%	0.0%		
Keeping a secret from my parents				41.02	<0.001
Correct at All Times	62.1%	60.7%	53.3%		
Improved/Retained	1.4%	9.3%	4.4%		
Talking to a stranger				14.00	0.001
Correct at All Times	81.3%	70.0%	60.0%		
Improved/Retained	0.5%	0.7%	0.0%		
Helping someone find their lost dog				57.06	<0.001
Correct at All Times	34.7%	32.7%	31.1%		
Improved/Retained	3.7%	10.0%	26.7%		
Going inside a neighbor's house without permission from my parents				20.32	0.002
Correct at All Times	78.1%	66.0%	57.8%		
Improved/Retained	0.9%	2.0%	2.2%		
Letting my parents know where I am all the time				15.95	0.001
Correct at All Times	80.4%	68.7%	60.0%		
Improved/Retained	1.8%	2.0%	0.0%		
Calling my parents when I change my plans				15.17	0.002
Correct at All Times	73.5%	66.0%	57.8%		
Improved/Retained	2.7%	2.7%	2.2%		
Letting people into my safe space				22.28	0.001
Correct at All Times	54.8%	57.3%	48.9%		
Improved/Retained	3.7%	7.3%	6.7%		
Practicing my safety skills				25.15	0.001
Correct at All Times	77.2%	64.7%	57.8%		
Improved/Retained	1.4%	0.7%	0.0%		
Keeping my side eyes turned off				47.57	<0.001
Correct at All Times	58.0%	57.3%	46.7%		
Improved/Retained	3.2%	10.7%	8.9%		
Walking on the sidewalk looking down at my feet				23.92	0.001
Correct at All Times	73.5%	62.7%	57.8%		
Improved/Retained	2.3%	6.7%	0.0%		
It is okay to keep a secret from my parents				29.42	<0.001
Correct at All Times	59.4%	52.7%	55.6%		
Improved/Retained	4.1%	11.3%	2.2%		
I can use a crayon to make safe space				36.41	<0.001
Correct at All Times	44.3%	31.3%	35.6%		
Improved/Retained	3.2%	13.3%	11.1%		
I can use my side eyes to stay safe				46.19	<0.001
Correct at All Times	56.6%	55.3%	42.2%		
Improved/Retained	2.3%	13.3%	17.8%		
I know when it's okay to help a grown-up				22.07	0.002
Correct at All Times	41.1%	26.7%	26.7%		
Improved/Retained	4.1%	6.7%	11.1%		
I can walk smart				33.24	<0.001
Correct at All Times	42.5%	31.3%	20.0%		
Improved/Retained	6.4%	7.3%	26.7%		
I can keep my safe space				55.51	<0.001
Correct at All Times	47.0%	45.3%	33.3%		
Improved/Retained	2.3%	16.0%	24.4%		

ESCAPE KNOWLEDGE SCORE IMPROVEMENTS (baseline to follow-up)

Escape Knowledge Scale Improvements by Condition (baseline to follow-up)					
	CG (n=189)	WS (n=111)	RB (n=27)	χ^2	P
I should tell my parents if someone tries to hurt me				18.22	0.002
Correct at All Times	80.8%	65.3%	60.0%		
Improved/Retained	0.9%	2.0%	0.0%		
My safe voice is quiet				153.90	<0.001
Correct at All Times	18.7%	21.3%	22.2%		
Improved/Retained	5.0%	35.3%	33.3%		
I can unfreeze my body with my safe voice				159.89	<0.001
Correct at All Times	16.4%	18.7%	6.7%		
Improved/Retained	1.4%	37.3%	42.2%		
I can use my safe voice if I feel scared				71.70	<0.001
Correct at All Times	39.3%	35.3%	24.4%		
Improved/Retained	4.1%	24.7%	28.9%		

This table presents the proportion of students who answered the Escape Knowledge items (n = 4) correctly at baseline, post-test, and 1-month follow-up. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test and 1-month follow-up (improved/retained).

Compared to those in the WS or RB conditions, smaller proportions of students in the CG condition answered items correctly at post-test and follow-up for most items.

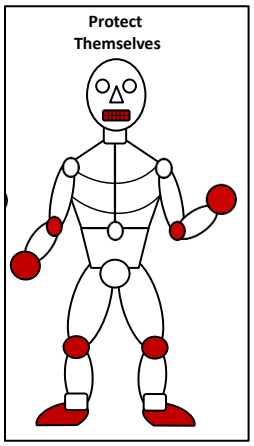
Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved/retained knowledge for 4 of the 4 items.

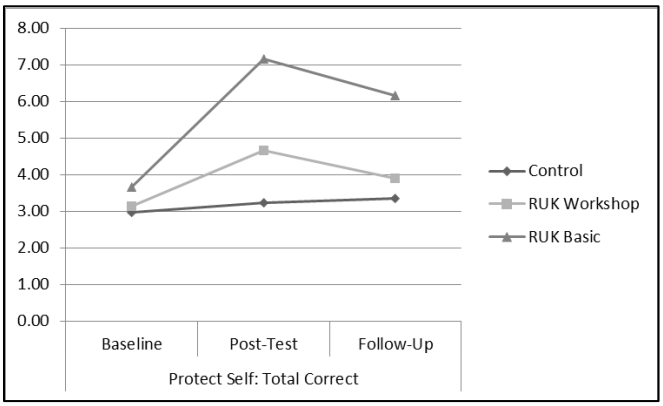
The proportion of students who improved by 1 or more points on the Escape Knowledge (scores ranged from 0 to 4 points) from baseline to 1-month follow-up are as follows:

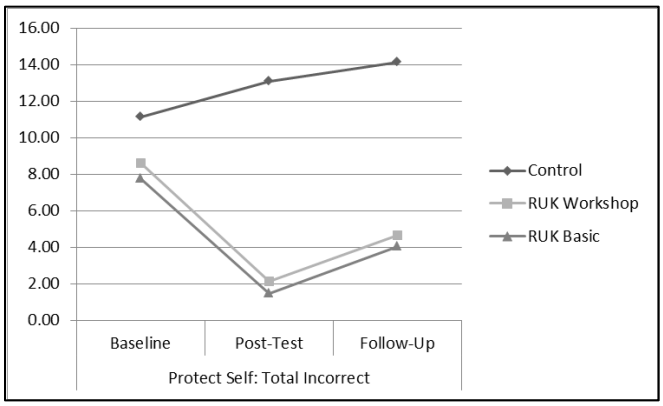
- CG: 19.1% (n = 36 of 189)
- WS: 74.8% (n = 83 of 111)
- RB: 92.6% (n = 25 of 27)

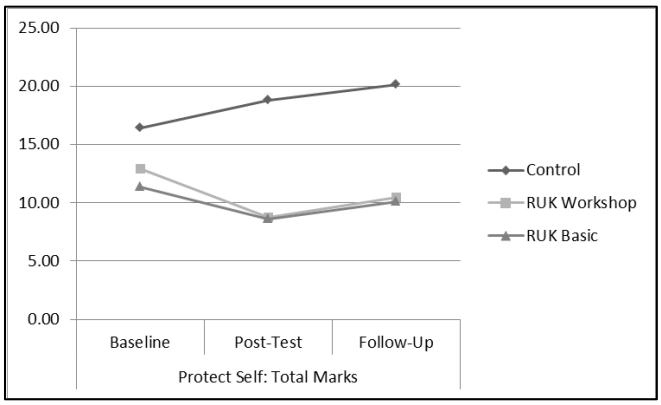
SELF-DEFENSE: "PROTECT THEMSELVES" KNOWLEDGE BY CONDITION

The graphics below provide visual evidence of the knowledge related to self-defense (i.e., body parts students can use to protect themselves) by condition over time.









Total Body Parts Correct

- CG parts correctly identified remained relatively consistent over time. This confirms self-defense-related knowledge (body parts used to protect themselves) was not influenced because this group did not receive a RUK intervention.
- WS and RB parts correctly identified improved from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up parts correctly identified remained higher than the baseline average. Considerable improvement was seen for the RB condition.

Total Body Parts Incorrect

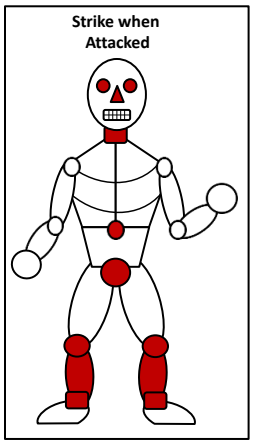
- CG parts incorrectly identified consistently increased over time.
- WS and RB parts incorrectly identified decreased from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up parts incorrectly identified remained lower than the baseline average.

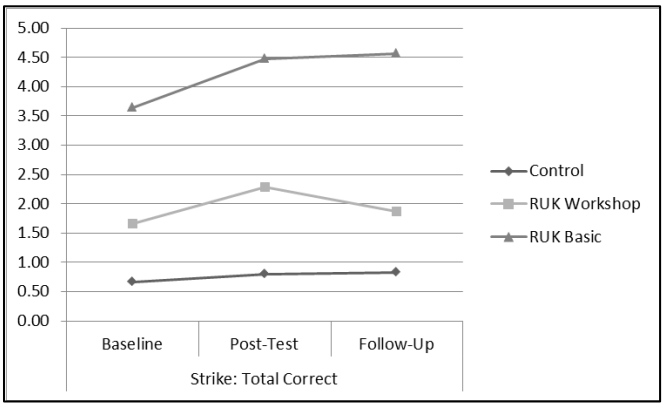
Total Body Parts Marked

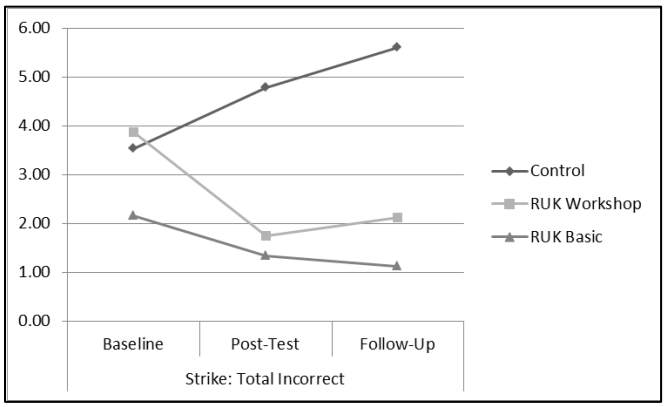
- CG total parts marked consistently increased over time.
- WS and RB total parts marked decreased from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up total parts marked remained lower than the baseline average.

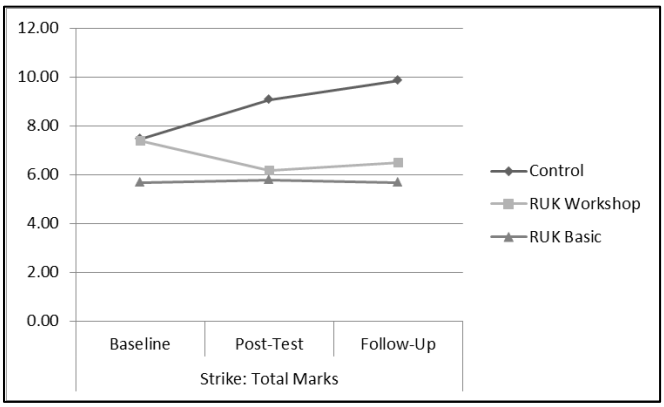
SELF-DEFENSE: "STRIKE WHEN ATTACKED" KNOWLEDGE BY CONDITION

The graphics below provide visual evidence of the knowledge related to self-defense (i.e., body parts students should strike when being attacked) by condition over time.









Total Body Parts Correct

- CG parts correctly identified remained low and relatively consistent over time. This confirms self-defense-related knowledge (body parts to strike when being attacked) was not influenced because this group did not receive a RUK intervention.
- WS parts correctly identified improved from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up parts correctly identified remained slightly higher than the baseline average.
- RB parts correctly identified remained high and consistently increased over time.

Total Body Parts Incorrect

- CG parts incorrectly identified consistently increased over time.
- WS parts incorrectly identified improved from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up parts incorrectly identified remained lower than the baseline average.
- RB parts incorrectly identified remained low and consistently decreased over time.

Total Body Parts Marked

- CG total parts marked consistently increased over time.
- WS total parts marked decreased from baseline to post-test and slightly tapered at 1-month follow-up. The average follow-up total parts marked remained lower than the average at baseline.
- RB parts correctly identified remained low and consistent over time.

SELF-DEFENSE: KNOWLEDGE IMPROVEMENTS (baseline to follow-up)

This table presents the proportion of students who correctly identified body parts they can use to protect themselves (n = 5 parts) and body parts that students should strike if they are being attacked (n = 8 parts) at both baseline, post-test, and 1-month follow-up. It also reports the proportion of students who answered incorrectly at baseline but answered correctly at post-test and 1-month follow-up (improved/retained).

Compared to those in the WS or RB conditions, larger proportions of students in the CG condition correctly identified self-defense body parts at all three time points for all items.

Compared to students in the CG, significantly larger proportions of participants in the WS or RB improved/retained for 5 of the 5 "protect themselves" body parts and 8 of the 8 "strike when attacked" body parts.

Knowledge improvement/retention for striking the throat and groin when attacked was low for the RB group.

Self-Defense Knowledge Improvements by Condition (baseline to follow-up)

	CG (n=189)	WS (n=111)	RB (n=27)	χ^2	P
PROTECT THEMSELVES					
Mouth				51.13	<0.001
Correct at All Times	41.1%	27.3%	37.8%		
Improved/Retained	8.7%	34.0%	15.6%		
Elbow				34.74	<0.001
Correct at All Times	54.3%	39.3%	33.3%		
Improved/Retained	10.0%	14.7%	20.0%		
Fist				28.08	<0.001
Correct at All Times	82.2%	63.3%	53.3%		
Improved/Retained	2.3%	5.3%	6.7%		
Knee				50.04	<0.001
Correct at All Times	60.3%	44.0%	22.2%		
Improved/Retained	5.9%	9.3%	11.1%		
Foot				28.56	<0.001
Correct at All Times	64.8%	51.3%	44.4%		
Improved/Retained	7.8%	8.0%	11.1%		
STRIKE WHEN ATTACKED					
Eye				94.01	<0.001
Correct at All Times	43.8%	34.7%	17.8%		
Improved/Retained	5.5%	26.0%	31.1%		
Nose				39.48	<0.001
Correct at All Times	49.3%	30.0%	17.8%		
Improved/Retained	7.3%	18.7%	26.7%		
Throat				17.11	0.029
Correct at All Times	37.0%	23.3%	22.2%		
Improved/Retained	11.0%	16.7%	4.4%		
Solar Plexus				30.55	<0.001
Correct at All Times	45.7%	34.0%	24.4%		
Improved/Retained	9.1%	18.0%	13.3%		
Groin				30.34	<0.001
Correct at All Times	75.3%	56.7%	51.1%		
Improved/Retained	3.7%	11.3%	4.4%		
Knee				70.23	<0.001
Correct at All Times	45.7%	21.3%	13.3%		
Improved/Retained	9.6%	8.7%	22.2%		
Shin				63.44	<0.001
Correct at All Times	31.5%	12.0%	24.4%		
Improved/Retained	7.8%	18.7%	17.8%		
Ankle				67.26	<0.001
Correct at All Times	32.0%	28.0%	17.8%		
Improved/Retained	12.8%	24.7%	24.4%		

CHANGES OVER TIME

Paired-Sample T-Test Showing Magnitude of Change Across Time

RUK WORKSHOP CONDITION

	Baseline to Post-Test (n = 150)		Post-Test to Follow-Up (n = 111)		Baseline to Follow-Up (n = 111)	
	t	P	t	P	t	P
Recognize Knowledge Score (13 items)	-15.69	**<0.001**	3.70	**<0.001**	-12.00	**<0.001**
Avoid Knowledge Score (17 items)	-7.66	**<0.001**	1.11	0.268	-5.59	**<0.001**
Escape Knowledge Score (4 items)	-15.61	**<0.001**	0.40	0.688	-12.94	**<0.001**
Protect Self: Total Correct (9 body parts)	-6.13	**<0.001**	2.79	**0.006**	-1.76	0.081
Protect Self: Total Incorrect (26 possible)	6.26	**<0.001**	-0.55	0.583	5.03	**<0.001**
Protect Self: Total Marks (35 possible)	3.46	**0.001**	-0.37	0.713	2.88	**0.005**
Strike: Total Correct (12 body parts)	-8.78	**<0.001**	4.02	**<0.001**	-4.10	**<0.001**
Strike: Total Incorrect (23 possible)	11.70	**<0.001**	-4.76	**<0.001**	6.61	**<0.001**
Strike: Total Marks (35 possible)	6.05	**<0.001**	-2.95	**0.004**	3.69	**<0.001**

RUK BASIC CONDITION

	Baseline to Post-Test (n = 45)		Post-Test to Follow-Up (n = 27)		Baseline to Follow-Up (n = 27)	
	t	P	t	P	t	P
Recognize Knowledge Score (13 items)	-15.14	**<0.001**	3.80	**0.001**	-7.44	**<0.001**
Avoid Knowledge Score (17 items)	-8.81	**<0.001**	-0.93	0.363	-6.27	**<0.001**
Escape Knowledge Score (4 items)	-14.52	**<0.001**	1.00	0.327	-10.73	**<0.001**
Protect Self: Total Correct (9 body parts)	-3.33	**0.002**	-0.46	0.646	-2.74	**0.011**
Protect Self: Total Incorrect (26 possible)	1.67	0.102	0.96	0.346	2.64	**0.014**
Protect Self: Total Marks (35 possible)	-0.15	0.879	0.70	0.490	0.22	0.824
Strike: Total Correct (12 body parts)	-11.53	**<0.001**	2.53	**0.018**	-5.34	**<0.001**
Strike: Total Incorrect (23 possible)	6.10	**<0.001**	-2.42	**0.023**	2.90	**0.007**
Strike: Total Marks (35 possible)	2.28	**0.028**	-1.30	0.205	1.39	0.177

RUK Workshop Condition:

- All outcome variables significantly improved from baseline to post-test.
- Tapering from post-test to 1-month follow-up was observed for:
  - Recognize Knowledge Score
  - Protect Self: Total Correct
  - Strike: Total Correct
  - Strike: Total Incorrect
  - Strike: Total Marks
- When compared to baseline, follow-up improvements remained significant for all variables, except:
  - Protect Self: Total Correct

RUK Basic Condition:

- All outcome variables significantly improved from baseline to post-test, except:
  - Protect Self: Total Incorrect
  - Protect Self: Total Marks
- Tapering from post-test to 1-month follow-up was observed for:
  - Recognize Knowledge Score
  - Strike: Total Correct
  - Strike: Total Incorrect
- When compared to baseline, follow-up improvements remained significant for all variables, except:
  - Strike: Total Marks

Repeated Measures ANOVA

RUK WORKSHOP VS. CONTROL

	Baseline to Post-Test RUK WORKSHOP (n = 150) vs. CONTROL (n = 219)						Baseline to Follow-Up RUK WORKSHOP (n = 111) vs. CONTROL (n = 189)					
	Mean Change	f	P	Eta	95% CI Lower	95% CI Upper	Mean Change	f	P	Eta	95% CI Lower	95% CI Upper
Recognize Knowledge Score (13 items)	**3.08**	161.00	**<0.001**	0.44	0.37	0.50	**2.29**	65.46	**<0.001**	0.29	0.21	0.36
Avoid Knowledge Score (17 items)	**1.53**	38.31	**<0.001**	0.16	0.10	0.22	**1.27**	20.36	**<0.001**	0.11	0.05	0.18
Escape Knowledge Score (4 items)	**1.39**	153.33	**<0.001**	0.43	0.36	0.49	**1.33**	88.48	**<0.001**	0.35	0.27	0.42
Protect Self: Total Correct (5 body parts)	**0.49**	15.46	**<0.001**	0.07	0.03	0.12	0.06	2.94	0.890	0.02	0.00	0.05
Protect Self: Total Incorrect (26 possible)	**-3.36**	27.42	**<0.001**	0.12	0.06	0.17	**-3.90**	25.16	**<0.001**	0.13	0.07	0.20
Protect Self: Total Marks (35 possible)	**-2.81**	16.64	**<0.001**	0.07	0.03	0.12	**-3.51**	18.94	**<0.001**	0.10	0.05	0.17
Strike: Total Correct (8 body parts)	**1.25**	86.69	**<0.001**	0.30	0.22	0.36	0.35	14.64	0.150	0.08	0.03	0.14
Strike: Total Incorrect (23 possible)	**-8.41**	98.41	**<0.001**	0.32	0.25	0.39	**-7.10**	44.49	**<0.001**	0.22	0.14	0.29
Strike: Total Marks (35 possible)	**-6.53**	37.82	**<0.001**	0.16	0.09	0.22	**-6.43**	24.71	**<0.001**	0.13	0.07	0.20

RUK BASIC VS. CONTROL

	Baseline to Post-Test RUK BASIC (n = 45) vs. CONTROL (n = 219)						Baseline to Follow-Up RUK BASIC (n = 27) vs. CONTROL (n = 219)					
	Mean Change	f	P	Eta	95% CI Lower	95% CI Upper	Mean Change	f	P	Eta	95% CI Lower	95% CI Upper
Recognize Knowledge Score (13 items)	**4.79**	161.00	**<0.001**	0.44	0.37	0.50	**3.72**	65.46	**<0.001**	0.29	0.21	0.36
Avoid Knowledge Score (17 items)	**2.56**	38.31	**<0.001**	0.16	0.10	0.22	**2.39**	20.36	**<0.001**	0.11	0.05	0.18
Escape Knowledge Score (4 items)	**1.88**	153.33	**<0.001**	0.43	0.36	0.49	**1.76**	88.48	**<0.001**	0.35	0.27	0.42
Protect Self: Total Correct (5 body parts)	**0.69**	15.46	**<0.001**	0.07	0.03	0.12	**0.57**	2.94	**0.040**	0.02	0.00	0.05
Protect Self: Total Incorrect (26 possible)	**-2.07**	27.42	**0.010**	0.12	0.06	0.17	**-3.04**	25.16	**<0.001**	0.13	0.07	0.20
Protect Self: Total Marks (35 possible)	-1.50	16.64	0.120	0.07	0.03	0.12	**-2.44**	18.94	**0.040**	0.10	0.05	0.17
Strike: Total Correct (8 body parts)	**3.27**	86.69	**<0.001**	0.30	0.22	0.36	**1.72**	14.64	**<0.001**	0.08	0.03	0.14
Strike: Total Incorrect (23 possible)	**-8.19**	98.41	**<0.001**	0.32	0.25	0.39	**-7.36**	44.49	**<0.001**	0.22	0.14	0.29
Strike: Total Marks (35 possible)	-6.53	37.82	**<0.001**	0.16	0.09	0.22	**-5.98**	24.71	**<0.001**	0.13	0.07	0.20

RUK Workshop Condition:

- Compared to participants in the Control Condition, improvements observed among participants in the RUK Workshop Condition were significantly greater from baseline to post-test.
- Compared to participants in the Control Condition, improvements observed among participants in the RUK Workshop Condition were significantly greater from baseline to 1-month follow-up, except for:
  - Protect Self: Total Correct
  - Strike: Total Correct

RUK Basic Condition:

- Compared to participants in the Control Condition, improvements observed among participants in the RUK Basic Condition were significantly greater from baseline to post-test, except for:
  - Protect Self: Total Marks
- Compared to participants in the Control Condition, improvements observed among participants in the RUK Basic Condition were significantly greater from baseline to 1-month follow-up.

SUMMARY AND RECOMMENDATIONS

Findings from this evaluation indicate that participants in the RUK Workshop (WS) and RUK Basic (RB) significantly increased knowledge related to predator safety and self-defense when compared to students who did not receive an intervention (Control Group [CG] Condition). Topics with significant improvements observed for the WS and RB Conditions included:

- Recognize, Avoid, Escape Knowledge Scores
- Self-Defense Knowledge: Protecting themselves and knowing where to strike when attacked

Relative to the CG Condition, significant improvements were observed for the WS and RB Conditions from baseline to post-test (data collected the same day). Although some tapering was observed at 1-month follow-up for some outcomes (i.e., reduction of initial improvements seen from baseline to post-test), the majority of values at follow-up were still significant relative to baseline values. This means that the effect of the intervention was still seen after one month.

Compared to the CG condition, significantly larger proportions of WS and RB Condition students improved from baseline to post-test for many/most knowledge items examined. Additionally, larger proportions of students in the WS and RB Conditions improved and retained knowledge at 1-month follow-up for many/most items examined.

For some knowledge-related items (especially associated with the Avoid Knowledge), participants across conditions answered correctly at multiple time points. This indicates that these items should be considered "general knowledge" among elementary school students. While this information is important and valuable, it is recommended that RUK staff highlight these points as reinforcement, but spend the intervention time covering other important content. This will ensure time is adequately spent imparting new knowledge while reinforcing what is already known.

This evaluation focused on 2nd and 4th grade students as proxies for all elementary students. Findings suggest RUK would be appropriate and effective for elementary students in other grades.

While the magnitude of knowledge changes was similar between the WS and RB conditions, the impact of the RB was stronger in some instances. This finding is likely because the RB is a 3-hour intervention and the WS is a 1-hour intervention. As such, students in the RB have more intervention exposure and dose. Despite these differences, the overall impact of the RUK program seems relatively universal. Therefore, with small refinements, the 1-hour WS version is sufficient to achieve outcomes associated with program success.

It is important to note that the sociodemographics differed in some ways between the groups (e.g., age, sex, race). While these differences may have influenced some of the results, our ANOVA analyses controlled for age and sex). This is a common occurrence when participants are assigned into intervention conditions by methods other than randomization. Some of these differences may be because of difficulties recruiting for the RB Condition (because only a certain demographic can be available for 3-hours; whereas, the WS Condition participants were able to be reached at school). While this is a possible limitation of the current evaluation, the robustness of the outcomes indicates high internal reliability and the high potential to replicate RUK in other settings with diverse students <u>and</u> achieve similar outcomes.

Moving forward, the RUK staff should consider collecting data from participants at baseline and post-test for program monitoring and quality assurance. An abbreviated set of evaluation instruments could be used to ensure the most important content is learned by participants. Collecting data at 1-month follow-up may be unnecessary; however, collecting such information on a smaller group of participants could be useful.