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Force and Trauma in Aquatic Lessons

Supplementary Document to support National and International Swim Codes of Practice.

Purpose

To provide further education in relation to stress, force and trauma in aquatic lessons of any kind.

Rationale

National and International Swim Codes of Practice state that teaching practices in aquatic lessons be free of force and trauma.

However individuals vary in the way they define these terms and apply them in an aquatic environment. They also vary in their knowledge and ability to recognise a child in distress and to implement practices free of force and trauma.

This can result in infants and young children inadvertently being subjected to highly distressing and potentially harmful experiences during aquatic lessons.

This Paper serves to provide further education in relation to stress, force, trauma, and signs of distress, along with practical strategies to help support an infant or child in distress.

Situations of Force and Trauma In Aquatic Lessons

The most common situations involving force and overwhelming stress/trauma in aquatic lessons include;

1. **Entry:** taking a resisting child into the water
2. **Front Submersion:** taking a resisting child under the water; by push, pull or release
3. **Back Float:** placing a resisting child on their back with or without support
4. **Transitioning:** separating a child from their parent before the child is emotionally ready
5. **Teacher gender sensitivity or changes:** insisting a distressed child get in the water with a teacher they are uncomfortable with for any reason
6. **Abandonment:** sending the parent away from the child, even out of sight in an attempt to make the child to comply
7. **Pace:** conducting an activity or lesson too quickly thereby inducing resistance or distress
8. **Distance/Insufficient Support:** being too far away from the child during a released front float, swim or back float, resulting in difficulty and panic to get up and to get air

9. **Stranding/Isolating:** holding a distressed child away from the side of the pool or leaving the child stranded on a platform away from the poolside or teacher in order to force compliance
10. **Physical Touch, Manipulation or Restraint:** Physically touching, restraining or manipulating a child's limbs, body or head without consent, against will, especially if roughly or gripping tightly. Any touching of a sexual nature with or without apparent consent.
11. **Verbal Threats, Shaming and Humiliation Tactics:** For example, "If you don't... I will..."; "If you don't...you can't go to mummy", "big boys don't cry", "don't be a baby"
12. **Neglect:** failing to recognise and/or comfort a distressed child and persisting with an activity regardless

These situations might occur in any type of lesson, in any type of swim school, with a learner of any age. It is these and related situations where subjective interpretations of force and trauma might be seen.

For example, one person may feel it is acceptable and non-forceful to take a distressed, resisting child into the water, whereas another may view it as unacceptable and forceful practice.

The decision to take a distressed child in may depend on the motivations of the adult or the meaning an adult makes of the child's resistance and distress. If the adult views the child's resistance as manipulative or oppositional, it may be treated differently and perhaps more forcefully than resistance that is interpreted as genuine fear.

Definitions

In order to become clearer about actions that constitute force and therefore what might constitute acceptable, trauma-informed practices, it can be helpful to review formal definitions.

Merriam-Webster Dictionary (Merriam-Webster, 2018)

- The use of power to impose one's will upon another
- Overcoming resistance by the exertion of strength, power or duress
- Make someone do something against their will
- Violence, compulsion, or constraint exerted upon or against a person or thing

Synonyms and related words

- Coerce, pressure, bully, intimidate, threaten, humiliate

Antonyms

- Consent, agreement, approval, permission, willingness, free-will, non-violent

In aquatic lessons, making a child do something, *anything*, while they are resisting, distressed and non-consensual **constitutes force**.

The meaning an adult might assign to the child's distress and resistance, for example manipulation versus genuine fear, does not justify the use of force.

The good intentions of an adult also do not justify the use of force, nor do they lessen the harmful impacts on the distressed child (Teicher & Samson, 2016).

Forcing a child is a form of violence. It is a severe betrayal of the child's trust and an exploitation of their vulnerability (Giller, 1999).

The current neuroscientific evidence base does not support the use of force as an appropriate teaching practice in aquatic lessons of any kind with learners of any age, in any activity. The use of force also contravenes

- the Position Statement on the Rights of the Infant by the World Association Infant Mental Health Association (World Association Infant Mental Health, 2016)
- the UN Convention on the Rights of the Child in Early Childhood (United Nations Committee on the Rights of the Child, 2005)
- the National Principles for Child Safe Organisations (Australian Human Rights Commission, 2018)

The Impact of Using Force on a Child

When a child is forced, there are many evidence-based potentially harmful physiological, psychological and developmental impacts.

- The child's arousal/stress level rapidly escalates (Refer to Stages of Arousal below)
- The child's feelings of safety and trust are severely compromised and may be entirely destroyed
- The child's feelings of helplessness, powerlessness, fear, shame and rage increase
- The child learns that people are not safe and cannot be trusted
- The child learns that their feelings don't matter, are silly or wrong
- The child learns that *they* don't matter, are silly or wrong
- The child learns that people can do things to their body without their consent, especially adults
- The child learns that it is appropriate to respond non-compassionately, impatiently and even angrily to others in distress
- Learned helplessness can become a default life-long coping strategy for children who are repeatedly forced
- Regular exposure to highly stressful situations, especially at the hands of another, may result in permanent alterations to the child's brain architecture and stress coping systems as a result of toxic levels of stress hormones
- The child can develop a default defense strategy to situations of perceived danger, and with

repeated stressors will slip into that state more easily

- Trauma can develop

Trauma can be defined as:

- The emotional, psychological and physiological residue left over from heightened stress that accompanies experiences of threat, violence and life-challenging events as perceived by the individual (Thomas, 2019)
- The impact of any negative life event that occurs in a position of relative helplessness (Scaer, 2001; Scaer, 2006)
- Arising from single or repeated adverse events that threaten to overwhelm a person's ability to cope. When trauma is repeated and extreme, occurs over a long time, or is perpetrated in childhood by caregivers it is called complex trauma (Dr Cathy Kezelman; President Blue Knot Foundation, 2014)

Stages of Autonomic Arousal

At the optimal level of arousal, a child is socially engaged, interactive with others and the environment, making eye contact, showing facial expression, and is a relaxed and willing participant. In this state of arousal, learning is possible. The experience is joyful, free of force and the potential for trauma (overwhelming stress) and is associated with the pituitary neuropeptides of oxytocin and vasopressin. The child is within their window of tolerance and information can be integrated (Siegel, 1999).

When a threat of any kind is detected by the amygdala, a distress signal is instantaneously sent to the hypothalamus. The hypothalamus acts as the command centre and communicates with the rest of the body through the autonomic nervous system (ANS) which controls the involuntary functions of the body such as breathing, blood pressure, heartbeat, and the dilation or constriction of key blood vessels and small airways in the lungs called bronchioles (Harvard Health Publishing Harvard Medical School, 2020)

The term 'neuroception' was developed by Dr Stephen Porges (Porges, 2004, 2011) to describe the capacity of the nervous system to detect threat at an unconscious level.

The ANS will automatically respond according to the perceived level of threat and according to Jackson's Theory of Dissolution (Macdonald Critchely; Eileen A. Critchley, 1998) and Porges Polyvagal Theory (Porges, 1995). "The higher nervous system arrangements inhibit (or control) the lower, and thus, when the higher are suddenly rendered functionless, the lower rise in activity" (Porges, 2009).

The Polyvagal Theory/System (Porges, 1995) describes three functionally different branches of the vagus or 10th cranial nerve. The branches of the vagal nerve mediate different automatic evolutionary

stress or defense responses in humans. Each response is associated with a different set of physiological and behavioural responses.

The three responses are automatically, biologically and unconsciously recruited, generally in hierarchical order from the most recently evolved, to the most primitive, according to escalating arousal and perceived level of threat. If the response strategy recruited is ineffective or has proven ineffective in the past as determined by the amygdala, the ANS will switch to another. It is common to see children under stress switch rapidly between defensive responses as the nervous system attempts to find safety.

These three biologically driven defense response strategies are

1. The Social Engagement System (Human Brain)
2. The Flight / Fight Response (Mammalian Brain)
3. The Dissociated Freeze / Faint Response (Reptilian Brain)

1. Social Engagement System

The social engagement system is the most recently evolved level of the 3-tiered defense hierarchy. It is found in humans only and is mediated by the parasympathetic myelinated ventral vagal that goes from the eyes to the heart and the ears to the heart.

When the child detects threat, the defense system is immediately activated, setting in motion a cascade of biochemical and physiological changes that compromise and/or entirely disable the child's capacity to engage in social learning. This means that the child's level of arousal is outside their window of tolerance, and learning is not being integrated (Siegel, 1999).

Feelings of threat and danger trigger the release of stress hormones, adrenaline (epinephrine), and glucose among others. This is the moment when first signs of resistance and distress often become visible, even if subtle.

The social engagement system may then be automatically recruited by the ANS as the first line of defense in order to restore safety. This is generally demonstrated by the child reaching out in some way to a perceived safe person, usually the parent or primary attachment figure, through physical and vocal gestures in order to seek comfort and safety.

The child may express their distress through hesitation, caution, wanting to show you something else, vocalisation including words, raised voice pitch, frowning, shrugging shoulders, tensing body, turning away from the threat toward a safe person, reaching out with hands toward safe person, attempting to make eye contact with safe person, shaking head to say no, crying.

The child's heart rate elevates, pupils dilate, auditory sensitivity often develops, and the facial expression is of anxiety, worry and fear.

If the child's needs for safety are met with compassion, warmth, gentle physical contact, caring eyes and a soft, melodious voice, the child's eye-heart and ear-heart vagal connection will help calm the child. Oxytocin and endorphins will be released and the body will gradually return to the optimal state of perceived safety and arousal so as to engage in social learning.

This process is often referred to as co-regulation. For further detail, refer to the Strategies Section on Page 9.

2. The Flight / Flight Response – Defensive Response Strategy 2

If the social engagement system does not alleviate the threat, or makes it worse due to the misattuned, invalidating social responses of those from whom the child is seeking safety, arousal and stress hormone levels escalate and the ANS may recruit the fight/flight defense response (Moore et al., 2001).

The fight/flight response is common to all mammals and accessed by dropping down a level in the evolutionary hierarchy. It is mediated by the sympathetic nervous system and associated with situations of perceived severe danger, which can include misattuned social responses, often experienced as abandonment.

This defence strategy is a traumatic response and is characterised by panic, fear and rage leading to increased mobilisation either toward or away from the source of threat. It is a state of hyperarousal, hypervigilance, and indicates distress outside the child's window of tolerance (Siegel, 1999). The child may also experience flashbacks and intrusive imagery.

A child in this state is experiencing toxic levels of stress and will display frantic efforts to find safety through fighting with or trying to run from the threat.

Expressions of distress may include distraught crying, screaming, kicking, hitting, pinching, biting, flapping arms, trying to push or run away, clinging to the person or a large object such as the platform or poolside, back arching, hands behind head, pulling at hair or ears, looking away, fists clenched.

The child's brain is flooded with toxic levels of stress hormones following activation of the HPA (hypothalamic-pituitary-adrenal) axis. The hypothalamus releases corticotropin-releasing hormone (CRH), which travels to the pituitary gland, triggering the release of adrenocorticotropic hormone (ACTH). This hormone then travels to the adrenal glands, prompting them to release cortisol. Breathing rate, heart rate and oxygen circulation increase, pupils dilate and the body shakes (Harvard Health Publishing Harvard Medical School, 2020). This process happens instantaneously and automatically.

Misattuned responses from adults such as ignoring the distress or scolding it, are an additional severe stressor because the source of safety has now also become a further source of harm, essentially leaving the child abandoned at a time of intense need (Moore et al., 2001; Tronick et al., 1978).

A child in the defensive state of flight / flight is unable to engage in social learning, and cognitive processes have become disorganised. The child needs immediate emotional support from the parent or primary attachment figure present. Support may take the form of, withdrawal from the terrifying situation, hugging closely, face to face contact, caring eyes, warm facial expression, gentle voice, humming, stroking and rocking so as to activate the parasympathetic nervous system and calm the stress response.

It is important to note, however that cortisol levels peak about 20 minutes after the perceived threat subsides (Tronick et al., 1978). This means that the child's internal state is still in a heightened level of activation even if the outward expression of distress has subsided.

If the child's frantic efforts to fight or flee are unsuccessful, the ANS will initiate the third defensive state known as the dissociated freeze response.

3. Dissociated Freeze / Faint – Defensive Response Strategy 3

The dissociated freeze / faint defensive response is the most primitive defence response system. It is found in reptiles and turtles, and mediated by the dorsal vagal nerve of the parasympathetic nervous system.

This response is automatically and unconsciously activated when the more evolved defence strategies described above have failed or are deemed unsafe. This is a state of hypoarousal and involves immobilisation as the final line of defence against impending death when the situation is deemed inescapable. It indicates severe trauma and is potentially the most dangerous of all responses.

In this state the body releases endorphins and other numbing chemicals to reduce heart rate, body temperature and muscle tone.

A child in this state tends to avoid eye contact, often looking down and/or away to the side, has flat facial expression and intonation, seems drowsy, sleepy and may yawn, appears calm, relaxed, limp, (alternatively, may shake or quiver), does not seem to be aware of what is happening around them, does not seem to hear the human voice, may be compliant and robotic as if a shell, may have amnesia, may defaecate (Scaer, 2001). This is a severe trauma response. The child is outside their window of tolerance, (Siegel, 1999) and cannot engage in social learning or cognitive processes.

Apparent Calm Versus Actual Calm

It is very important to recognise the difference between the **apparent** calm of a child in the dissociated freeze / faint defensive state and the **actual** calm of a child not in distress (Frances S. Waters, 2016; Scaer, 2001).

The child that appears calm without distress will be socially engaged, making eye contact, responsive to others, interactive with the environment, curious, joyful and connected with optimal body tension that is

neither limp nor overly tense. These are the indicators of a child operating within their window of tolerance and being at an optimal level of autonomic nervous system (ANS) arousal.

The child that appears calm in a dissociated freeze/collapse defensive state does not engage socially or with the environment, may seem robotic or drowsy, has flat expression, no joy, avoids eye contact, seems disconnected, does not seem to hear you or feel you and may have poor muscle tone. These are signs the child is outside their window of tolerance and severely distressed.

“Children are often unable to fight or flee. This makes them more likely freeze or dissociate. The younger the child, the more likely they will dissociate in response to trauma. The process of dissociation enables them to divide their experience. This is a protective ‘survival’ response to being overwhelmed. The child can then separate aspects of the experience from their awareness” (Blue Knot Foundation, 2021)

Longer Term Impacts

If a child’s stress systems are repeatedly activated without the successful recruitment of the social engagement system, a child’s ANS may develop a preference for accessing the traumatic responses of fight, flight and/or freeze. In particular the dissociated freeze response may become a hardwired pathway to provide relief and safety for the child whose world is perceived as increasingly unsafe (Australian Childhood Foundation, 2011).

Over time, repeated adverse childhood experiences may decrease the child’s capacity to access their social engagement system. Healthy development of the child’s social, emotional, self regulation, behavioural and cognitive skills is therefore negatively impacted, setting the foundation for lifelong difficulties in learning, behaviour, relationships, physical and mental health (Collector, 2020; Felitti et al., 1998).

Factors to Consider When Responding to a Child in Distress

It can sometimes be challenging to know how to respond when a child displays signs of resistance and distress in aquatic lessons. Even with the best of intentions, there are a number of factors that can get in the way of being able to respond without resorting to the use of forceful practices (Daniel A. Hughes; Jonathan Baylin, 2012)

These include

- the influence of one’s own childhood experiences and trauma history
- one’s own current life stressors
- one’s own knowledge gaps
- unhelpful parent responses at the pool, sometimes due to parental trauma/PTSD
- insufficient staff at the pool to assist
- the way one is feeling on the day

These factors and others can negatively impact one's capacity to respond to a child's distress with patience, compassion, professionalism and without inadvertently resorting to the use of force. In other words, to respond in a **trauma-informed manner**.

Being aware of and seeking support for personal issues and stressors is important for wellbeing in general and has a flow on effect to how one relates and responds to young children and their parents in aquatic lessons. In addition, knowing what to do when a child or parent is distressed in a lesson is important so as to avoid defaulting to force.

Below are some strategies that can help ease a child's distress significantly. These scientifically valid strategies are based on the application of Porges's Polyvagal Theory (PVT) (Australian Childhood Foundation, 2011).

Most distressed children seek comfort from their parent or the key attachment figure with them at the pool that day, for example Grandma, even if that figure may appear to be responding in unhelpful ways. This is a natural and normal response for a child and is not to be denied. To deny the child access to the key parent figure in times of distress is a form of force. If the parent is responding in ways that are abusive or violent toward the child then the child must be protected from such a situation, however, generally the parent can be soothed and the situation quickly desescalated.

Providing information for parents on how the swim school responds to a child in distress can be very helpful along with guidance on how to respond if their child becomes distressed. It can be helpful to provide such information at the time of enrolment and remind parents periodically. The modelling of these practices by staff at the pool will further guide parents in this regard.

Helpful Strategies for Responding to a Child in Distress Based on the Neuroscience of Safety and Optimal Arousal (Australian Childhood Foundation, 2011)

- Stop and step back from whatever is causing the distress and resistance. Give the child space to regain a sense of control over their environment and body.
- Provide/allow comfort from the key attachment figure; offer a soft melodious voice, humming, singing, reassurance, eye contact, warm facial expression, skin to skin contact, hugging, gentle touch, lightly stroking skin, rocking back and forth. These comfort the child by activating the ventral vagal of the parasympathetic nervous system.
- "Name it to tame it" (Seigal, 2012). For slightly older children, letting the child know you see their distress by putting age-appropriate, soothing words to it, for example "it's ok". "you don't want to do this right now", "we can stop", "that's a bit scary" "you're feeling sad", "you'd like to sit here for a while", "you're a bit worried". This is not giving in to the child or letting them have their way. This is responding to a child's distress without the use of force and helps calm the

child. It is part of coregulation and teaches the child how to regulate themselves. It builds the child's feelings of safety and trust and helps reduce hyper (over) or hypo (under) arousal.

- Wrap a towel around the child for warmth if shivering. In addition to providing warmth, the weight of the towel can be of comfort, as can the softness of the fabric against the skin.
- Give time for the child to calm down and for stress hormone levels to reduce.
- Be guided by the child for readiness to re-engage. If the child has been looking away from the teacher or class at the height of distress, you will see them turn to visually re-engage when feeling safer.
- When ready and with support of key attachment figure, re-engage with the environment in a playful, curious way and at a distance that is emotionally safe and within the child's window of tolerance. Helpful sentence starters with a verbal child to encourage (not force) re-engagement can include, "perhaps we could", "maybe we could", "I wonder", "what could we", "how could we", "which one", "what might we". Using the word "we" is comforting and supportive.
- When ready and from a safe distance with support of key attachment figure, engage with instructor and/or class. Allow the child to lead the way. Most distressed children will indicate their desire to rejoin a class or activity in a surprisingly short amount of time when they have been soothed and respected in the ways described above.
- For the child that has become so distressed as to have activated the dissociate freeze response, the above strategies are still appropriate. Close physical contact, ideally skin to skin, hugging and rocking are generally the most helpful initially and a soft melodious voice, particularly humming or soft singing. Although the child may not seem able to hear the voice initially, they will feel the vibration which is why humming or soft singing can be particularly effective.
- Take time and make eye contact once the child seeks this. Soon the child will regain conscious awareness of the environment and indicate interest in reconnecting from a safer distance.
- If any strategy is unhelpful for the child and escalates the distress, stop and try something else.

Unhelpful Strategies for Responding to a Child in Distress

The following strategies are at best unhelpful and at worst, constitute force. They will usually result in escalation of the child's distress and if carried out by the teacher or a swim school staff member, model unhelpful and forceful practices to the parent.

- Harsh voice and/or stern facial expression, eye rolling, etc

- Isolation or restraint of any kind
- Scolding, pressuring, threatening, forcing, punishing, shaming. For example saying things like, “everyone else is doing it”, “be a big boy”, “stop being so silly”, “if you don’t...then”
- Denying the child access to their parent or primary attachment figure present. This includes forced entry without the parent in transition classes or sending the parent out of sight entirely
- Attempting to reason with the distressed child. For example; “It’s not that bad”, “you’ve done it before”, “it won’t hurt you”. This is a form of shaming, invalidation and pressure, and will often escalate the child’s defensive responses. Also when the child is either hyper or hypo aroused, cognitive processes are compromised and since reasoning is a cognitive activity, it becomes futile.

Please be aware that sometimes a distressed child may appear to comply to these unhelpful strategies albeit with some concern, rigidity and unhappiness. You may feel you have “won” with the child in getting them to do what you wanted. However this is a dangerous situation as the compliance is likely to be a fear-based compliance, and part of a child’s attempt to stay safe through the submit/fawn response. The fawn response is proposed as an alternative mobilised stress response to fight or flight in order to optimise safety (Walker, 2013).

It does not necessarily indicate a happy, willing, connected child in the optimal state of arousal for social, integrated learning and organised cognitive processes. Although seeming compliant and subdued in the moment, feelings of inner rage may develop within the child which may be later expressed (externalised), or alternatively they may be internalised, observable as a flat, depressed mood or anxiety.

Parent and Child Lesson

In the parent and child type lesson, teaching and soothing the child generally takes place through the parent. If the child becomes distressed for any reason, the parent often becomes distressed too. Sometimes parents feel pressure to keep up in the lesson and for their child to perform. This can lead to a parent ignoring, dismissing, shaming or scolding their child’s distress. In such situations, the teacher can assist greatly by reassuring the parent and assisting them in knowing how to respond to their child’s distress in the lesson. Shame reduction for the parent is very important to help them prioritise the needs of their child over performance peer pressure from the class.

The helpful and unhelpful strategies above are all relevant and can sometimes be more easily implemented than with an older child whose parent is now on the pool deck. As previously mentioned, giving written information and education to parents ahead of time can make a positive difference to how everyone responds to a child in a moment of distress.

Responsibility of Teachers and Swim Schools: First Do No Harm – Hippocratic Oath

Ultimately, it is the responsibility of teachers and swim school staff to, First Do No Harm. It is important to recognise the signs of resistance and distress in a child in lessons and immediately stop the action or activity that may be the cause of the distress. The child will learn and progress optimally once soothed and comforted in a way that meets their needs and the parent can be supported in knowing how to best respond to their child's distress. Investing in staff and parent education benefits everyone and helps ensure no child is inadvertently harmed in aquatic lessons of any kind.

Three Common Myths about Force and Trauma

Myth 1: Depending on the cause or reason for the upset, it is acceptable to force a child to continue with a distressing activity during the lesson.

False

Force is force. The use of force and its harmful impacts on a child cannot be justified or minimised by the apparent cause of the child's resistance, the meaning an adult makes of it or intent of the person using force.

Myth 2: The most traumatising situations are those involving natural disasters and accidents.

False

Research shows that stressors deliberately inflicted by people cause the deepest wounds and are the most traumatising. For example it is harder to tolerate the experience of being pushed under water by someone you trust as opposed to the experience of slipping under water on one's own. Being harmed by another is a significant interpersonal betrayal and abuse. The worst situation is when the injury is caused in a relationship with a person on whom the one harmed is dependent; most specifically a parent-child relationship (Giller, 1999). More recent research suggests the negative impacts of interpersonal harm are similar whether the cause is intentional or incidental (Teicher & Samson, 2016).

Myth 3: If the parent wants you to force their child into the water or to do any other activity, it is acceptable to force the child.

False

It is important to support the parent through education and emotional assistance to better understand how a non-forceful approach benefits their child's progress at lessons and their overall wellbeing.

Peer Review

This Paper has been peer reviewed by

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