BROWARD COUNTY and MIAMI-DADE COUNTY, FLORIDA

DROWNING PREVENTION PRACTICES PILOT STUDY

Nova Southeastern University
Institute for Child Health Policy
Health Professions Division
Fort Lauderdale, Florida

JUNE 2007

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EXECUTIVE SUMMARY

To investigate the drowning prevention and awareness among families with residential pools in our communities, surveys were mailed out to households with registered pools in pre-selected zip code areas within Broward and Miami-Dade Counties. These zip code areas have high percentages of young children under the age of 5 in the household as well as other factors that fit best for this study. Analyses were performed on all qualified surveys collected, as well as on surveys grouped by different stratification factors, such as by county, household type and demographic variables. Overall, there are not many differences concerning awareness of drowning risk factors or perceptions and knowledge towards drowning prevention among families with a residential pool in our selected communities within Broward and Miami-Dade Counties. The same holds true when analyses were performed on families with children and without children. However, when house safety and pool safety practices are considered, there are differences between county and differences by household type with or without children.

Though, little research has been completed to examine the impact on childhood drowning in Florida subsequent to enactment of Year 2000 state legislation mandating residential pool barriers, the findings from this study indicate that in general households with children are better in practicing common household safety practices as well as safety fencing around pools. A higher percentage of pool owners in Broward County utilize more safety devices on their pools. The difference between Broward County and Miami-Dade County may be partially due to the fact that a higher percent of pools in Miami-Dade County were built before year 2000---prior to the mandatory pool safety barrier becoming law. Further investigation, involving more communities and larger sample size in our local area, will help to further understand the reasons for pool safety practice behaviors. Through this pilot study, we conclude that pool owners in our study are well aware of the drowning risk factors and strong advocates of legislating pool safety devices. But there are still differences in practicing pool safety measures between subgroups in our community. Three critical dimensions (attention, proximity and continuity) of caregiver supervisory behaviors are identified as important areas for measurement. Targeted interventions are needed to reduce the incidence of residential swimming pool drownings across racial/ethnic groups, particularly adult supervision.

INTRODUCTION

Worldwide, drowning is the second leading cause of injury-related death to children ages 14 and under. In the United States, drowning remains the second leading cause of accidental death among children ages 1 to 14, despite a 52% decline in child drownings per year from 1987 to 2003. In 2003, 782 children ages 14 and under died as a result of accidental drowning; in 2004, an estimated 3,702 children in this age group were treated in emergency departments for near-drowning. Of these drowning deaths, an estimated 40% occurred in pools. Fifty-percent of all child drowning incidents occur in the states of Arizona, California, Florida, Georgia, Illinois, Massachusetts, New York, Pennsylvania, Texas and the District of Columbia.

- Florida has the highest drowning death rate in the nation for children ages 1 to 4.
- In 2003, Florida surpassed California, the most populous state in the nation, in the number of children ages 1 to 4 who drowned.
- Despite local ordinances and a state statute requiring safety features for backyard swimming pools enough children drowned in Florida in 2004 to fill four preschool classrooms.

It is alarming that the number of drowning deaths in Florida for children under age 5 is increasing each year. From 2004 to 2005, there was a 17% increase in children ages 1 to 4 who drowned. During 2005 in Florida, there were 75 unintentional drowning deaths of children under age 5, compared to 64 in 2004. For the first quarter of 2006, statewide there were 10 unintentional drowning deaths of children under age 5. The majority of these children, over 60%, drowned in a swimming pool. Pool submersions involving children happen quickly and silently, with most child drowning victims missing from sight for less than 5 minutes.

From 2002 to 2004, the following counties lost the most children to drowning:

- Broward (30),
- Miami-Dade (20),
- Hillsborough (17),
- Orange (14),
- Palm Beach (11),
- Duval (10),
- Lee (10),

- Marion (9),
- Brevard (8),
- Polk (8),
- Seminole (8),
- Volusia (8),
- Manatee (7),
- Collier (6) and
- Pinellas (6).

Fifteen years of experience with pool fencing legislation in Queensland Australia has demonstrated that a reduction in toddler pool drowning deaths can be achieved. They report that it is difficult to know how much of this reduction is attributable to fencing itself or the heightened public awareness associated with the positive and negative media campaigns. However, the combination of a passive intervention strategy and accompanying education campaign are inextricably linked and the effect is likely to be symbiotic.

Drowning prevention planning and emergency readiness is a complex issue. Different types of unintentional injury prevention efforts and emergency response may require qualitatively different knowledge and skills. Different family structures require different approaches to readiness and effective networks within which community resources and families can interface are essential to implementation of drowning prevention strategies and preparedness to managing emergency response. Because families are the first lines of response it is important that all members of the family, parents, caregivers and children alike are provided with information that will guide their actions.

Drowning Prevention Pilot Projects

October of 2006, the Florida Department of Health Office of Injury Prevention selected the two counties with the highest number of drowning deaths of children under age 5, Broward and Miami-Dade, to participate in a drowning prevention pilot project to determine which best practices work within their communities. Each county received funding and is working on their pilot projects. The concept is that best practices successful within Broward and Miami-Dade may be replicated within other Florida communities. The pilots started in December 2006.

The Broward and Miami-Dade County Health Departments jointly funded the *Broward & Miami-Dade County Drowning Prevention Practices Pilot Study*. The concept of "injury prevention and preparedness to manage emergencies" is a multi-faceted combination of actions, awareness and behaviors that have not been clearly addressed or understood by families. Through the use of well-planned research methods and procedures, researchers at Nova Southeastern University's Institute for Child Health Policy were commissioned to assess conceptual frameworks that families use to think about child safety practices, with an emphasis on awareness of drowning prevention practices, as well as provide behavioral analysis on what families are currently doing and not doing to prevent drowning or near-drowning occurrences.

Specific research questions that will be addressed are:

1) What is the current level of awareness surrounding drowning prevention practices for families with young children?
2) Are community members aware that drowning is a major cause of unintentional injury and death?
3) What organizations would community members seek out for information on drowning prevention practices?
4) What are current behavioral practices of families to prevent young children from drowning? (For example life vests, fences, supervision etc.)
5) What are other child safety practices occurring among families with children?
6) What are the demographic characteristics of the households being investigated?

DESIGN & METHODS

This study is the first phase of a larger project that seeks to conduct a thorough assessment; development and execution of current local drowning prevention awareness that can be used to improve the likelihood of existing drowning prevention products and future media/marketing messages are successfully communicated to the intended audiences. Thus, the pilot phase of the study consists of reaching adults, 18 years of age or older who reside in a home with a pool in select zip codes of Broward County and Miami-Dade County Florida by utilizing a quantitative research tool to measure proposed research questions. The preparation of this pilot instrument involved utilizing the Broward and Miami-Dade County Health Departments Drowning Prevention Initiative Workgroup as well as reviewing the current literature along with several state and national childhood injury prevention surveys.

Literature Search

Databases

Nova Southeastern University (NSU) is a member of the Florida LambdaRail, LLC (FLR). Complementary to the National LambdaRail (NLR) initiative, a national high-speed research network initiative for research universities and technology companies, the FLR operates a statewide performance fiber-optic network infrastructure linking Florida's research institutions in support of large-scale, public or private research, education, and outreach partnerships. Florida has direct connectivity to a wide range of domestic and international research networks including the Internet2/Abilene Network and the NLR networking infrastructure. This puts Florida universities on equal and competitive footing with the best institutions in the nation, with the ability to communicate in ways not possible using previous networks. Multiple electronic databases were searched for research literature regarding drowning and near-drowning. Search terms included drowning best practices, drowning prevention, drowning review, submersion, near-drowning, water safety, and drown*'(searches all extensions). Cochrane databases were also searched for systematic reviews and studies of drowning prevention interventions.

Internet Searches

The Google search engine (www.google.com) was used to search for best practices and systematic reviews using the search terms above. In addition, many injury-specific websites were targeted and searched manually, including:

• Centers for Disease Control's National Center for Injury Prevention and Control (NCIPC) (www.cdc.gov/ncipc)

WISQARS™ (Web-based Injury Statistics Query and Reporting System) an interactive database system that provides customized reports of injury-related data.
www.cdc.gov/ncipc/wisqars/

• Safe Kids Worldwide
(www.safekids.org)

• Harborview Injury Prevention & Research Center
(www.depts.washington.edu/hiprc)

• World Health Organization's Department of Injuries and Violence Prevention
(www.who.int/violence_injury_prevention)

Other Sources

Additional sources include the library resource material, reference texts, and published systematic reviews of child and youth injury prevention best practices.

TARGET POPULATION SELECTION

Pool registration data was obtained from the County Property Appraiser's Offices for both Broward and Miami-Dade counties with the latest update occurring in 2005. Data elements consist of residential pool location (street address with zip code), owner's name(s), mailing address and other pool related information.

The two target areas chosen for this drowning awareness study in Broward County were the zip code area of 33028, located in City of Pembroke Pines, and the zip code area of 33029, located across the City of Pembroke Pines and the City of Miramar. These locations were selected by the Broward County Health Department because these areas have larger numbers of household members and the highest percentage of young children under the age of five in Broward County. In zip code area 33028, children under the age of five account for nine percent (9%) of the total population, and zip code area 33029, ten percent (10%) of the total population (Data source: **U.S. Bureau of Census, 2000 and DUPR/Planning Services Division, 2004** on Broward Facts website http://gis.broward.org/browardfacts). There were a total of 1439 registered pools in zip code area 33028 and 3428 registered pools in zip code area 33029. In total there were 4867 registered pools in our target area for Broward County.

For Miami-Dade county, zip code area 33157 was chosen for this drowning prevention study by the Miami-Dade County Health Department based upon the fact that this zip code area has the highest drowning incidents, as well as the highest number of pools coupled to the second highest percentage of children under the age of five among all the zip code areas in Miami-Dade county (Data Source: http://www.esri.com/data/community_data/community-sourcebooks/index.html). There were a total of 6353 registered pools in the zip code area of 33157.

For each county in the study, 1,000 registered pool owners were randomly selected as survey recipients in the identified zip codes areas. Random sample generation was performed using statistical application software (SAS). Among all Broward County registered pool owners within the zip code area of 33028; 300 survey recipients were randomly selected; and within the zip code of 33029; 700 survey recipients were selected. This allocation was based on the ratio of the number of pools registered in zip code area 33028 (1439 registered pools) and zip code area 33029 (3428 registered pools). In Miami-Dade County, among 6352 registered pools within zip code area 33157, 1000 survey recipients were randomly selected.

DATA COLLECTION

The survey research method was conducted by mail and via the web during the months of April to June 2007. For this research, we adhered to a modified version of the Total Design Method developed by Dillman. According to this method, three mailings of the questionnaire were precisely timed, and the last was sent via certified mail. However, due to intrinsic time and funding constraints, survey packages were mailed out once only. Included in the survey package were an introduction letter in both English and Spanish, a 3-page survey in English as well as a 3-page survey in Spanish, a business reply envelope along with a small incentive. The introduction letter included a website address that could be used in lieu of completing the paper survey. These materials were prepared according to the Dillman Total Design Method. The questionnaire was folded into three parts and the business reply envelope was folded over the bottom of the front page, then the introduction letter was folded over the entire questionnaire and placed in the envelope for mail-out. A follow-up postcard was sent to remind the recipients to complete the paper survey or to go online and finish the survey with the website address provided again in the postcard. Twenty-two surveys were returned by the post office as undeliverable and five surveys were returned incomplete in the business reply envelopes provided in the original mailing, with no explanation given. After deducting these, 435 surveys were counted out. Quality checks were then conducted on these 435 surveys, we found out two (2) were incomplete (with majority of the questions unanswered), 7 survey participants answered that they did not have a pool and/or spa at the current address and 6 participants failed to answer if they had a pool and/or spa at their current address, thus, leaving 420 surveys qualified for the analysis (see Table 1).

Table 1: Categories Counts

Language	**Count**	**Percent (with denominator 420)**
---English	404	96%
---Spanish	16	4%
County		**Percent (with denominator 420)**
---Broward	213	51%
---Dade	205	49%
---Unanswered	2	< 1%
Zip code		**Percent (with denominator 420)**
---33157	203	48%
---33028	61	15%
---33029	133	32%
---Zip Codes Near Targeted Area	9	2%
---Zip Unanswered	14	3%
Pool Type	**Count***	**Percent (with denominator 420)**
---In-ground	406	97%
---Above-ground	53	13%
---Freestanding spa	34	8%
---Spa attached to pool	62	15%
Pool Type Count		**Percent (with denominator 420)**
---One type per household	297	71%
---Two types per household	101	24%
---Three or more types per household	18	4%
---Unanswered	4	1%
Drowning Experience		**Percent (with denominator 420)**
---Yes	71	17%
---No	341	81%
---Unanswered	8	2%
Pool Built before 2000		**Percent (with denominator 420)**
---Yes	297	71%
---No	104	25%
---Not Sure	18	4%
---Unanswered	1	< 1%
Pool Built before 2000 by County		
---Yes (Broward county)	116	54% (with denominator 213---total number of pools in target areas of Broward county)
---Yes (Miami-Dade county)	180	88% (with denominator 204---total pool number of pools in target area of Miami-Dade county)
Pool Built before 2000 by Household Type		
---Yes from households With Child(ren)	154	65% (denominator 238---total households With Child(ren))
---Yes from households Without Child(ren)	138	80% (denominator 173---households Without Child(ren))
Pool Built before 2000 by County on households with child(ren)		
---Yes (Broward county)	64	51% (with denominator 125---total number of pools in target areas of Broward county among families with child(ren)
---Yes (Miami-Dade county)	90	80% (with denominator 112---total number of pools in target area of Miami-Dade county among families with child(ren)

Household Type		**Percent (with denominator 420)**
---With Child(ren)	238	57%
---Without Child(ren)	173	41%
---Unanswered	9	2%
Household with Child(ren)	**Count***	**Percent (with denominator 420)** **238 households have children**
0 to 4 years old	73	17%
5 to 12 years old	142	34%
13 to 17 years old	141	34%
Household with Child(ren) under 5 years of age		**Percent (with denominator 73)** **73 households have children under 5 years of age**
Broward County	37	51%
Miami-Dade County	36	49%

Note: Pool type counts do not add up to the total number of households (N=420); some families have more than one type of pool. Household counts with all children's age groups do not add up to the total number of households with children (N=238); some families have children in more than one age group.

The table above provides a categorical breakdown of all the major areas of research interest and will be used as the basis for the analysis of this report. From the tabulation, only 16 (4%) surveys were completed in Spanish and 404 (96%) surveys were completed in English.

Among all qualified surveys, 213 (51%) surveys were from Broward County and 205 (49%) were from Miami-Dade County. This result shows an equal response rate for both counties. When zip code areas are considered, 203 (48%) surveys were from Miami-Dade County (zip code 33157), and 194 (47%) surveys were from Broward County. About 5% of the returned surveys either missed the zip code or had zip codes in the vicinity around our target areas. Within Broward County, 61 surveys were from zip code area 33028 and 133 surveys were from zip code area 33029. Thus, surveys from zip code area of 33028 account for 31% and surveys from zip code area 33029 account for 69% of all the surveys received from selected zip codes in Broward County. This percentage ratio (31%: 69%) is very close to our survey mailing allocation (300 surveys and 700 surveys were mailed out for Broward target areas of 33028 and 33029 respectively.). With these tabulations, we feel confident to report that the survey response rates are approximately equal across both counties. In addition, the survey response rates are also approximately equal across target areas within Broward County. In other words, the total survey samples received are both well-balanced and representative in number for the chosen population.

For residential pool types, the overwhelming majority (97%) answered that they have an in-ground swimming pool. Other types of pools---an above-ground pool, a freestanding Jacuzzi or spa, a Jacuzzi or spa attached to pool---were low in numbers (8%-15%). Slightly less than three quarters (71%) of survey

participants had only one type of pool about a quarter (24%) of survey participants had two types of pools (for example, in-ground pool and a free standing spa at the household). Seventy-one percent (71%) of the participants had their pool built before 2000 which was the year pool safety barriers became mandatory through passage of state legislation affecting new residential pool construction.

Pool data has also revealed differences between Broward and Miami-Dade Counties. While eighty-eight percent (88%) of the pools were built before year 2000 among our survey participants in Miami-Dade County, only fifty-four percent (54%) answered the same among our survey participants in Broward County. When households with and without children are analyzed among our survey participants, eighty percent (80%) households without children had their pools installed before year 2000 as a contrast, only sixty-five percent (65%) household with children answered the same. Further comparison was made, and the result showed that differences were significant (1) between Broward County and Miami-Dade County pool installation among households with children (51% Broward county vs. 80% Miami-Dade county), (2) between Broward County and Miami-Dade County pool installation among households without children (60% Broward County vs. 98% Miami-Dade County). As can be seen, there are differences among subgroups of survey participants (by county, by household type, by county and household type) regarding the time (before or after year 2000) when their pools were built (before or after year 2000). Sub-grouping based on these differences may be used later when considering pool safety barriers and pool safety issues.

A total of 238 (57%) households reported having children in the home, 173 (41%) of households reported not having children in the home and 9 (2%) of survey participants did not answer this question. Seventeen percent (17%) of the survey participants reported having children under the age of 5, thirty-four percent (34%) of the survey participants reported having children between the ages of 5 and 12 years old and thirty four percent (34%) of the survey participants reported having children between the ages of 13 and 17 years old. It is important to take into consideration that these percentages are not mutually exclusive and therefore they cannot be added up in a meaningful way since some families have children in more than one age category.

A major area of interest for this research is focused on families with children under the age of 5. A breakdown is also listed to see the differences in numbers, if any, between Broward County and Miami-Dade County households in this study. Thirty-seventy (37) households in Broward County and thirty-six (36) households in Miami-Dade County have children under the age of 5.

As listed in Table 1, 71 (17%) participants answered that either they or someone close to them have been affected by a drowning or near-drowning of a child under the age of five. These participants contribute a significant number and thus their opinions and points-of-views will be grouped together compare with those who have not been affected by such an experience.

RESULTS

DEMOGRAPHIC VARIABLES

The demographic characteristics of the survey participants have been analyzed on all 420 surveys qualified for the analysis. Surveys were first analyzed together and then analyzed by county and by household type (with or without children) respectively. In the table below, frequencies are expressed as the count numbers, and the corresponding column percents are included in parentheses (see Table 2).

Table 2: Demographic Characteristics of Survey Participants

	Analyses on All Surveys Count (Percent)	Survey Analyses by County Count (Percent)		Survey Analyses by Household Type Count (Percent)	
	Overall	Broward	Miami-Dade	Without Child(ren)	With Child(ren)
Age					
18-24 years old	9 (2%)	7 (3%)	2(1%)	4 (2%)	5 (2%)
25-34 years old	27 (7%)	15 (7%)	12 (6%)	7 (4%)	20 (9%)
35-49 years old	198 (48%)	111 (53%)	86 (43%)	33 (19%)	161 (69%)
50-64 years old	132 (32%)	65 (31%)	67 (33%)	89 (52%)	39 (17%)
65 years and older	45 (11%)	10 (5%)	35 (17%)	38 (22%)	7 (3%)
Unanswered	9 (NA)	10 (NA)		17 (NA)	
Gender					
Female	268 (69%)	146 (73%)	121 (64%)	97 (60%)	169 (77%)
Male	120 (31%)	53 (27%)	67 (36%)	66 (40%)	50 (23%)
Unanswered	32 (NA)	33 (NA)		38 (NA)	
Race					
White/Caucasian	292 (74%)	129 (65%)	163 (82%)	132 (80%)	157 (69%)
Black/African American	23 (6%)	17 (9%)	6 (3%)	5 (3%)	18 (8%)
Asian/Pacific Islander	13 (3%)	6 (3%)	7 (4%)	5 (3%)	8 (4%)
Native American/Native Alaskan	2 (0.5%)	1 (0.5%)	1 (0.5%)	1 (0.6%)	1 (0.4%)
Other	67 (17%)	46 (23%)	21 (11%)	21 (13%)	43 (19%)
Unanswered	23 (NA)	23 (NA)		29 (NA)	
Ethnicity					
Hispanic	123 (31%)	67 (34%)	56 (29%)	38 (23%)	82 (37%)
Non-Hispanic	268 (69%)	130 (66%)	138 (71%)	126 (77%)	137 (63%)
Unanswered	29 (NA)	29 (NA)		37 (NA)	

Education					
Less than high school degree	2 (0.5%)	1 (0.5%)	1 (0.5%)	1 (0.6%)	1 (0.4%)
High school graduate or equivalent	26 (6%)	12 (6%)	14 (7%)	13 (8%)	12 (5%)
Some college	107 (26%)	53 (26%)	54 (27%)	48 (29%)	58 (25%)
College graduate	152 (37%)	80 (39%)	72 (35%)	57 (34%)	93 (40%)
Advanced degree	121 (30%)	59 (29%)	62 (31%)	49 (29%)	68 (29%)
Unanswered	12 (NA)	12 (NA)		20 (NA)	
Income					
Less than $20,000	6 (2%)	2 (1%)	4 (2%)	1 (1%)	4 (2%)
$20,000-34,999	6 (2%)	1 (0.5%)	5 (3%)	2 (1%)	4 (2%)
$35,000-49,999	26 (7%)	12 (6%)	14 (8%)	10 (7%)	16 (7%)
$50,000-74,999	62 (17%)	27 (14%)	35 (19%)	34 (23%)	28 (13%)
$75,000 and over	271 (73%)	149 (78%)	122 (68%)	102 (68%)	164 (76%)
Unanswered	49 (NA)	49 (NA)		55 (NA)	

Among all surveys analyzed, forty-eight percent (48%) of participants represent the middle age category of 35-49 years old, and thirty-two percent (32%) of participants represent the age category of 50-60 years old. There are only seven percent (7%) from the adult age category 25-34 years old, and 11% from the age category of 65 years or older. Sixty nine percent (69%) of the survey participants are female, and thirty-one percent (31%) are male. Most survey participants have some college experience (26%) or have a college or advance degree (67%=37% +30%); only 6.5% have high school or below marked as their level of education. About three-quarters (74%) of survey participants are white, six percent (6%) are black. Interestingly, 17% identified themselves as "other" race without any further specification. For ethnicity, thirty-one percent (31%) answered of that they are of Hispanic origin and sixty-nine percent (69%) answered that they are non-Hispanic. Seventeen percent (17%) have household incomes between $50,000 to $74,999 for year 2006; seventy-three percent (73%) have incomes of $75,000 and over. All together, ninety percent (90%) of participants have annual income greater or equal to $50,000.

When analyzed by county and by household type respectively, we found out some differences between counties and household types.

Survey participants residing in Broward County have a higher percentage in the middle age category of 35-49 years old (53% in Broward vs. 43% in Miami-Dade), and correspondingly a lesser percentage in the age category of 50-60 years old (Broward 5% vs. Miami-Dade 17%). Female participants are of a higher percentage in Broward County (73% in Broward vs. 64% in Miami-Dade), and white participants are low in percentage in Broward County (65% in Broward vs. 82% in Miami-Dade). Interestingly, more people

identified themselves as "other" in the race category in Broward County (23% Broward vs. 11% Miami-Dade). For ethnicity, both counties have about the same percentage of survey participants of Hispanic origin. In the categories of education and income, survey participants have very similar patterns. However, there is a slightly higher percentage of Broward County participants in the highest income category (78% in Broward vs. 68% in Miami-Dade).

When families with children in the household and families without children in the household were analyzed separately, most survey participants with children (69%) are in the age category of 35-49 years old, whereas most survey participants without children (52%) are in the age category of 50-64 years old. A higher proportion of female participants answered the survey in the household with children than without children. Among survey participants who have no children living in the household, a higher percentage of survey participants are more white and not of Hispanic origin. When comparing education and income, survey participants with different household types have very similar patterns. Only survey participants with children have a slightly higher percentage in the highest annual household income category. Seventy-six percent (76%) of participants with children in the house are in the annual household income group of $75,000 and over, whereas sixty-eight percent (68%) of participants without children in house are in the annual household income category of $75,000 and over.

KNOWLEDGE AND AWARENESS

As a first step in understanding the current level of awareness for drowning risk factors and of perceptions and knowledge towards drowning prevention among families with a residential pool in our target communities, a set of questions have been designed in the questionnaire to collect the information from survey participants (Question 1, 7, 8, 11, 12, 15, 16, and 19) from survey participants.

To assess participant's awareness of drowning as the leading cause of death for children under the age of 5 in Florida, we asked them to rank six different causes of death for children in Florida under the age of 5. Ranks range from 1 to 6, with 1 being the most common cause of death and 6 being the least common cause of death. The following table lists the major statistics for the rank data.

Table 3: Ranked Causes of Death for Children Under the Age of 5 by all Participants

Cause of Death	Count	Mean	Standard Error	Minimum	Maximum	Rank of Mean Values
Drowning	406	1.77	0.07	1.0	6.0	1
Motor Vehicle and Related	386	3.06	0.07	1.0	6.0	2
Airway Obstruction	382	3.40	0.07	1.0	6.0	3
Poisoning	385	3.96	0.07	1.0	6.0	4
Firearms	382	4.11	0.08	1.0	6.0	5
Fire/Burns	380	4.59	0.06	1.0	6.0	6

Among six listed causes of death for children under the age of 5 in Florida, drowning was ranked as number 1, the most common cause of death, followed by motor vehicle and related accidents, and airway obstruction (suffocation, strangulation, choking).

Table 4: Ranked Causes of Death for Children Under the Age of 5 by County

Cause of Death	County		Mean		Rank of Mean Values		Statistical Significance
	Broward	Miami-Dade	Broward	Miami-Dade	Broward	Miami-Dade	
Drowning	208	196	1.86	1.69	1	1	Not Significant
Motor Vehicle and Related	188	196	3.09	3.04	2	2	Not Significant
Airway Obstruction	190	191	3.51	3.27	3	3	Not Significant
Poisoning	192	191	3.97	3.94	4	4	Not Significant
Firearms	189	191	3.98	4.24	5	5	Not Significant
Fire/Burns	188	190	4.60	4.60	6	6	Not Significant

When comparing drowning awareness among pool owners in Broward County and Miami-Dade County residents, rank numbers were compared among these two groups. Since the rank data is not normally distributed, a non-parametric statistical procedure called the Wilcoxon Ranked Sums test was used. All p values in the comparisons were greater than 0.05, therefore these tests are not significant, which means that there is no significant differences in point-of-view between residents in both counties when they evaluate the six listed causes of death among children under the age of five in Florida.

Table 5: Ranked the Causes of Death for Children Under Age of 5 by Household Type

Cause of Death	Count		Mean		Rank of Mean Values		Statistical Significance
	Without Child(ren)	With Child(ren)	Without Child(ren)	With Child(ren)	Without Child(ren)	With Child(ren)	
Drowning	170	228	1.88	1.71	1	1	Not Significant
Motor Vehicle and Related	164	216	3.09	3.00	2	2	Not Significant
Airway Obstruction	161	215	3.30	3.47	3	3	Not Significant
Poisoning	163	216	3.94	3.94	4	4	Not Significant
Firearms	162	214	4.15	4.10	5	5	Not Significant
Fire/Burns	161	213	4.55	4.63	6	6	Not Significant

To compare drowning awareness in the residential pool population among families with children and without children, rank numbers were compared among these two groups. Since the rank data is not normally distributed, a non-parametric statistical procedure called the Wilcoxon Ranked Sums test was used. All the p values of these six comparisons are greater than 0.05, therefore these tests are not significant, thus there are no significant differences in point-of-view between families with children and families without children in the household when they evaluate the six causes of death among children under the age of 5 in Florida.

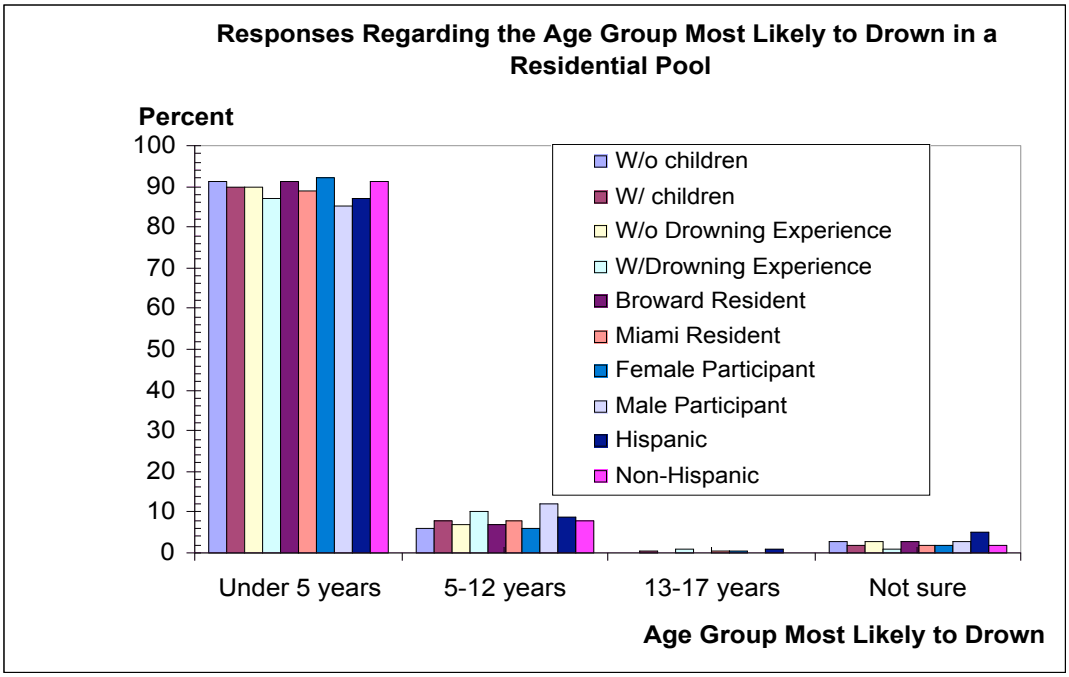
Table 6: Ranked Causes of Death for Children Under Age of 5 by Drowning Experience

Cause of Death	Count		Mean		Rank of Mean Values		Statistical Significance
	Without Drowning Experience	With Drowning Experience	Without Drowning Experience	With Drowning Experience	Without Drowning Experience	With Drowning Experience	
Drowning	330	69	1.83	1.58	1	1	Not Significant
Motor Vehicle and Related	316	66	3.08	2.95	2	2	Not Significant
Airway Obstruction	312	66	3.39	3.44	3	3	Not Significant
Poisoning	315	66	4.00	3.71	4	4	Not Significant
Firearms	313	65	4.07	4.31	5	5	Not Significant
Fire/Burns	312	64	4.55	4.77	6	6	Not Significant

To further compare drowning awareness in the residential pool population among individuals, who have been affected by a drowning or near-drowning experience of a child under the age of 5, and those

who have not been affected, rank numbers were again compared among these two groups. Since the rank data is not normally distributed, a non-parametric statistical procedure called the Wilcoxon Ranked Sums test was used. All the p values of these six comparison were greater than 0.05, thus there are no significant differences in point-of-view between individuals, who had been affected by a drowning or near drowning experience of a child under the age of 5, and those who had not been affected by such an experience, when they evaluate the six causes of death among children under the age of 5.

Figure 1: Percent of Responses Regarding the Age Group Most Likely to Drown



When asked to identify the highest risk group for drowning among children from ages 0 to 17, the majority (90%) of survey participants answered that children under the age of 5 is the age group most likely to drown in a residential swimming pool. A small percent (7%) of survey participants answered children between the ages of 5 to 12 years were at the greatest risk, and about 2% of the survey participants were not sure about this. Only one person (0.2%) answered children between the ages of 13 to 17 are at the most risk. Cross-tabulation analyses were also performed to identify differences in knowledge among subgroups by county, household type, previous drowning experience, gender, age, race, ethnicity and education status. Results are presented in Figure 1 (stratification results from grouping variable on survey participants' age, education, and income are not presented here.) As illustrated, no significant perceptional differences among survey participants can be seen across different subgroups. Among all subgroups, eighty-five to ninety-six percent (85% - 96%) of survey participants identified children under the age of 5 as

the group most likely to drown in a residential swimming pool, and only six to twelve percent (6% to 12%) identified children between the ages of 5 to 12 as being at the greatest risk and around 2% were not sure.

Table 7: Survey Responses for the Gender of Children Most Likely to Drown

	Female	Male	Not Sure	Statistical Significance
All Surveys	15 (4%)	207 (50%)	192 (46%)	
Household Type				Not Significant
Without Children	4 (2%)	82 (48%)	86 (50%)	
With Children	11 (5%)	120 (51%)	103 (44%)	
Personal Drowning Experience				Not Significant
Yes	5 (7%)	35 (50%)	30 (43%)	
No	10 (3%)	169 (50%)	159 (47%)	
County				Not Significant
Broward	9 (4%)	102 (49%)	99 (47%)	
Miami-Dade	6 (3%)	104 (51%)	92 (46%)	
Gender				Not Significant
Female	9 (3%)	127 (48%)	128 (48%)	
Male	5 (4%)	67 (56%)	48 (40%)	
Ethnicity				Significant
Hispanic	5 (4%)	50 (41%)	66 (55 %%)	
Non-Hispanic	8 (3%)	146 (55%)	113 (42%)	

When asked to identify which gender of children under the age of 5 is most likely to drown in a residential swimming pool, fifty percent (50%) of survey participants answered male, forty-six percent (46%) were not sure, and only four percent (4%) identified females. Cross-tabulation analyses were performed to identify differences in knowledge among subgroups by county, household type, previous drowning experience, gender, age, race, ethnicity and education status (some subgroups were not listed in the table).

Among all subgroups, forty-one to sixty-four percent (41% to 64%) survey participants identified male children under age of 5 years are more likely to drown in a residential swimming pool, while thirty-six to fifty-five percent (36% to 55%) were unsure. There is a significant difference between survey participants of Hispanic origin and those of non-Hispanic origin. A higher percent (55%) of non-Hispanic survey participants are aware that boys under the age of 5 years are more likely to drown in a residential pool than the percent (41%) of Hispanic survey participants. More than half (55%) of survey participants of Hispanic origin were unsure which gender of children under the age of five were at great risk, compared with 41% of survey participants of non-Hispanic origin (see Table 7 above).

Table 8: Public Opinion on Appropriate Age for Children to Learn Water Safety Skills

	<1 yr	1-2 yrs	3-4 yrs	5 yrs or older	Not Sure	Trend Finding
All Surveys	95 (23%)	246 (60%)	58 (14%)	9 (2%)	5 (1%)	
Household Type						
Without Children	36 (21%)	104 (61%)	23 (14%)	4 (2%)	3 (2%)	
With Children	59 (25%)	135 (57%)	34 (14%)	5 (2%)	2 (1%)	
Drowning Experience						Yes
Yes	19 (27%)	43 (61%)	5 (7%)	4 (6%)	0 (0%)	
No	75 (22%)	201 (59%)	53 (16%)	5 (1%)	5 (1%)	
County						
Broward	50 (24%)	122 (58%)	31 (15%)	5 (2%)	2 (1%)	
Miami-Dade	45 (22%)	123 (61%)	26 (13%)	4 (2%)	3 (1%)	
Gender						
Female	64 (24%)	165 (63%)	27 (10%)	5 (2%)	3 (1%)	Yes
Male	25 (21%)	62 (53%)	25 (21%)	4 (3%)	2 (2%)	
Ethnicity						
Hispanic	26 (21%)	75 (61%)	15 (12%)	2 (2%)	4 (3%)	
Non-Hispanic	62 (23%)	154 (58%)	40 (15%)	7 (3%)	1 (0.4%)	

When asked about the age range most appropriate for a child to learn water safety skills, the majority (60%) of survey participants chose the age group of 1 to 2 years, followed by 23% who answered less than 1 year. Fourteen percent (14%) answered 3 to 4 years and one percent (1%) was unsure. Put together, ninety-seven percent (97%) of survey participants believe children should start learning water safety skills at some point younger than the age of 5. Cross tabulation analyses were performed to identify any differences in the perception among subgroups by county, household type, previous drowning experience, gender and ethnicity. A higher percentage of survey participants, who had been affected by a drowning or near-drowning experience of a child under the age of 5, chose teaching water safety skills at an early age compared to survey participants who had never been affected. Also, a higher percentage of female survey participants chose teaching water safety skills at an early age compared to male survey participants.

Figure 2: Percent of Responses on Appropriate Age to Learn Water Safety Skills

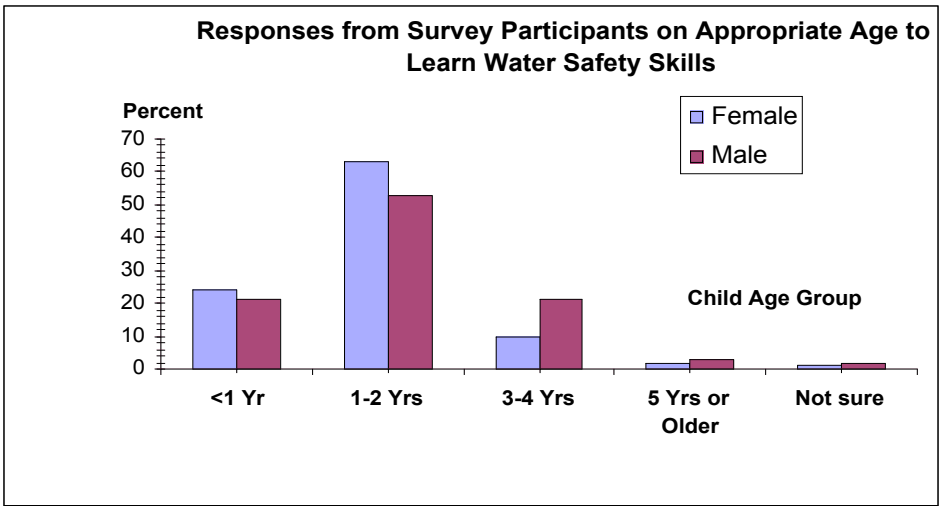


Table 9: Appropriate Supervision for Children Under the Age of 5

	Visual contact all time	Stay poolside	Arm's reach	Other
All Surveys	220 (53%)	105 (25%)	79 (19%)	8 (2%)
Household Type				
Without Child(ren)	98 (58%)	40 (24%)	29 (17%)	2 (1%)
With Child(ren)	115 (49%)	65 (28%)	49 (21%)	6 (3%)
Drowning Experience				
Yes	39 (55%)	16 (23%)	16 (23%)	0 (0%)
No	179 (53%)	88 (26%)	63 (19%)	7 (2%)
County				
Broward	107 (51%)	55 (26%)	41 (20%)	6 (3%)
Miami-Dade	112 (56%)	50 (25%)	38 (19%)	1 (.5%)
Gender				
Female	125 (47%)	72 (27%)	63 (24%)	4 (2%)
Male	80 (68%)	22 (19%)	12 (10%)	4 (3%)
Ethnicity				
Hispanic	76 (63%)	25 (21%)	17 (14%)	3 (2%)
Non-Hispanic	133 (51%)	73 (28%)	54 (21%)	3 (1%)

When asked to select one choice for the most appropriate type of adult supervision for children under the age of 5 playing in or around a pool, fifty-three percent (53%) of survey participants answered "Stay in visual contact at all times", followed by twenty-five percent (25%) answering "Stay poolside" . Nineteen percent (19%) answered "Stay within arm's reach of the child", leaving 2 percent (2%) with answer "Visually checking on the child every 5 or 10 minutes or stay in the general vicinity of the water". The same pattern occurs by county, household type, previous personal drowning experience, gender, and ethnicity.

Table 10: Best Source of Advice for Drowning Prevention

	American Red Cross	Physician	County health department	Other parents	Online resources	Other	Nurse / friends & relatives
All Surveys	164(41%)	76(19%)	49(12%)	30(8%)	27(7%)	34(9%)	18(5%)
Household Type							
Without Children	67(41%)	22(13%)	26(16%)	13(8%)	10(6%)	18(11%)	9(5%)
With Children	93(41%)	53(23%)	23(10%)	17(7%)	17(7%)	15(7%)	9(4%)
Drowning Experience							
No	142(43%)	63(19%)	43(13%)	23(7%)	21(6%)	29(9%)	10(3%)
Yes	22 (33%)	13(20%)	6(9%)	7(11%)	5(8%)	5(8%)	8(12%)
County							
Broward	82 (41%)	41(21%)	22(11%)	16(8%)	13(7%)	19(10%)	6(3%)
Miami-Dade	82(42%)	34(17%)	27(14%)	13(7%)	14(7%)	15(8%)	12(6%)
Gender							
Female	90 (35%)	68(27%)	31(12%)	18(7%)	13(5%)	24(9%)	12(5%)
Male	58 (51%)	7(6%)	14(12%)	8(7%)	13(11%)	8(7%)	6(5%)
Ethnicity							
Non-Hispanic	109 (42%)	43(17%)	30(12%)	21(8%)	17(7%)	21(8%)	16(6%)
Hispanic	44 (37%)	29(25%)	17(14%)	7(6%)	9(8%)	10(8%)	2(2%)

When asked about the best source of advice about drowning prevention for children under the age of 5, the top three categories are as follows: forty-one percent (41%) selected the American Red Cross, nineteen percent (19%) selected physician, and twelve percent (12%) selected county health department. The rest of the categories were nurse/friends/relatives, other parents, online resources, and other; the corresponding answers were less than ten percent (10%) for each of these categories. This pattern was held across different subgroups listed in the table.

Table 11: Drowning Prevention Education at Doctor's Office

	Yes	No	Don't Remember
All Surveys	83 (29%)	145 (51%)	56 (20%)
County			
Broward	40 (28%)	69 (49%)	33 (23%)
Miami-Dade	42 (30%)	76 (54%)	22 (16%)
Gender			
Female	69 (38%)	85 (46%)	30 (16%)
Male	10 (13%)	47 (63%)	18 (24%)
Ethnicity			
Hispanic	23 (27%)	48 (57%)	13 (15%)
Non-Hispanic	55 (30%)	89 (49%)	37 (20%)

When asked if a pediatrician or a nurse ever talked to the survey participants about taking precautions to prevent a child from drowning, only twenty-nine percent (29%)of the survey participants answered yes, fifty-one percent (51%) said no and twenty percent (20%) could not remember. Again subgroups by county, gender, and ethnicity were examined and the patterns are also the same. While thirty-eight percent (38%) of female participants answered yes, only thirteen percent (13%) of the male participants answered yes. It is also important to note that a higher percentage of male survey participants (24%) could not remember compared to female participants (16%). This difference is statistically significant.

Table 12: Legalize Pool Safety Devices for Children Under the Age of 5

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
All Surveys	244(59%)	74(18%)	45(11%)	26(6%)	22(5%)
County					
Broward	129(62%)	39(19%)	18(9%)	11(5%)	11(5%)
Miami-Dade	115(57%)	35(17%)	27(13%)	14(7%)	11(5%)
Household Type					
Without Children	94(55%)	28(16%)	26(15%)	12(7%)	11(6%)
With Children	144(62%)	46(20%)	19(8%)	14(6%)	11(5%)
Drowning Experience					
Yes	45(63%)	8(11%)	5(7%)	6(8%)	7(10%)
No	197(59%)	66(20%)	38(11%)	19(6%)	15(4%)
Gender					
Female	174(65%)	40(15%)	25(9%)	17(6%)	12(4%)
Male	54(45%)	30(25%)	19(16%)	8(7%)	8(7%)
Ethnicity					
Hispanic	81(66%)	16(13%)	12(10%)	7(6%)	6(5%)
Non-Hispanic	151(57%)	55(21%)	30(11%)	18(7%)	12(5%)

When asked about their opinions about the idea of legally requiring pool safety devices at residences where there are children under the age of 5, fifty-nine percent (59%) of survey participants said they strongly agree and eighteen percent (18%) of participants said they somewhat agree. Together, seventy-seven percent (77%) agree with the idea of legally requiring pool safety devices at residences where there are children under the age of five, eleven percent (11%) remain neutral, and another eleven percent (11%) somewhat disagree to strongly disagree with the proposed idea. When compared by county, household type, and by participants affected or not affected by drowning experience, there are no significant differences. When comparisons were made between female and male participants, female participants had a higher percent (65%) to strongly agree with the idea compared to male participants (45%). Participants with Hispanic origin also have a higher percent (66%) to strongly agree with the idea.

PREVENTION PRACTICES AND OBSTACLES

As the second step towards drowning prevention, we studied what kinds of preventive or safety procedures are in practice among the households we surveyed. In addiction, we studied what preventive or safety procedures are not in practice and the reasons for that. A set of questions have been designed in the questionnaire to collect the information (Question 2, 9, 10, 17 and 18) from survey participants.

Table 13: General Safety Practices in Households

General Safety Measures Practiced in Household	Household Number	Percent
Medicine and vitamins out of child's reach (Practice 1)	357	91%
Locks on cabinets containing dangerous items (Practice 2)	186	51%
Plastic plugs on all electrical outlets (Practice 3)	214	56%
Hot water heater set at safe temperature (Practice 4)	320	83%
Working smoke detector (Practice 5)	378	95%
Guns stored unloaded in locked cabinet (Practice 6)	233	80%
Child under 80 pounds always rides in car/booster seat (Practice 7)	300	83%

Most families have working smoke detectors at home (95%) and keep medicine and vitamins out of children's reach (91%). The majority of families set hot water heater at a safe temperature (83%), always have children less than 80 pounds ride in a car/booster seat (83%) and store rifles and guns unloaded in a locked cabinet (83%). However, only fifty-one percent (51%) of survey participants answered that they have locks on cabinets containing dangerous items and fifty-six percent (56%) answered that they inserted plastic plugs on all electrical outlets; so for these safety practices, less attention has been given among people surveyed.

Table 14: General Safety Practices in Households by County and Family Type

General Safety Practice	Broward	Miami Dade	Difference in Proportion	Household w/o Child(ren)	Household w/ Child(ren)	Difference in Proportion
Practice 1	187(93%)	168(89%)	Not Significant.	132 (85%)	217 (96%)	Significant
Practice 2	99(53%)	86(49%)	Not Significant	51 (36%)	128 (60%)	Significant
Practice 3	110(57%)	104(56%)	Not Significant	53 (36%)	154 (68%)	Significant
Practice 4	160(82%)	158(84%)	Not Significant	126 (83%)	186 (82%)	Not Significant
Practice 5	197(97%)	179(92%)	Not Significant	149 (93%)	223 (96%)	Not Significant
Practice 6	117(80%)	116(82%)	Not Significant	83 (72%)	144 (85%)	Significant
Practice 7	156(83%)	143(82%)	Not Significant	116 (83%)	178 (82%)	Not Significant

Note: Medicine and vitamins out of child's reach (Practice 1),Locks on cabinets containing dangerous items (Practice 2),Plastic plugs on all electrical outlets (Practice 3),Hot water heater set at safe temperature (Practice 4),Working smoke detector (Practice 5)
Rifles and guns stored unloaded in locked cabinet (Practice 6), Child under 80 pounds always rides in car/booster seat (Practice 7)

From the table, it is quite clear that the corresponding proportions are very close for all safety practices at home when comparing survey results between in Broward County and Miami-Dade County. For example, ninety-three percent (93%) of the survey participants in Broward County and eighty-nine percent (89%) of survey participants in Miami-Dade County answered that they keep medicine and vitamins out of a child's reach; eighty-two percent (82%) of the survey participants in Broward County and eighty-four percent (84%) of survey participants in Miami-Dade County answered that they set the hot water heater at a safe temperature.

When we compare the data by households with children in the home and without children in the home, there are differences. A higher percentage of households (96%) with children keep medicine and vitamins out of a child's reach compared with only eighty-five percent (85%) of household without children. When comparing households without children, a higher percentage of households with children also keep locks on cabinets containing dangerous items (60% vs. 36%), insert plastic plugs on all electrical outlets (68% vs. 36%), and keep rifles and guns stored unloaded in locked cabinets (85% vs. 72%). When assessing safety practices for setting the hot water heater at a safe temperature, having a working smoke

detector at home and ensuring that children under 80 pounds rides in car/booster seat, there are no significant differences between households with children and households without children.

In addition, more than four-fifths of the households surveyed (83%) practiced four or more of the seven safety practices listed in the survey, and almost one-fifth (19%) practiced all seven safety practices listed in the survey.

Figure 3: Number of Safety Practices Performed at Home

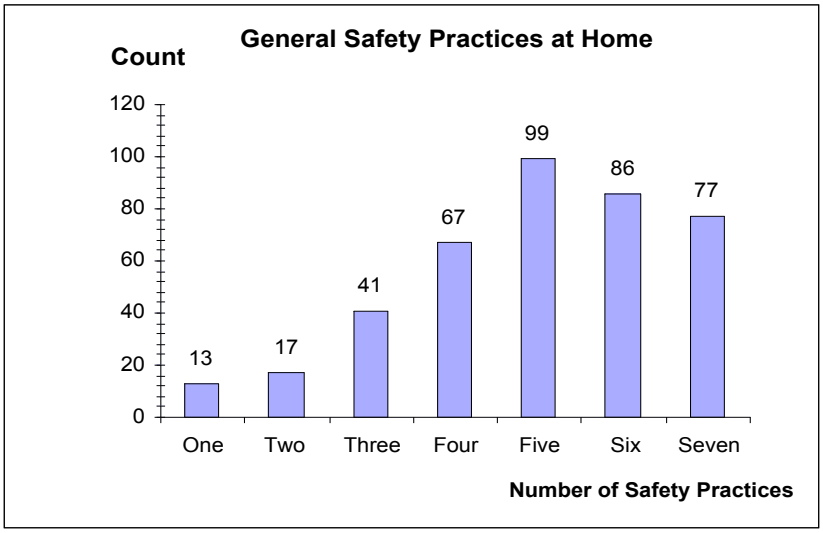


Table 15: Residential Pool Safety Measures Practiced in Household

Residential Pool Safety Measures Practiced in Household	Household Number	Percent
Child-resistant locks on doors and/or windows leading to the pool (Practice 1)	228	64%
Fencing that surrounds the pool on all sides, for examples, mesh fencing (Practice 2)	185	52%
Fencing that separates the pool from the house but not on all sides of the pool (Practice 3)	43	14%
Fencing that has self-closing, self-latching gate (Practice 4)	159	47%
Screened in pool (Practice 5)	162	47%
Safety-approved pool cover or net (Practice 6)	20	7%
Audible pool alarm (Practice 7)	31	10%

More than half of survey participants answered that they have child-resistant locks on doors and/or windows leading to the pool (64%) and have fencing that surrounds the pool on all sides. Almost half of survey participants answered that they have fencing with a self-closing, self-latching gate (47%) and also

about half of survey participants answered that they have a screened-in pool. It is important to note that these percentages are not mutually exclusive, and cannot be added up in a meaningful way since some families have more than one residential pool safety measure. Eighty-five survey participants have fencing that surrounds the pool on all sides with a self-closing, self-latching gate. This is equivalent to 20% of all survey participants (results not shown in the table).

Keep in mind that a screened-in pool itself is not considered to be a complete safety device for drowning prevention if children can get access to the pool through doors from the house.

Table 16: Residential Pool Safety Measures Practiced by County and by Household Type

Pool Safety Measures	Broward	Miami Dade	Difference in Proportion	Household w/o Child(ren)	Household w/ Child(ren)	Difference in Proportion
Practice 1	125(69%)	103(58%)	Significant	88(60%)	136(66%)	Not Significant
Practice 2	99(55%)	86(50%)	Not Significant	62(45%)	121(58%)	Significant
Practice 3	24(15%)	19(12%)	Not Significant	18(14%)	23(12%)	Not Significant
Practice 4	92(53%)	67(41%)	Significant	66(47%)	90(47%)	Not Significant
Practice 5	62(36%)	100(57%)	Significant	80(53%)	80(42%)	Significant
Practice 6	12(8%)	8(5%)	Not Significant	8(6%)	12(7%)	Not Significant
Practice 7	25(16%)	6(4%)	Significant	11(9%)	20(11%)	Not Significant

Note: Child-resistant locks on doors and/or windows leading to the pool (Practice 1); Fencing that surrounds the pool on all sides, for examples, mesh fencing (Practice 2); Fencing that separates the pool from the house but not on all sides of the pool (Practice 3);Fencing that has self-closing, self-latching gate (Practice 4);Screened- in pool (Practice 5);Safety-approved pool cover or net (Practice 6);Audible pool alarm (Practice 7)

In Broward County a higher percentage of households (69% vs. 58%) have installed child-resistant locks on doors and/or windows leading to the pool, have had fencing that has a self-closing, self-latching gate (53% vs. 41%), and have had an audible pool alarm (16% vs. 4%). Miami-Dade County participants have more screened in pools (57%) than Broward County participants (36%). The percentages are closer when the rest of the safety practices listed in the table are compared between counties.

When analyzing data by households with children in the home compared to households without children in the home, the differences are focused on mesh fencing and having a screened-in pool. A higher

percentage of households with children (58%) have fencing that surround the pool on all sides compared with households without children (45%). Also a lower percentage of households with children (42%) have screened-in pools, compared with households without children (53%). The percentages are closer when the rest of safety practices listed in the table are compared between households with children and households without children.

Keep in mind that a screened-in pool itself isn't considered to be a complete safety device for drowning prevention if children can get access to the pool through doors from the house.

Table 17: Residential Pool Safety Measures Practiced in Household Where Children Often Spend Time

Safety Measures Practiced in Household Where Children Often Spend Time	Count (Percent)
Child-resistant locks on doors and/or windows leading to the pool	25 (83%)
Fencing that surrounds the pool on all sides, for example, mesh fencing	14 (50%)
Fencing that separates the pool from the house but not on all sides of the pool	6 (21%)
Fencing that has self-closing, self-latching gate	9 (33%)
Screened-in pool	13 (48%)
Safety-approved pool cover or net	2 (7%)
Audible pool alarm	2 (7%)
Other safety features	2 (10%)

Note: Data in this table only represents households with children under the age of five, thus the numbers are low due to the nature of our data.

Eighty-three percent (83%) of households where children spend time have child-resistant locks on doors and/or windows leading to the pool, fifty-percent (50%) have fencing that surrounds the pool on all sides. When comparing data between counties, there are no significant differences in the practice of child-resistant locks on doors and/or windows leading to the pool and fencing that surrounds the pool on all sides at households other than the family home. The numbers for the rest of the safety practices are low therefore no meaningful comparisons can be made (data not shown in the table.).

Table 18: Responses to CPR Performance

					Statistic Significance
All Households with Children	**Perform CPR**	**Yes**	**No**	**Not Sure**	
	Self	152(70%)	56(26%)	9(4%)	
	Spouse/Partner	116(58%)	63(32%)	21(11%)	
	Caregiver	45 (33%)	53(39%)	39(28%)	
County	**Perform CPR**	**Yes**	**No**	**Not Sure**	
	Self	81(71%)	31 (27%)	2(2%)	Not Significant
	Spouse/Partner	62 (61%)	33 (32%)	7 (7%)	Not Significant
Broward	*Caregiver*	26 (35%)	27 (36%)	22 (29%)	Not Significant
	Self	70 (69%)	25 (25%)	7(7%)	
	Spouse/Partner	54 (55%)	30 (31%)	14 (14%)	
Miami-Dade	*Caregiver*	19 (31%)	26 (42%)	17 (27%)	
Gender	**Perform CPR**	**Yes**	**No**	**Not Sure**	
	Self	104 (69%)	39 (26%)	8 (5%)	Not Significant
	Spouse/Partner	84 (59%)	42 (30%)	16(11%)	Not Significant
Female	*Caregiver*	36 (36%)	39 (39%)	26 (26%)	Not Significant
	Self	32 (67%)	15 (31%)	1 (2%)	
	Spouse/Partner	22 (49%)	18 (40%)	5 (11%)	
Male	*Caregiver*	5 (17%)	12 (41%)	12 (41%)	
Ethnicity	**Perform CPR**	**Yes**	**No**	**Not Sure**	
	Self	43 (56%)	31 (40%)	3 (4%)	Significant
	Spouse/Partner	36 (49%)	29 (40%)	8 (11%)	Not Significant
Hispanic	*Caregiver*	12 (23%)	28 (54%)	12 (23%)	Significant
	Self	94 (76%)	24 (20%)	5 (4%)	
	Spouse/Partner	71 (62%)	32 (28%)	12 (10%)	
Non-Hispanic	*Caregiver*	32 (41%)	23 (29%)	24 (30%)	

When asked if persons (self, spouse/partner, caregiver) who care for your child know how to perform CPR, seventy percent (70%) of the survey participants answered yes for themselves, fifty-eight percent (58%) for their spouses and thirty-three percent (33%) for their caregivers. Twenty-six percent (26%) of the survey participants answered no for themselves, thirty-two percent (32%) for their spouses and thirty-nine percent (39%) for their caregivers. Yet only four (4%) of the survey participants answered not sure for themselves, eleven percent (11%) for their spouses and twenty-eight percent (28%) for their caregivers. So among households with children who answered this question, more than a quarter (28%) were not sure if caregivers of their children know how to perform CPR.

When comparison was performed between households with children in Broward County and in Miami-Dade County, there are no significant differences in percentages between counties.

When comparison was performed across gender of survey participants, there are no significant differences in percentages between female participants and male participants

However, when comparisons were performed across ethnicity, there were some significant differences. While seventy-six percent (76%) of non-Hispanic participants answered that they know how to perform CPR, only fifty-six percent (56%) of Hispanic participants answered that they know how to perform CPR. Forty-one percent (41%) of non-Hispanic participants answered that the caregivers to their children know how to perform CPR, while only twenty-three percent (23%) of Hispanic participants answered the same for their caregivers.

Table 19: Reasons for Not Having a Child-Resistant Fence among Households with Children under age of five

Reasons	Frequency
Do not think a fence is needed	8
Too expensive	6
Unattractive	4
Do not believe it would be effective	3

There were only a few survey participants who answered the question "If you currently have children under the age of five living at your home and do not have a child-resistant fence separating the pool from the house, please indicate reasons why". Among them, eight (8) participants responded "Don't think a fence is needed", six (6) participants responded "Too expensive" to install a child-resistant fence separating the pool from the house, four (4) participants answered the fence is "Unattractive", and three (3) participants "Don't believe it would be effective". When evaluating the results from this survey question, take into consideration that the response numbers are low. Part of the reason is that most households with children had already installed a child-resistant fence separating the pool from the house (see results in Table 16); and partly because survey participants are reluctant to reveal what they should have done but haven't, even anonymously.

Table 20: Residential Pool Safety Measures Under Consideration

Considering…	Frequency
Fencing that's surrounds the pool on all sides	19
Fencing that separates the pool from the house	6
Child-resistant locks/alarms on all windows and doors leading to the pool	20
Audible pool alarm	18
Safety-approved pool cover or net	7

There were only a few survey participants who answered the question "If you currently have children under the age of five living at your home and do not have any barriers between the house and the pool, which of the following would you consider installing?" Among them, nineteen (19) participants are considering the installation fences that surround the pool on all sides, six (6) participants are considering installation of fences that separate the pool from the house, twenty (20) participants are considering child-resistant locks/alarms on all windows and doors leading to the pool, eighteen (18) participants are considering installation of an audible pool alarm, and seven (7) participants are considering installation of a safety-approved pool cover or net.

When evaluating the results from this survey question, take into consideration that the response numbers are low. Part of the reason is that most households with children have already installed some safety devices for their pools (see results in Table 16); and partly because those survey participants who don't have any of these safety devices may not want to install any safety barriers.

LIMITATIONS

The results of this pilot study are from select areas of Broward County and Miami-Dade County, Florida and can only be used in communities with the same or similar settings. They can, however, suggest strengths as well as deficits in knowledge and prevention practices among pool owners with and without children. We were not able to access all pool owners with young children since there is no publicly available mechanism that can be used to link birth certificate data to residential address. Therefore, the use of publicly-accessible pool registration information has greatly reduced the distance between reality and our ideal target population to reach families that have a residential pool and young children under the age of 5. Given the resources of time and funding, we may be able to explore additional venues to reach out to this population and conduct more research.

CONCLUSION AND DISCUSSION

KNOWLEDGE AND AWARENESS

To evaluate the current level of awareness in drowning prevention on a local level, questions were designed to assess public knowledge, perception and information resources related to drowning and drowning prevention.

Survey participants were asked to rank six different causes of death for children under age 5 in Florida from number 1 being the most common to number 6 the least common. Results showed that survey participants ranked drowning as the most common cause of death, followed by motor vehicle accidents (number 2) and airway obstruction (number 3). This perception holds true among participants in Broward County and in Miami-Dade County, among participants with or without children in the household, as well as among participants affected or not affected by a drowning or near-drowning experience of a child under the age of 5. Then we compared this result with the injury data and statistics on the website of National Center for Injury Prevention and Control (Web-based Injury Statistics Query and Reporting System (WISQARS™): http://www.cdc.gov/ncipc/wisqars/). From 2000 to 2004, the three leading causes of unintentional injury deaths for children age 1 to 4 years old in Florida were unintentional drowning (341 cases of death) ranked as number 1, followed by unintentional motor vehicle accidents (155 cases of death) ranked as number 2 and unintentional suffocation (42 cases of death) ranked as number 3. Of all 652 cases of unintentional

injury deaths, 341 cases (accounts for 52.3%) were caused by unintentional drowning. Additionally, drowning is the second leading cause of unintentional injury deaths among children in the United States (AAP, 2003; Brenner, 2001).Therefore, survey participants are well aware of the major causes of death, especially drowning, and ranked them in the correct order for young children under the age of 5.

Next, when asked to assess the highest risk group for drowning, ninety percent (90%) of the survey participants answered those children in the age group of "5 years old and younger" in Florida are at the greatest risk for drowning compared to other age groups. When we explored further there were no significant differences in perception when comparing households with children and without, as well as county level, or between individuals who have been or have not been affected by the drowning or near-drowning of a child under the age of 5. Although drowning is a potential risk for all children, it is at the highest risk for children under the age of 5.

According to the literature, male children are more likely to drown than female children (Brenner, 2001; O'Flaherty, 1997 & Quan). In Florida, of the 341 cases of death caused by unintentional drowning for children age 1 to 4 from 2000 to 2004, 222 cases were males and 119 cases were female. Thus, male cases account for about two-thirds (65%) of drowning deaths for children age 1 to 4. However, survey results showed, only half of the participants know that drowning victims are more likely to be male than female in this age group, with about another half answering that they were unsure of which gender was more likely to drown for children under the age of 5. When exploring further, there were no significant differences when comparing households with children and without, as well as county level, gender, race, age and education. Overall, only about half of the survey participants (41% to 55%) answered that male children under the age of 5 are more likely to drown, about another half of the survey participants (40% to 55%) were not sure about this, and only 2% to 5% answered female. Survey participants with Hispanic origin were less aware of the fact that young male children are more likely to drown (41% answered male), and a higher percent (55%) were not sure which gender is at the highest risk for drowning among young children. From this study, it is clear that participants were less informed for this risk factor.

The American Academy of Pediatrics recommends that a supervising adult should be within arm's length when infants and toddlers are in or around water (AAP, 2003). However, only about one-fifth (19%) of survey participants gave the preferred response that the most appropriate type of adult supervision, for children under the age of 5 playing in or around the pool, is adult supervision that involves staying within arm's reach of the child. About half of the survey participants answered that "staying in visual contact at all

times" is the most appropriate type of supervision. However, we have to take into account that parents and caregivers can be distracted with other activities that may interfere with visual supervision (AAP, 2003 & Cody, 2004). A quarter of the survey participants believed that "staying poolside" is a good way to safe guard young children. Thus, our participants have underestimated the risk of drowning. Education is the key to prevention, and parents and caregivers need to know what the best practices are in terms of supervision of young children in or around the residential pool.

In order to find out where survey participants seek information, the following question was posed "Which one of the following do you consider the best source of advice about drowning prevention for children under the age of five?" About forty percent (40%) of the survey participants chose the American Red Cross as the best source for advice about drowning prevention, followed by about one-fifth (19%) of survey participants who answered physicians, and twelve percent (12%) who answered the county health department. Barkin and Gelberg (1999) examined the role of primary care providers providing drowning prevention counseling during well-child examinations of children ages birth to 5 years by pediatricians, family physicians and pediatric nurse practitioners. Barkin and Gelberg found that these caregivers gave less important level to counsel on drowning prevention than other injury prevention topics. After further exploration of differences, we found that amongst those who, had not been affected by drowning experience of a child under the age of 5, a higher percentage were more likely to cite the American Red Cross, physician and County Health department as the best sources for advice regarding drowning prevention. In addition to American Red Cross, those who had been affected by a drowning experience also had a higher percentage chose other sources such as (such as nurses, friends, relatives, and other parents) as the best source for advice on drowning prevention for children under the age of 5. Compared to male participants (only 6% of male participants answered physician as the best source), more than a quarter (27%) of female participants answered physician as the best source for drowning prevention.

About half (51%) of the survey participants answered that during an office visit a pediatrician or nurse never talked to them about taking precautions to prevent their child from drowning. While a little more than a quarter (29%) of the participants answered that during an office visit a pediatrician or nurse did speak with them about taking precautions to prevent their child from drowning. A higher percentage of female participants (38%) answered that a pediatrician or nurse did speak with them about taking precautions to prevent drowning of children compared to only thirteen percent (13%) of male participants answered so. Overall, "county health department" is listed as the third best resources. Knowing the difference in subgroups of people seeking advice about drowning prevention, we can well-prepare the

public education and social marketing campaign to target different groups effectively. Also, how to boost the rate of people using drowning prevention advices from count health departments is a very important issue to pursue in the future study.

Ninety-seven percent (97%) of survey participants believe children should start learning water safety skills at some point younger than age of five. More than half of the survey participants reported that the age range of 1-2 years old is the most appropriate age for a child to learn water safety skills like being able to get to the side of the pool or floating on his/her back. However there is only a small amount of literature regarding water safety skills. The American Academy of Pediatrics informs us that children are not developmentally ready for formal swimming lessons until after their fourth birthday and if a child has developmental delays then the age is even older (AAP, 2003).

More than half of survey participants strongly agree that legally requiring pool safety devices at residences where there are children under the age of 5 is important. In addition, female participants and participants of Hispanic origin are the top two groups that strongly agree with legalizing pool safety devices at residence where there are children under the age of 5.

Prevention Practices and Obstacles

The most common safety practices of home owners with pools in the target population are using a working smoke detector, keeping medicines and vitamins out of children's reach, keeping the hot water heater at a safe temperature and ensuring that children under 80 pounds always ride in a car/booster seat. In addition, more than four-fifths of the participants reported practicing four or more of the seven general safety measures in their households. After further comparison the differences of common safety practices in households with children and households without children, keeping medicines and vitamins out of a child's reach, placing locks on cabinets containing dangerous items and placing plastic plugs on all electrical outlets, and storing rifles and guns stored unloaded in locked cabinet were the 4 categories where there were significant differences among households with children and without children. Households with children are more precautious and a higher percentage of households practice these 4 safety practices at home compared with households without children. For the rest of the safety practices (set hot water heater at a safe temperature, having a working smoke detector, making sure children 80 pounds always rides in a car/booster seat) the precautious levels are both high in these two groups. Overall, households with children are doing better in practicing common safety practices.

The majority of residential pool safety measures practiced among our survey participants consists of having child-resistant locks on doors and/or windows leading to the pool, having fencing that surrounds the pool on all sides and having fencing that has a self-closing, self-latching gate. In addition, about sixty-nine percent (69%) of the survey participants reported using two or more residential pool safety measures. When comparing residential pool safety measures practiced in households with children and households without children, we found that households with children have a higher percentage of fencing that surrounds the pool on all sides compared to households without children. When comparing differences at the county level, Broward County participants have a higher percentage that placed child-resistant locks on doors and/or windows leading to the pool, installed fencing that has self-closing, self latching gates and had an audible pool alarm compared to Miami-Dade County participants. Thus, compared with pool owners in Miami-Dade County, overall Broward County pool owners have a higher overall percentage of utilizing more safety devices on their pools. Interestingly, eighty-five (85) survey participants have fencing that surrounds the pool on all sides with self-closing, self-latching gate. This is equivalent to twenty percent (20%) of all survey participants. This is the recommended safety device that works effectively in preventing drowning or near-drowning occurrences.

In addition the researchers sought to identify survey participants who currently have children under the age of 5 who do not have a child-resistant fence separating the pool from the house and explore some of the reasons why they haven't taken this safety precaution. Also, further exploration was sought on the types of residential pool safety measures participants may consider installing. Responses to these particular questions were low; some reasons may be that the majority of the participants have some type of residential pool safety measures currently installed at their homes. Another reason may be that the participants who do not have a residential pool safety measure may not want to expose themselves to questions as they may have thought they would be perceived as behaving in a way that is socially undesirable.

The AAP recommends that if a home has a residential swimming pool it should be surrounded by a fence at least 5 feet high that prevents direct access to the pool from the house (AAP, 2003). Gauging residential pool safety measures practiced in households where children under the age of 5 often spend time was also measured. The majority of the residential pool safety measures practiced in households where children under the age of 5 spend most time consist of having child-resistant locks on doors and/or windows leading to the pool, having fencing that surrounds the pool on all sides and having a screened-in

pool. In addition, almost half of the participants reported that those households, where there are children under the age of 5 spending time, use three or more residential pool safety measures. Again, responses are low in number for this question due to the fact that a very low percentage of households we surveyed have children under the age of 5. Further study is necessary to confirm the answers and percentages regarding safety practices in other houses where young children often spend time.

The American Academy of Pediatrics recommends that parents, caregivers, and pool owners should learn cardiopulmonary resuscitation (CPR) (AAP, 2003). Most survey participants (70%) reported knowing how to perform CPR on their children. More than half of the participants (58%) reported that their spouse/partner knows how to perform CPR, and one third (33%) reported that their caregiver (to the children) knows how to do so.

When comparison was performed between households with children in Broward County and in Miami-Dade County, there are no significant differences in proportions between counties.

When comparison was performed across gender of survey participants, there are no significant differences in percentages between female participants and male participants.

However, when comparisons were performed across ethnicities, there are significant differences. About three quarters (76%) of non-Hispanic participants answered they knew how to perform CPR, while only more than half (56%) of Hispanic participants answered the same. Forty-one percent (41%) of non-Hispanic participants answered that the caregivers to their children know how to perform CPR, while only twenty-three percent (23%) of Hispanic participants answered the same for their caregivers.

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APPENDIX

Survey in English

Thank you for taking the time to complete this survey about child safety. Please answer all of the questions by filling in the circles completely with dark ink or pencil. There are no right or wrong answers and your responses are anonymous. By answering and submitting responses you give voluntary consent for your participation in this study.

1. Please rank the following causes of death for *children under age 5 in Florida* from #**1** (most common) to #**6** (least common).

- ☐ Poisoning
- ☐ Fire/burns
- ☐ Airway obstruction (suffocation, strangulation, choking)
- ☐ Motor vehicle related
- ☐ Drowning
- ☐ Firearms

2. Which of the following child safety measures are practiced in your household?

Yes	**No**	
●	●	Medicine and vitamins out of child's reach
●	●	Locks on cabinets containing dangerous items
●	●	Plastic plugs on all electrical outlets
●	●	Hot water heater set at safe temperature
●	●	Working smoke detector
●	●	Rifles and guns stored unloaded in locked cabinet
●	●	Child under 80 pounds always rides in car/booster seat

3. How many children in each of the following age groups currently live in your household? Please indicate how many males and how many females are in each group.

- ☐ **0-4 years of age** → Males: ☐ Females: ☐
- ☐ **5-12 years of age** → Males: ☐ Females: ☐
- ☐ **13-17 years of age** → Males: ☐ Females: ☐
- ☐ **No children living in the home**

4. At your current address, do you have a pool and/or outdoor spa?

● Yes ● No → **If No, please discontinue filling out this survey. Thank you for your time.**

5. What type of pool and/or outdoor spa do you have at your home?

Yes	**No**	
●	●	In-ground pool
●	●	Above-ground pool
●	●	Freestanding Jacuzzi or spa
●	●	Jacuzzi or spa attached to pool

6. Was your pool or outdoor spa installed before 2000?

● Yes ● No ● Not sure

7. Children of which age group do you think are most likely to drown in a residential swimming pool?

☐ 0-4 years of age ☐ 5-12 years of age ☐ 13-17 years of age ☐ Not sure

8. Which gender of children under the age of five is most likely to drown in a residential swimming pool?

☐ Male ☐ Female ☐ Not sure

9. Which of the following are used *at your home*?

Yes	No	
●	●	Child-resistant locks on doors and/or windows leading to the pool
●	●	Fencing that surrounds the pool on all sides, for example, mesh fencing
●	●	Fencing that separates the pool from the house, but not on all sides of the pool
●	●	Fencing that has a self-closing, self-latching gate
●	●	Screened in pool
●	●	Safety-approved pool cover or net
●	●	Audible pool alarm
●	●	Other (Please describe) _____

10. If you have a child in your household under the age of five, which of the following are used *at a home where your children often spend time (e.g., relative, neighbor, babysitter)?*

Yes	No	
●	●	Child-resistant locks on doors and/or windows leading to the pool
●	●	Fencing that surrounds the pool on all sides, for example, mesh fencing
●	●	Fencing that separates the pool from the house, but not on all sides of the pool
●	●	Fencing that has a self-closing, self-latching gate
●	●	Screened in pool
●	●	Safety-approved pool cover or net
●	●	Audible pool alarm
●	●	Oher safety features (Please describe) _____
●	●	Does not apply
●	●	Do you have children under the age of five living in the home?

11. At what age do you think it is appropriate for a child to learn water safety skills such as being able to get to the side of the pool or floating on his/her back?

☐ Less than 1 year ☐ 1-2 yrs old ☐ 3-4 yrs old ☐ 5 yrs or older ☐ Not sure

12. Which *one* of the following describes the most appropriate type of adult supervision for children under the age of five playing in or around the pool? **Please select one.**

☐ Stay in visual contact at all times
☐ Visually check on the child every 5 minutes
☐ Visually check on the child every 10 minutes
☐ Stay within arm's reach of the child
☐ Stay poolside
☐ Stay in the general vicinity of the water
☐ Not sure

13. Which of the following people who care for your child know how to perform CPR (cardiopulmonary resuscitation) for children?

	Yes	No	Not Sure
Self	●	●	●
Spouse/Partner	●	●	●
Caregiver (relative, babysitter)	●	●	●

14. Have you or someone close to you been affected by the drowning or near-drowning of a child under the age of five?

● Yes ● No

15. Which *one* of the following do you consider the *best source* of advice about drowning prevention for children under the age of five? **Please select one.**

☐ Physician ☐ American Red Cross ☐ Friends/relatives
☐ Nurse ☐ County health department ☐ Other (Please describe)
☐ Other parents ☐ Online resources

_____

16. During an office visit, has a pediatrician or nurse ever talked to you about taking precautions to prevent your child from drowning? ☐ Yes ☐ No ☐ Don't remember ☐ Does not apply

17. If you currently have children under the age of five living at your home and do not have a child-resistant fence separating the pool from the house, please indicate why not. Please bubble in all that apply.

☐ Do not think a fence is needed
☐ Too expensive
☐ Unattractive
☐ Do not believe it would be effective
☐ Other (Please describe) _____
☐ No children under the age of five living in the home

18. If you currently have children under the age of five living at your home and do not have any barriers between the house and the pool, which of the following would you consider installing?

Yes	No	
●	●	Fencing that surrounds the pool on all sides
●	●	Fencing that separates the pool from the house
●	●	Child-resistant locks/alarms on all windows and doors leading to the pool
●	●	Audible pool alarm
●	●	Safety-approved pool cover or net
●	●	No children under the age of five living in the home

19. How do you feel about the idea of legally requiring pool safety devices at residences where there are children under the age of five?

☐ Strongly agree ☐ Neither agree nor disagree ☐ Strongly disagree
☐ Somewhat agree ☐ Somewhat disagree

20. What is your age range? ☐ 18-24 ☐ 25-34 ☐ 35-49 ☐ 50-64 ☐ 65 +

21. What is your gender? ☐ Female ☐ Male

22. What is your level of education? ☐ Less than high school degree ☐ Some college ▲ Advanced degree
☐ High school graduate or equivalent ☐ College graduate

23. What is your race? ☐ White/Caucasian ☐ Asian/Pacific Islander ☐Other
☐ Black/African American ☐ Native American/Native Alaskan

24. Are you of Hispanic origin? ☐ Yes ☐ No

25. What is your approximate household income for 2006?

☐ Less than $20,000 ☐ $35,000 – 49,999 ☐ $75,000 and over
☐ $20,000 – 34,999 ☐ $50,000 – 74,999

26. In which county do you reside? ☐ Miami-Dade ☐ Broward

27. What is your 5-digit zip code? ☐☐☐☐☐

Thank you very much for completing this survey.

Survey in Spanish

Gracias por tomar el tiempo por rellenar esta encuesta sobre la seguridad de los niños/as. Por favor contesta todas las preguntas llenando cada círculo por completo usando un lápiz o un bolígrafo. No hay respuestas correctas o incorrectas y sus respuestas serán anónimas. Al responder y enviar sus respuestas usted da su consentimiento voluntario para participar en esta encuesta.

1. Por favor, ponga las siguientes causas de muerte en la Florida en niños/as menores de 5 años de edad en orden desde #1 (la mas común) asta el #6 (la menos común).

- ☐ Intoxicación
- ☐ Fuego/quemaduras
- ☐ Obstrucción aérea (sofocación, estrangulación, atragantar)
- ☐ Automóvil
- ☐ Ahogamiento
- ☐ Armas de fuego

2. ¿Cuáles de los siguientes métodos de seguridad práctica usted en su casa? Marque todas las respuestas que aplican.

Sí	**No**	
●	●	Medicina y vitaminas fuera del alcance de los niños/as
●	●	Candados en gabinetes donde hay contenidos peligrosos
●	●	Usar tapas plásticas en todos los tomas de electricidad
●	●	Tener el calentador de agua puesto a una temperatura moderada
●	●	Usar detector de humo, funcional
●	●	Guardar armas de fuego en gabinetes cerrados con llave
●	●	Niños/as menos de 80 libras siempre viajan en una silla especial de automóvil para niños/as

3. ¿Cuántos niños/as viven en su casa en cada grupo de edad? Por favor indique cuantos varones y hembras hay en cada grupo.

- ☐ **0-4 años de edad** → Varón: ☐ Hembra: ☐
- ☐ **5-12 años de edad** → Varón: ☐ Hembra: ☐
- ☐ **13-17 años de edad** → Varón: ☐ Hembra: ☐
- ☐ **No hay niños/as menor de 18 años viviendo en la casa**

4. ¿En tu dirección actual tiene usted una piscina o jacuzzi externo?

● Sí ● No → **Por Favor discontinua la encuesta. Gracias por su tiempo.**

5. ¿QUé tipo de piscina o jacuzzi exterior tiene Usted en su casa? Marque todas las respuestas que apliquen.

Sí	**No**	
●	●	Piscina enterrada en el suelo
●	●	Piscina por encima del suelo
●	●	Jacuzzi solo
●	●	Jacuzzi adjunto a la piscina

6. ¿Fue su piscina o jacuzzi exterior instalado antes del 2000?

● Sí ● No ● No sé

7. ¿Cuáles de los siguientes grupos de edades de niños/as son más propensos a ahogarse en una piscina residencial?

☐ 0-4 años de edad ☐ 5-12 años de edad ☐ 13-17 años de edad ☐ No sé

8. ¿Cuál sexo entre los niños/as es más propenso a ahogarse en una piscina residencial?

☐ Masculino ☐ Femenino ☐ No sé

9. Por favor indique cuales de las siguientes cosas son usadas <u>en su casa</u>. Marque todas las respuestas que apliquen.

Sí	No	
●	●	Cerraduras resistentes a los niños/as en puertas / ventanas que conducen a la piscina.
●	●	Cerca que rodea la piscina por todos los lados, por ejemplo, cercas de malla.
●	●	Cerca que separa la piscina de la casa, pero no en todos los lados de la piscina.
●	●	Cercas que se cierran por si mismo, puerta con cerrojo o pestillo automático.
●	●	Piscina cercada con tela metálica
●	●	Cobertura de piscina aprobada por seguridad
●	●	Alarma audible de piscina
●	●	Otro (Por favor indique) _____

10. Si tiene usted un niño/a menor de 5 años de edad en su casa, por favor indique cuales de las siguientes cosas son usadas <u>en otra casa donde su niño/a visita con frecuencia</u> (por ejemplo la casa de familiares, vecinos, niñera).

Sí	No	
●	●	Cerraduras resistentes a los ninos en puertas / ventanas que conduecen a la piscina.
●	●	Cerca que rodea la piscina por todos los lados, por ejemplo, cercas de malla.
●	●	Cerca que separa la piscina de la casa, pero no en todos los lados de la piscina.
●	●	Cercas que se cierran por si mismo, puerta con cerrojo o pestillo automatico.
●	●	Piscina cercada con tela metálica
●	●	Cobertura de piscina aprobada por seguridad
●	●	Alarma audible de piscina
●	●	Otro (por foavor indique) _____
●	●	No apilca
●	●	Tiene usted chicos menores de 5 años viviendo en su hogar?

11. ¿A que edad piensa usted que es apropiado para que un niño/a pueda adquirir las habilidades de seguridad en el agua?

☐ Menor de un año ☐ 1-2 años de edad ☐ 3-4 años de edad ☐ 5 años o más ☐ No sé

12. ¿Que tipo de supervisón piensa usted que es la más apropiada cuando niños/as menor de cinco años juegan alrededor de una piscina? **Por favor elige solo una respuesta.**

☐ Mantén contacto visual todo el tiempo
☐ Chequear el niño/a visualmente cada cinco minutos
☐ Chequear el niño/a visualmente cada diez minutos
☐ Mantener el niño/a al alcance de la mano
☐ Quedarse al lado de la piscina
☐ Quedarse cerca del agua
☐ No sé

13. ¿Cuáles de las siguientes personas que cuidan a su niño/a saben hacer reanimación cardiopulmonar (RCP) para niños/as?

	Sí	No	No Sé
Yo	●	●	●
Esposo/a - Compañero/a	●	●	●
Cuidador (familiar, niñera	●	●	●

14. ¿Ha sido afectado usted o una persona cerca a usted por el ahogamiento o el casi-ahogamiento de un niño/a menor de cinco años de edad?

● Sí ● No

15. ¿Cuáles de los siguientes grupos considera usted <u>ser la mejor fuente</u> de información sobre la prevención del ahogamiento de niños/as menores de cinco años? **Por favor elige solo una respuesta.**

☐ Médico
☐ Enfermera
☐ La Cruz Roja
☐ Amigos/Familiares

☐ El departamento de salud ☐ Otro (por favor indique)
☐ Otros padres ☐ En el Internet
_____

16. ¿Durante la visita medica, le ha hablado un pediatra o enfermera sobre las precauciones que deben tomar para prevenir el ahogamiento de su hijo? ☐ Sí ☐ No ☐ No me acuerdo ☐ No me aplica
17. Si tiene usted un niño/a menor de cinco años de edad en su casa, y no tiene una cerca que separa la piscina de la casa, por favor indique por que no. Marque todas las respuestas que apliquen.
    ☐ No pensaba que se necesitaba una cerca
    ☐ Muy cara
    ☐ Son feas
    ☐ No creía que eran efectivas
    ☐ Otra (por favor indique) _____
    ☐ No hay niños/as menor de 5 años viviendo en la casa

18. Si tiene usted un niño/a menor de cinco años de edad en su casa, y no tiene una barrera entre la casa y la piscina, cuales de las siguientes considera usted instalar. Marque todas las respuestas que apliquen.

Sí	**No**	
●	●	Cerca que rodea la piscina por todos los lados
●	●	Cerca que separa la piscina de la casa
●	●	Cerraduras resistentes a los niños/as en puertas/ventanas que conducen a la piscina
●	●	Alarma audible de piscina
●	●	Cobertura de piscina aprobada por seguridad
●	●	No hay niños/as menor de 5 años viviendo en la casa

19. ¿Cómo se sentiría usted sobre la idea de requerir legalmente seguridades de piscinas en residencias donde hay niños/as menores de cinco años de edad? Por favor elige solo una respuesta.
    ☐ Muy de acuerdo ☐ Ni acuerdo, ni desacuerdo ☐ Muy de acuerdo
    ☐ Algo de acuerdo ☐ Algo en desacuerdo

20. ¿A qué grupo de edades pertenece? ☐ 18-24 ☐ 25-34 ☐ 35-49 ☐ 50-64 ☐ 65 +

21. ¿Cuál es su género? ☐ Femenino ☐ Masculino

22. ¿Cuál es su nivel escolar? ☐ Un poco de escuela secundaria ☐ Un poco de universidad ☐ Fui a un postgrado
    ☐ Graduado de escuela secundaria o equivalente ☐ Graduado de la universidad

23. ¿Cuál es su raza? ☐ Blanco ☐ Asiático ☐ Otra
    ☐ Negro ☐ Indio Americano

24. ¿Eres de origen hispano? ☐ Sí ☐ No

25. ¿Aproximadamente, cuál es el ingreso familiar en el 2006?
    ☐ Menos de $20,000 ☐ $35,000 – 49,999 ☐ $75,000 o más
    ☐ $20,000 – 34,999 ☐ $50,000 – 74,999

26. ¿En que condado vive? ☐ Miami-Dade ☐ Broward

28. ¿Cuál es su código postal? | | | | | |

Muchas gracias por completar esta encuesta.

Cover letter in English

Title: Practices and Perceptions of Child Safety among Broward and Miami-Dade County Residents Who Reside in Homes with Pools.

Dear Community Member,

We are inviting you to participate in a research study about child safety being conducted in Broward and Miami-Dade Counties by the Institute for Child Health Policy at Nova Southeastern University. Your household is one of the small number in which people are being asked to give their opinion on these matters. We would like the questionnaire to be completed by ***one adult in your household who is 18 years or older***.

We are including a survey in both English and Spanish in this envelope. Please complete ***only one survey*** and send it back to us in the language of your choice. If you prefer go to the following web address **http://www.nova.edu/cwis/surveys/childsafety** and complete the survey online ***instead*** of completing the paper surveys provided. We would greatly appreciate your participation. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. The survey will take approximately 10 minutes to complete. You do not need to put your name on the survey. We promise that we will respect your privacy. We will make sure that your answers cannot be linked to you personally when we use the results obtained from the study. All surveys will be stored for the length of three years after the data is recorded. If the results of this study are used for publication, no identifying information will be used.

Included you will find a self-addressed, stamped envelope to mail ***one of the two*** surveys enclosed if you do not complete the survey online, along with a small token of appreciation for your time. Your response and time is greatly appreciated.

If you have any questions or would like more information about this research study please contact,

Deborah Mulligan, MD
Institute for Child Health Policy
Nova Southeastern University
3200 S. University Drive, Suite 1212
Ft. Lauderdale, Florida 33328
Phone: 954-262-1940
Email: dams@nova.edu

THANK YOU AND WE LOOK FORWARD TO YOUR PARTICIPATION IN THE STUDY!

Cover letter in Spanish

Título: Prácticas y Percepciones de la seguridad de los niños de residentes el condado de Broward y Miami-Dade con piscinas en sus casas.

Estimado Miembros de la Comunidad,

Los estamos invitando a participar en un estudio investigativo sobre la seguridad infantil que será conducido en los condados de Broward y Miami-Dade por el Instituto de Póliza de Salud Infantil de Nova Southeastern University. Su familia fue una es unos de los pocos que fue seleccionado para opinar sobre este tema. Les pado que un adulto **(mayor de 18 años)** de su familia llenara esta encuesta.

Estamos incluyendo con esta carta una copia de la encuesta en ingles y en español, complete la que este en el idioma de su preferencia y devuelva la nosotros. Si usted prefiere, vaya al la pagina del Internet **http://www.nova.edu/cwis/surveys/childsafety** y complete la encuesta. Como la validez de los resultados depende de obtener un índice de respuesta alto, su participación es crítica para el éxito de este estudio. La encuesta tomará aproximadamente 10 minutos para llevarla y no necesitas escribir su nombre en ella. Su privacidad será respetada y le aseguramos que sus respuestas no lo identificaran, aun cuando los resultados sean publicados. Las encuestas serán archivadas por tres años después de que la información sea recolectada. Además la junta de Nova Southeastern University ha aprobado este estudio el cual cumple con los requisitos éticos de la ley federal y las pólizas de la Universidad.

Para el retorno de su encuesta completada le hemos facilitado un sobre con la dirección del remitente, sello de correo y una muestra de nuestro agradecimiento por dedicarnos su tiempo. Su tiempo y sus respuestas son grandemente valoradas. Si tiene alguna pregunta o quisiera más información sobre este estudio, por favor contacte,

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! GRACIAS Y ESPERAMOS SU COOPERACION EN ESTE ESTUDIO!

Postcard

Dear Community Member,

This is a reminder that we would like your participation in a research study about child safety being conducted by the Institute for Child Health Policy at Nova Southeastern University. If you have already returned the completed paper survey or the online survey, we greatly appreciate your valued response. However, if you have not had an opportunity to do so, please take about 10 minutes to do so. If you no longer have the paper survey; please visit **http://www.nova.edu/cwis/surveys/childsafety** to complete the survey online.

AGAIN, WE THANK YOU FOR PARTICIPATING IN THIS IMPORTANT RESEARCH.

Estimado miembro de la comunidad,

Quisiéramos recordarle cuan importante es su participación en este estudió sobre la seguridad infantil que será conducido por el Instituto de Póliza de Salud Infantil en la Universidad de Nova Southeastern. Si ya usted ha completado el cuestionario vía la pagina Web o lo ha enviado por correo, le agradecemos su ayuda. Sin embargo, si usted no ha tenido la oportunidad de llenarla, por favor dedique 10 minutos para hacerlo. Si no posee el cuestionario vaya a la página **http://www.nova.edu/cwis/surveys/childsafety** donde se puede enviar electrónicamente.

GRACIAS POR SU PARTICIPACIÓN EN ESTE ESTUDIO IMPORTANTE.