



Aquaphobia: Causes, Symptoms and Ways of Overcoming It for Future Well-being

Rofiza Aboo Bakar¹ and Jazredal Aboo Bakar²

¹Universiti Teknologi MARA Cawangan Pulau Pinang

²Muslim Swimming and Sports Academy

Corresponding email: rofiza@ppinang.uitm.edu.my

Article Information

Keywords

Swimming, aquaphobia, theory of fear and brain

Abstract

Under the '1 Student 1 Sport' policy, swimming has been recommended as one of the sport activities in Malaysian schools. Nonetheless, suffering from aquaphobia or the fear of water has compelled many students to forget about this excellent form of exercise. The aim of the paper is to put forward the causes of aquaphobia, its symptoms and some suggested ways that can be employed to overcome it. These ways are developed based on the theory of fear and brain which suggests that one's fear can be kept under control and treated if the cause of fear is shown to be no longer harmful, and the correct ways or strategies are being repeated. The causes of aquaphobia are many, and among them are having the fear of drowning, the experience of a horrified incident and overprotective parents. Aquaphobia symptoms include hyperventilation or shortness of breath, increased heartbeat, sweating and shivering. Some ways of overcoming aquaphobia comprise of the swimming teacher being by the swimmer's side, teaching the correct breathing techniques and mirroring movements students need to learn. If aquaphobia can be addressed, water fear will disappear. This will encourage more school students to perform aquatic activity which will lead to their well-being.

INTRODUCTION

People who are active in sports generally lead a healthy physical and psychosocial life (Kamaria Kamarudin & Mohd. Sofian Omar-Fauzee, 2007). The Government of Malaysia has identified the need to get more people into sports, and in 2011 announced its '1 Student 1 Sport' policy (The Economic Planning Unit, 2010) which placed an increased importance in sports in both primary and secondary school curricula as it is seen as an avenue that can produce holistic students who are physically, emotionally and intellectually healthy (The Ministry of Education, 2011). Swimming is one of the sport activities that are suggested in Malaysian schools (Bahagian Sukan, Kementerian Pelajaran Malaysia, 2011). If a student can swim well, he may be able to venture into other sports like canoeing, scuba diving and kayaking. In fact, as reported by Varveri, Karatzaferi, Pollatou, and Sakkas (2015), Australia embraces the idea that swimming lessons should start as early as in one's infancy stage, since being contact with water seems to promote both physical and mental health. Similarly, Finland adopts the same policy that swimming is an important civic skill and has to be guaranteed and taught to all Finnish children (Vaahtera, 2012). Having the ability to swim may also prevent a person from fatal drowning accidents (Vaahtera, 2012) which is rampant worldwide (Torlakovic & Kebat, 2015), including

Malaysia (Tuan Pah Rokiah Syed Hussain, Baharum Mohamed, & Hamidi Ismail, 2014). However, there are people who shy away from swimming because they suffer from aquaphobia or the discomfort and fear of water (Noble & Cregeen, 2014). In some cases, aquaphobic people experience increased heartbeat rates, drowsiness, bloated and cramped stomachs, and difficulty in breathing (Ermawan Susanto, 2005). Water is such a mystery to many (Cristophe, 2016; Torlakovic & Kebat, 2015) that they fear that they will drown in water and encounter death. In truth, many traditional swim lessons also do not address the issue of overcoming aquaphobia at all (Popke, 2009). If one wants to know how to swim, one has to conquer the fear, and thus a good swimming programme should include ways to deal with the fear of water. The aim of this paper, thus, is to present the causes of aquaphobia and the strategies that can be implemented in minimizing if not altogether eliminating it.

CAUSES OF AQUAPHOBIA

In a talk on water safety done by the authors in a secondary school in Penang, Malaysia on the 3rd of February, 2016, 80% out of 400 students who attended the talk admitted being afraid of deep water in pools and deep open water. Similarly, 46 percent of American adults are afraid of deep water in pools, and 64 percent are afraid of deep open water (Popke, 2009). This fear is triggered by different reasons. Below are some of the causes of aquaphobia as reported in journals.

A Person Has an Instinctive Fear of Drowning

This feeling is caused by tension when the learner moves his head out of the water to inhale (Cross, 2016). Not only new beginners suffer from this inadequacy; this fear of drowning is experienced even among top competitive swimmers (Cristophe, 2016; Cross, 2016). This fear eventually disturbs the natural poise of the swimmer's head, neck and back which leads him to becoming heavier and having more difficult movement in water.

A Person Has Experienced an Incident of Personal Horror

Aquaphobia may arise from a single incident in a person's life, such as surviving a sinking boat, or was panicky in water which resulted from being thrown into the deep end of a pool (Cristophe, 2016; Popke, 2009).

A Person Has At Least One Parent Who Is Overprotective Or With Aquaphobia

A person may have taken swimming lessons but have never been comfortable in water because of the destructive horror in relation to swimming cultivated by at least one of their parents (Cristophe, 2016; Depiano, 1985, as cited in Kraft, 2016; Ermawan Susanto, 2005; Popke, 2009). The parent may have been very protective that no swimming or any water-related activity is allowed among the children, and the fear of water is passed down genetically to the children. In a conversation with an enrolling student in one of the authors' swimming classes, Hidayah (pseudonym) admitted that despite learning swimming, she still fears water because "... when I was small, my father used to tell me that there is a ghost in the water waiting to haunt those who swim," (Indah, April 25, 2016). This fear is very much overpowering that it is very hard for one to forget it without a conducive programme designed to overcome the phobia.

A Person Has a Psychological Difficulty Adjusting to Water

A person does not like the weightlessness of water and he makes excuses staying out of water (Popke, 2009).

A Person Lacks Trust in The Water

A person might have undergone stressful methods that are put forth by a swim teacher while he is learning swimming. Consequently, he feels that there is no support from the teacher while he is in the water and is fearful that he will drown (Cross, 2016).

SYMPTOMS OF AQUAPHOBIA

Fear of water can be a physical response to thinking about drowning and almost all people with aquaphobia can portray a very strong reaction when they think that they will drown (Change That's Right Now, 2016). Some physical response to aquaphobia can include nausea, dizzy, numbness, hyperventilation or shortness of breath, increased heartbeat, sweating and shivering (Change That's Right Now, 2016; Otta & Ogazie, 2014).

THE THEORY OF FEAR AND BRAIN

Aquaphobia is a type of fear. Brain scientists agree that fear memories are stored in the amygdala in the brain (Carter, 1998; Carter, 2009; Debeic & LeDoux, 2004). Fear is a natural feeling that occurs when the defense system in the brain is active and usually most things that cause fear are learnt about in life and through

experience (Debiec & LeDoux, 2004). Simple fear occurs when one reacts to a concrete and immediate threat like when someone in a mask is pointing a gun at you or when a snake is on the ground (Howard, 2006).

Other symptoms of fear are depression, post-traumatic stress disorder, obsessive-compulsive disorder, panic disorder and phobias. Phobias are the experiences of crippling worry and tension in specific setting, such as heights, tests and water, and this worry is often accompanied by trembling, increased blood pressure, stomach problems, headache and muscle tension (Carter, 2009; Howard, 2006) which may motivate another behaviour like avoidance which can determine the behavioural patterns of an individual (Debiec & LeDoux, 2004). For example, a person who has had the experience of drowning may avoid being near water altogether (Change That's Right Now, 2016). Howard (2006) stresses that most fear can be treated effectively with a combination of psychotherapy (cognitive and behavioural therapy) and pharmacotherapy (antianxiety agents).

Fear is a result of the brain's defense mechanism towards a dangerous stimulus. Debiec and LeDoux (2004) report that once a person acquires the fear of the dangerous stimulus, that fear may or may not remain throughout his life. According to Carter (2009), it is often very hard to overcome fear. However, LeDoux (2015) informs that taking a step to fight the fear will reroute the path of fear through the amygdala, which means that the fear can be consciously controlled and treated, and can be weakened through any learning experiences which could demonstrate that the stimulus that was dangerous once, is no longer harmful now. These experiences may be learnt and the victim of fear can often be recovered although the time taken for the recoverability can either be spontaneously, or within months or years (Debiec & LeDoux, 2004). Besides, Carter (2009) also suggests that the fear feeling in the amygdala can be reduced if pleasurable learning experiences and anticipation (a clear control over what is going to happen and what action will need to be done) are included. Thus, knowing that fear may be controlled and treated through certain pleasurable activities and anticipation, strategies that are deemed possible in overcoming aquaphobia are further discussed in the next section.

WAYS OF OVERCOMING AQUAPHOBIA

To reiterate, strategies that are suggested in the paper take into consideration that fear can be recovered if they are equipped with pleasurable learning experiences and a clear control over what is going to happen and what action will need to be done in cases of emergency. Besides, it is also necessary for swimming instructors to make students understand that being able to swim does not only mean swimming for a certain length of metres; it also means being able to stay afloat in deep and open water, especially in cases of emergency like slipping off a dock or falling out of a boat until help arrives. Thus, beating the fear of water and staying calm in deep water is a lesson worth taught. Below are some of the strategies that can be administered in overcoming aquaphobia.

Having A Supportive Person at The Swimmer's Side

The coach or an experienced swimmer should be at the side of the swimmer to ensure that he feels confident and comfortable, and has somebody watching over him all the time and not going to let him drown (Vaahtera, 2012). Figure 1 shows how a coach can offer his support by being at the side of a new swimmer.

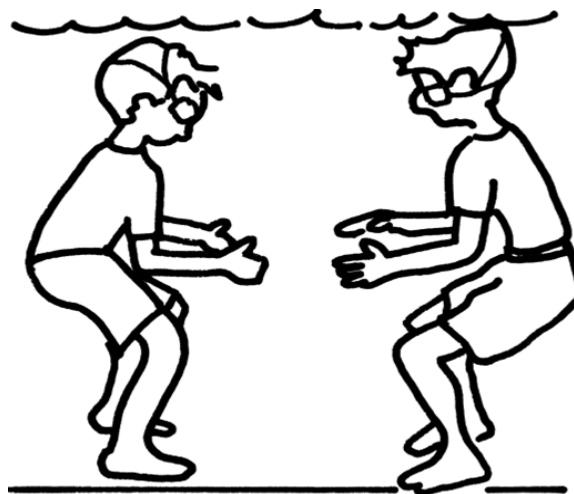


Fig. 1.

A coach offering support by being at the side of a swimmer

Help Students Simply Stay Calm in the Water

Ermawan Susanto (2005) and Popke (2009) reported that expert swimming instructors admitted that new beginners will feel strange, lose control of their bodies in water, and their heart rate will go up dramatically. However, this strange feeling can be amended by making them repeatedly floating, gliding and rolling softly and gently in an area of a pool that is not deep, noisy and packed with other swimmers. When they are quite comfortable being in water and have control of their bodies, they can be mixed with other swimmers of all skill levels. For them to adapt and be comfortable, they may need around eight or more trips to a specific swimming pool. Start with the one whose water is shallow and goes no higher with the swimmer's chest to ensure safe feeling and relaxation.

Help Students Learn the Correct Breathing and Relaxation

Breathing in water can energise and relax a swimmer provided that he emphasizes on the out-breath for the in-breath to follow suit (Cross, 2016). By swimming, a swimmer learns a principle for life that to breathe in well, he must let enough air out. The focus thus is on to move calmly and consciously to allow relaxed and unforced breathing.



Fig. 2.
Learn the correct breathing technique

Help Students Gain Confidence

Vaahtera (2012) suggested that students learning swimming should know no pressure, be comfortable in water and have fun in the pool. When the fear ends, water confidence will increase and swimming skills will soon develop. The researchers themselves have experimented with their learners some strategies which witness the development of self-confidence in water. Among the strategies are face washing with the swimming pool water, water war and water treading.

Mirror the Movements That Students Need to Learn

Carter (2009) reports that certain neurons in our brain are activated when we move, or when we see someone else moving, which means that we can unconsciously imitate the actions of others and share to some extent their experience. Understanding this, swimming instructors can demonstrate the correct ways of swimming strokes for them to mirror, and not forgetting to display both through their actions and instructions that swimming is fun by maintaining the softness in the face and the breath (Cristophe, 2016). In this way, the students' brains can learn to move their legs, bodies and hands prior to their real movement and maintaining the softness in their faces while imagining that swimming is fun. Although it takes some time before the students can master each stroke correctly, they can feel successful in what they are learning and doing.

Move Well in Water and Improve Flexibility

To move well and improve flexibility in water, a swimmer needs to loosen up by keeping the length of the body, moving legs from the hips and freeing his ankles (cross, 2016). Applying Carter's (2009) theory that fear can be reduced if a person has a clear control over what is going to happen and what action will need to be done, thus the swimming instructor needs to remind the swimmer by telling him what exact movements to be done, and this movement must be controlled by the swimmer's thoughts and repeated till perfection.

Begin with Simple Tasks Before Gradually Moving on To More Difficult Ones

Water may be feared by a person because of his parents' intense fear which has been transferred onto him. Therefore, to beat aquaphobia, it is advisable that simple activities are started before moving on to the more difficult ones so that successes can be built on gradually (DePiano, 1985, as cited in Kraft, 2016). For example, the student can first start his class by socializing by a swimming pool, and can then slowly work towards submerging under water from the side of the pool to the shallow end. This can be done over a period of a few sessions. DePiano (1985) (as cited in Kraft, 2016) reiterated that the student may still feel uncomfortable with water, but his anxiety and avoidance behaviour will slowly disappear. Figure 3 below shows the key aspects in this paper.

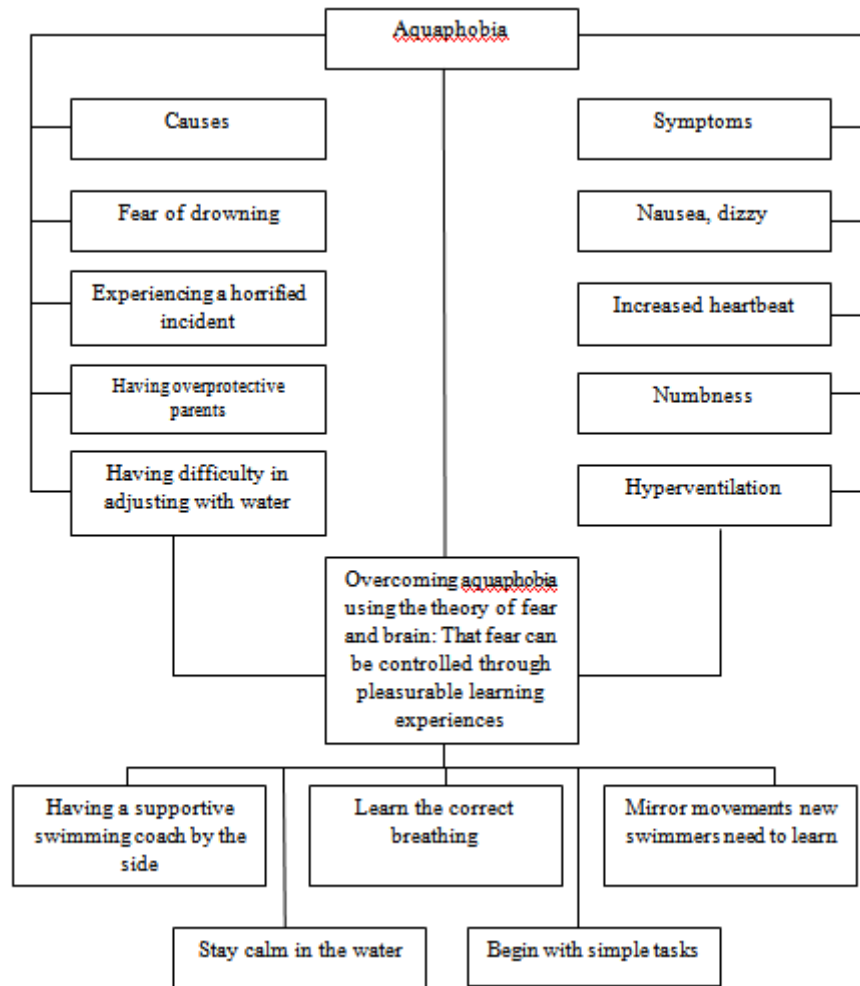


Fig. 3.
The key aspects of the paper

GENERAL BENEFITS OF OVERCOMING AQUAPHOBIA

There are some benefits of overcoming aquaphobia. Firstly, the disappearance of fear of water can encourage people to perform swimming that can help people maintain personal health. Mohammed Alkatan, Baker, Machin, Park, Akkari, Pasha, and Tanaka (2016) have found swimming to be an ideal activity for patients with arthritis since regular swimming can reduce joint pain and stiffness linked to osteoarthritis. It too does not put pressure on any of the body joints nor internal organs (Cross, 2016) making it the safest form of exercise. Popke (2009) also reported that Professor Steven Blair from the Department of Exercise Science and Biostatistics and Epidemiology, University of South Carolina, USA in his 32 years of research has found that men who swim for exercise live longer than those who run or walk for exercise.

Secondly, by overcoming aquaphobia, people can get involved in swimming and other water sports, feel adventurous (Cross, 2016), and not feel socially handicapped (Popke, 2005). Being able to get involved in these water activities may give them a feeling of success and happiness. The researchers have also learnt from the

adults who enrolled in the swimming classes that they wanted to overcome their aquaphobia so that they could learn swimming and wind up in the water after a long stressful day of studying and working.

Next, swimming makes one lose weight easily. It is argued that losing weight by swimming is easier than by running (Cross, 2016) since twenty minutes of gentle breaststroke can produce a heart rate of 120 beats per minute.

Finally, Cross (2016) states that a swimmer can also have a good appearance. His body muscles are toned up because all the muscles in the body respond while swimming. His lung capacity is increased through breathing and improves his body shape. Not forgetting, his complexion is also changed because there is an elimination of toxins.

CONCLUSION

In short, this study have indicated that aquaphobia should be overcome so that many can swim and get involved in water sport activities. Similarly, no one should feel bad if he is afraid of water because everyone has a different level of water confidence and this level of water confidence can increase with the right trainings. Some people want to feel relaxed being in water; others want to be competitive; whereas some just want to be fit. In whichever situation, swimming instructors and physical education teachers may have the need to focus on dealing with aquaphobia first before teaching their students all the classical strokes in swimming like front crawl, breaststroke, backstroke and butterfly. A person needs to primarily be in total control over his body while being in the weightlessness of water, feel comfortable, have a normal heart rate, and beat the fear of water. Helping everybody beat aquaphobia should be the priority of the swimming instructors. A paradigm shift in teaching swimming and a secure learning environment is needed for all to enjoy the safety and comfort of being in water. It is hoped that this shift will be happening soon.

REFERENCES

- Bahagian Sukan, Kementerian Pelajaran Malaysia. (2011). *Buku panduan pelaksanaan dasar satu murid satu sukan* (1st ed). Putrajaya: Malaysia.
- Carter, R. (1998). *Mapping the mind*. London: The Orion Publishing Group Ltd.
- Carter, R. (2009). *The brain book*. London: Dorling Kindersley Ltd.
- Change That's Right Now. (2016). *Symptoms: Friends of the Fear*. Retrieved from: <http://www.changethatsrightnow.com/aquaphobia/symptoms/>
- Cristophe. (2016). *Overcoming fear of water and swimming – Part 1*. Retrieved June 27, 2016, from www.enjoy-swimming.cpm/about-us.html
- Cross, I. D. (2016). *Swimming without stress: Lessons for land lovers*. Available from <http://www.swimmingwithoutstress.co.uk/improve-swimming-book.html>
- Debiec, J. LeDoux, J. (2004). Fear and the brain. *Social Research*, 71(4), 807-818.
- Ermawan Susanto. (2005). Strategi menghilangkan fobia air: Sebuah pendekatan menuju keamanan pembelajaran akuatik. *Jurnal Pendidikan Jasmani Indonesia, Edisi Khusus*, 117-126.
- Howard, P. J. (2015). *The owner's manual for the brain: Everyday applications from the mind-brain research* (3rd ed.). Texas: Bard Press.
- Kamaria Kamarudin, & Mohd. Sofian Omar-Fauzee. (2007). Attitudes toward physical activities among college students. *Pakistan Journal of Psychological Research*, 22(1-2), 43-54.
- Kraft, D. (2016). The place of hypnosis in psychiatry Part 6: Treatment of specific phobias – natural environment type, blood-injection-injury type, and other types. *Australian Journal of Clinical and Experimental Hypnosis*, 41(1), 1-15.
- LeDoux, J. (2015). *Anxious: Using the brain to understand and treat fear and anxiety* (1st ed.). New York: Viking.
- Mohammed Alkatan, Baker, J., Machin, D. R., Park, W., Akkari, A.S., Pasha, E. P., & Tanaka, H. (2016). Improved function and reduced pain after swimming and cycling training in patients with osteoarthritis. *Journal of Bodywork and Movement Therapies*. doi: 10.3899/jrheum.151110
- Noble, J., & Cregeen., A. (2014). *Swimming games and activities for parents and teachers* (3rd ed). London: Great Britain.
- Otta, F. E., & Ogazie, C. A. (2014). Effects of systematic desensitization and study behaviour techniques on the reduction of test phobia among in-school adolescents in Abia state. *World Journal of Educational Research*, 1(3), 1-7.
- Popke, M. (2009). Back to swim school. *Athletic Business*, 52-61.

- The Economic Planning Unit. (2010). *Tenth Malaysia Plan 2011 – 2015*. Putrajaya, Malaysia: Prime Minister's Department.
- The Ministry of Education. (2011). *Sport training module for school sport club advisors: Primary school ping pong*. Putrajaya: Malaysia.
- Torlakovic, A., & Kebat, R. (2015). Efficiency of the training programme for non-swimmers adapted for women with a pronounced fear of being in water. *Homo Sporticus*, 1, 21-26.
- Tuan Pah Rokiah Syed Hussain, Baharum Mohamed, & Hamidi Ismail. (2014). *Kesediaan kognitif menghadapi banjir bagi meminimumkan kemusnahan dan kehilangan nyawa*. Paper presented at the Persidangan Kebangsaan Ekonomi, Malaysia. Retrieved from www.ukm.my/fep/perkem/pdf/perkem2014/PERKEM_2014_5D2.pdf
- Vaahtera, E. (2012). Compulsory able-bodiedness and the stigmatized forms of nondisability. *Lambda Nordica*, 17, 77-101.
- Varveri, D., Karatzaferi, C., Pollatou, E., & Sakkas, G. K. (2015). Aquaticity: A discussion of the term and of how it applies to humans. *Journal of Rheumatology*, 1-5. <http://dx.doi.org/10.1016/j.jbmt.2015.11.001>