

SFL Safety Specific Exercises to Prevent Drowning.

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Abstract:

Determine the effects of swim for Life Safety Exercises SFL its one of Safer 3 and American Red Cross Program. At this research we use only Safer 1 from the Swim for Life Foundation Program SFL in swimming and water safety in American Red Cross Association. Its lead to the ability to recover safely from a simulated episode of falling into a swimming pool or Deep water. Design Randomized trial of eight weeks' duration water safety and swim for life lessons for 40 non Swimming Student 19 to 21 years old from 15.10.2012 to 15.12.2012. Outcome measures-Buoyancy ability, water fear behavior, water recovery, and Tread water to side after jumping into pool were measured before, during, and after the SFL training program. **Results:** 40 non Swimming Student completed the study in the eight week. Swimming ability, water recovery, and jump and swim skills improved over

baseline levels in groups. By the end of training in the 8 week group improved in swimming ability. Improvements in water recovery and jump and swim skills were associated positively with changes in SFL ability.

Conclusions:

Buoyancy ability and safety skills of non Swimming Student can be improved through training. Such programs may offer some protection for them at risk of drowning and there was no indication that this program increased the risk of drowning. However, pool fencing, other barriers around water, and supervision still remain the most important prevention strategies to reduce drowning in Egypt.

Keywords: Swim for Life SFL, Safer 3, Drowning.

Introduction

Drowning is the process of experiencing respiratory impairment from submersion or immersion in liquid. Near

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drowning is the survival of a drowning event involving unconsciousness or water inhalation and can lead to serious secondary complications or death, possibly up to 72 hours after the event. It occurs more frequently in males and the young. (A Rahman 2009, Jump up Dueker 2009, Lunetta, P. & Modell 2005).

Over the past three decades countries have made strong, continuous progress on infectious disease reduction. However no impact has been made on drowning deaths. As a result, drowning is emerging as a leading cause of death for children after infancy 1 year in the countries surveyed for this report. And yet drowning is off the political radar. (Gordon Alexander UNISEF 2013). (K. N. Asher 1995)

A person drowning is unable to shout or call for help, or seek attention, as they cannot obtain enough air. The instinctive drowning response is the final set of autonomic reactions in the 20 – 60 seconds before sinking underwater, and to the untrained eye can look similar to calm safe behavior.[4][5] Lifeguards and other persons

trained in rescue learn to recognize drowning people by watching for these instinctive movements.(Linnan, M 2007). International Life Saving Federation ILS members in 2012 were found to be collecting data in a range of methodologies for age (Fig 1), locations (Fig 2) and activities (Fig 5) prior to drowning. This range points to the need for greater uniformity in drowning data standards and definitions. The survey attempted to map the issues that ILS members rate as important for drowning prevention in their areas of responsibility (Fig 6). The responses reflected the principal interests of lifesaving agencies with higher ratings for subjects such as training, public education , standards, lifeguard training and recruitment, and CPR scoring higher than home swimming pools, cold water immersion and tsunami events (Fig 4).

The following definition was accepted by the World Congress on Drowning in 2002 and subsequently by the World Health Organization in 2005: "Drowning is the process of experiencing respiratory impairment from submersion or immersion in liquid." [8]

This definition does not imply fatality, or even the necessity for medical treatment after removal of neither the cause, nor that does any fluid necessarily enter the lungs. The WHO further recommended "Drowning outcomes should be classified as: death, morbidity, and no morbidity. There was also consensus that the terms wet, dry, active, passive, silent, and secondary drowning should no longer be used.

Signs and symptoms Drowning is most often quick and unspectacular. Its media depictions as a loud, violent struggle have

Much more in common with distressed non swimmers, who may well drown but have not yet begun. In particular, an asphyxiating person is seldom able to call for help. The instinctive drowning response covers many signs or behaviors associated with drowning or near drowning: Head low in the water, mouth at water level , Head tilted back with mouth open, Eyes glassy and empty, unable to focus , Eyes open, with fear evident on the face, Hyperventilating or gasping , Trying to swim in a particular direction but not making headway , Trying to roll over

on the back to float , Uncontrollable movement of arms and legs, rarely out of the water. (Kavi Bhalla 2010, Fletemeyer, John 1998)

Drowning begins at the point a person is unable to keep their mouth above water; inhalation of water takes place at a later stage.[10]. The Safer 3 Water Safety Challenge is an annual event that has been held by many swim schools across the country to promote water safety. (International Life Saving Federation 2007, K Moran 2012). American Red Cross program It emphasized three sets of skills: 1 out-of-water safety behavior (deck behavior) 2 swimming ability (Fig 3); and 3 water safety skills. (Kenneth N Asher 1995). Safer 3, and American Red Cross Program "how to be safer by learning to swim and behave properly around water, how to get parents to make water safer with protective barriers, and how rescue preparation and parents can make a big difference in water safety.

Safer 3 from the Swim for Life Foundation According Safer Water, Safer Kids, Safer Response. 1-Safer Water is to make sure there is proper

fencing around pools, which includes four sided fencing, self-closing gates, self-latching, alarms, motion detections devices, safety equipment, and additional layers of protection.2-Safer Kids is learning to swim, constant adult supervision, which includes always having a designated "water watcher." No child should be considered water safe, because this can cause a false sense of security and lack of supervision. By learning to swim children are safer, never 100% safe.3-Safer Response is to know CPR, first aid, and rescue techniques. Have an emergency action plan and phone by the pool at all times. The risk can never be eliminated, but it can be reduced and managed. (Linda Quan 1998, Safer 3 Water safety Foundation 2013).

Non Swimmer or Children are also safer when they master of swimming skills at an early age. Qualified instructors in numerous public and private community swimming programs around the country can provide ongoing development of swimming skills while teaching proper behavior in and around the water with and without

Inflatable tools, swim board and Life Jacket. Teaching kids to swim should be a process, not an event to reach the main goals and mission that's a world without drowning. (Passmore 2007).

Aim: Save lives through water safety education throw: measure the Applied of Swim for Life Skills **SFL** to reduce the risk of Drowning.

Material and Methods

Subjects

40 Non Swimmers healthy male sport students volunteered for the study .The subject were 20.8 ± 1.31 years of age, height 176.2 ± 1.16 m and weight 75.85 ± 1.67 kg. Training program in the 8 week group improved the swimming ability.

Protocol

Subjects were tested Pre and Post on Four **SFL** Skills Water Fear, Front Move buoyancy, Back Move buoyancy, Jump and Stand Up (Tread Water) in Deep Water, Jump and Stand Up (Tread Water) in Deep Water and Move 15 meter.

Data analysis

A control value for each parameter was calculated as an average value mean and standard deviation \pm SD, an

average value was calculated three time pre and post swim for Life test Skills SFL. The relative change for the Skills was calculated for each subject. The Changes of Swim for Life

test Skills SFL characteristics values were compared between, before and after. The level used for accepting significance was *P < 0.05.

Table (1)
SFL Characteristics of 40 subjects

Characteristics	Means ± SD	Characteristics	Means ± SD
Age[year]	20.74 ±0.91	Front Move buoyancy	3.87 ± 2.52
Height(cm)	175.92 ±2.74	Back Move buoyancy	4.84 ± 2.31
Weight [kg]	74.64 ± 1.89	Jump and Stand Up (Tread Water) in Deep Water	27.07 ±7.001
		Jump and Stand Up (Tread Water) in Deep Water and Move 15 meter	3.64 ± 2.56

Data are means ± SD, n=40

Figure 1: Data available Age for Drowning

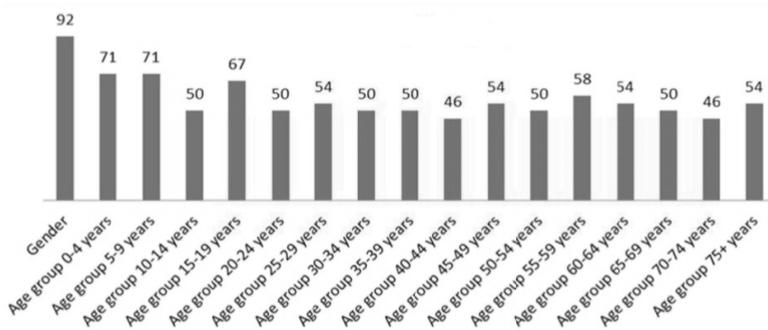


Figure 2: Data available Location for Drowning

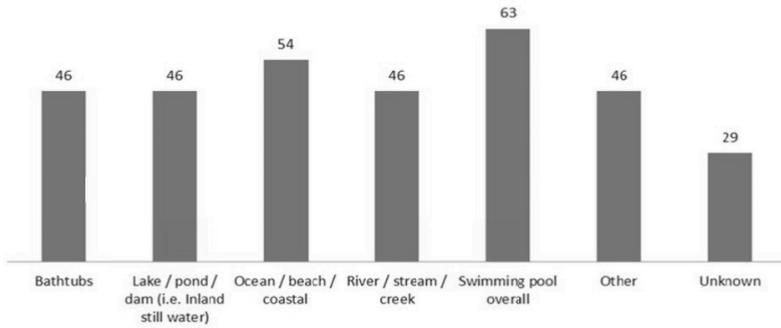


Figure 3: Data available Factors for Drowning

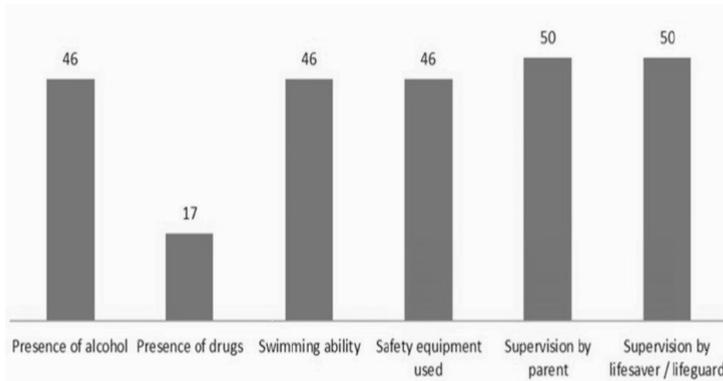


Figure 4: Prevention Strategies Data available of Drowning

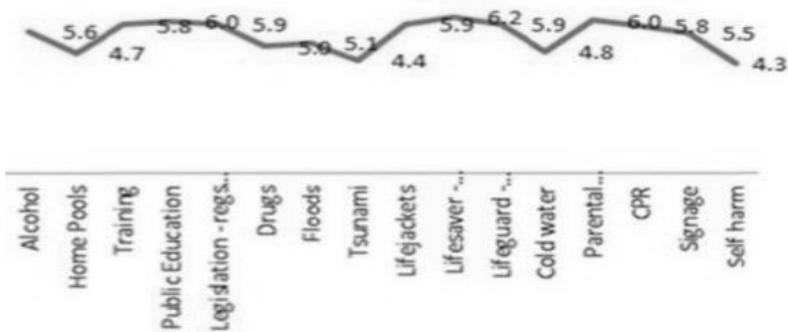


Figure 5: Activities Data available for Drowning

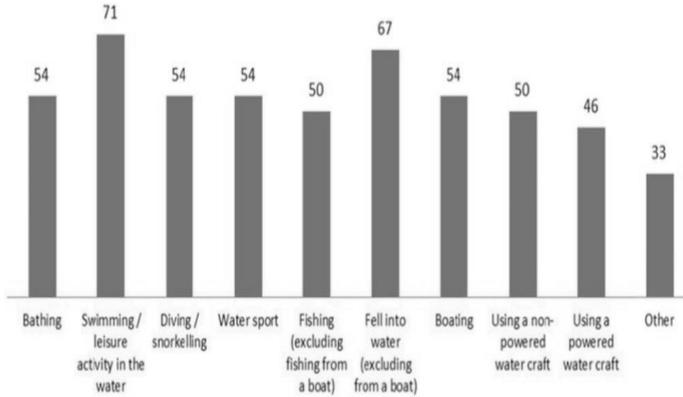


Figure 6: Countries Members Respond or Not in ILS Drowning Data

Members (Countries) who responded but did not have drowning data		Members (Countries) who responded and had drowning data	
Austria Bosnia and Herzegovina British Virgin Islands Cameroon China Chinese Taipei Croatia Gibraltar India	Israel Mauritius Mexico Netherlands Pakistan Philippines Portugal Romania South Africa Spain Thailand	Argentina Australia Barbados Brazil Bulgaria Canada Chile Czech Republic Denmark Finland Hong Kong Iran Ireland	Japan Latvia Norway Saint Lucia Singapore Slovakia South Korea Sweden Switzerland Trinidad & Tobago United Kingdom USA
Member (Countries) who did not respond			
Algeria Kenya Jamaica Peru Costa Rica Malaysia Qatar Palestine United Arab Emir. France Hungary Azerbaijan Russia Luxembourg	Seychelles Swaziland Panama Grand Cayman Isl. Bangladesh Indonesia China Kuwait Belgium Germany Greece Serbia & Montenegro Serbia Iceland	Egypt Lesotho Virgin Islands Surinam Jordan Sri Lanka South Korea Taiwan Cyprus Italy Turkey Lithuania Montenegro Andorra	Botswana Liberia Venezuela Antigua New Zealand Fiji Macau Syria Estonia Poland Macedonia Ukraine Malta

(Lu, T.2010).

Results

Non Swimmer group showed highly significant improvements in swimming ability during the eight weeks after the beginning of training. Front Move buoyancy gradually Increased after SFL Program (3.87 ± 2.52 , 59.64 ± 7.051 , $p < 0.05$), but the Back Move buoyancy increase after SFL Program (4.84 ± 2.31 , 64.28 ± 7.88 $p < 0.05$), and Jump and Stand Up (Tread Water) in Deep Water increase after SFL Program (2.71 ± 2.59 , 27.07 ± 7.001 $p < 0.05$). Jump and Stand Up (Tread

Water) in Deep Water and Move 15 meter increase after SFL Program (3.64 ± 2.56 , 34.38 ± 5.91 $p < 0.05$). After the 8 week group's improvement slightly, the duration of the swimming lessons of eight weeks may also limit the generalizability of the study results; as such lessons may not be available to some families. Future studies should examine the effectiveness of fewer lessons and shorter intervention on swimming skills and water safety.

Table (3)
SFL skills variables before and after 8 week for Subject

No	Characteristics	Means \pm SD Pre	Means \pm SD Post	T-Test
1	Front Move buoyancy	3.87 ± 2.52	59.64 ± 7.051	3.16
2	Back Move buoyancy	4.84 ± 2.31	64.28 ± 7.88	1.04
3	Jump and Stand Up (Tread Water) in Deep Water	2.71 ± 2.59	27.07 ± 7.001	3.81
4	Jump and Stand Up (Tread Water) in Deep Water and Move 15 meter	3.64 ± 2.56	34.38 ± 5.91	8.79

Data are means \pm SD, n = 40, P = 2.03

Discussion

The research explored the importance to drowning prevention with SFL Specific

exercises for a range of issues. The highest response rates were in areas consistent with the mission of many lifesaving

organizations i.e. lifesaver training, public education and CPR such as child supervision and legislation. We found significant differences after SFL program in Front Move buoyancy test according to the post measurement ($P=2.03$). found significant differences after SFL program in Back Move buoyancy test according to the post measurement ($P=2.03$).found significant differences after SFL program in Jump and Stand Up (Tread Water) in Deep Water test according to the post measurement ($P=2.03$).We found significant differences after SFL program in Jump and Stand Up (Tread Water) in Deep Water and Move 15 meter test according to the post measurement ($P = 2.03$).from (Figure 1) data Age for Drowning showed the 71 % for age Drowning 0:4 ,5:9 year and 69% for age Drowning from 15 :19 year. From (Figure 2) Data available Location for Drowning showed the 63 % in Swimming pool, 54% in Ocean, Beach and Coastal (World Health Organization 2013) .from (Figure 3) showed Data available Factors for Drowning 50% in Supervision for lifesaver, lifeguard and

Supervision by Parent. From (Figure 4) showed Data available for Prevention Strategies of Drowning 6% for Lifeguard and CPR. From (Figure 5) Showed Activities Data available for Drowning 71% Swimming and Leisure Activity in water and 67% in fell in deep water and Boat(Promoting Child Rights 2013) . From (Figure 6) Showed Egypt in the Countries Members Not Respond in ILS Drowning Data. (World Health Organization, 2003, 2010).

Recommendation

After consideration of the results of this research the authors make the following recommendations: Egypt government should continue to work to prevent Drowning and interested to:

1. Improve the quality, completeness and comprehensive of drowning data.

2. Develop clear and consistent definitions and improved understanding of different collection methods and methodologies to support data comparison across international boundaries.

3. Improve the use of the all forms of data by drowning prevention and lifesaving agencies to identify drowning

risk and plan prevention programs. This should also include the development of strategies to increase the evidence base of what works, in what circumstances, requiring what resources.

Conclusion

We believe that the results of this study show that there are potential benefits for non Swimming Student in learning SFL and water safety skills. This study should be repeated by others and Egypt should be as a member in Drowning Data in ILS. SFL and water safety training should be promoted as part of a drowning prevention program for this age range. However, a comprehensive approach would incorporate passive protection, such as water barriers and personal flotation devices, active measures such as water safety and SFL instruction, and supervision. All such elements should be advocated strongly to optimize water safety and enjoyment for non Swimmer people.

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