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Sources of Self-Efficacy in Springboard and Highboard Diving: A Qualitative Investigation

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Abstract

Self-efficacy has been linked with enhanced sports performance and has shown to have a mediating effect on stress. The purpose of this study was to explore the use of self-efficacy as well as the sources and influences on self-efficacy beliefs in competitive springboard and highboard divers. Participants were two adult (M Age = 39.5 years) and ten adolescent divers (M Age = 14.5 years) with an average of four years experience and were required to participate in semi-structured focus groups. Each focus group consisted of 6 participants; allocation to focus groups was based on convenience for the participant. Transcripts were analysed through deductive reasoning, nine first order theme emerged through the data analysis process; preparatory skills, family influences, coach influences, peer influences, competition, emotions, imaginary barriers, watching diving, and memories. These findings suggest that the effects of physiological and emotional reactions are influential in the development of divers perceptions, and suggest the use of self-efficacy theory as a mediator of these effects.

Keywords:

Self-efficacy, diving, qualitative, adolescence

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Dr Jeff Huber, a leading expert in diving psychology once said ‘mental challenges are the most formidable obstacles divers confront’ (Huber, 2016, p223). Self-efficacy theory can help achieve better understanding of these personal challenges and allow coaches and divers to work towards better overall performance.

Self-efficacy beliefs have been described as "people's judgements of their capabilities to organise and execute courses of action required to attain a desired outcome" (Bandura, 1997, p.3). Self-efficacy is an integral part of Bandura's (1977) social learning theory, and refers to individuals perceptions about their ability to perform a certain task or control their behaviour, motivations or environment. Self-efficacy is important in sports performance, with current literature supporting the link between self-efficacy and performance (Corrado et al., 2015). A meta-analysis conducted by Stizmann and Ely (2011) found a positive correlation between self-efficacy and performance in 93% of studies included.

Sources of Self-Efficacy

Bandura (1977) suggested four factors that influence self-efficacy: direct experience, vicarious experience, social persuasion and physiological and affective states. Nevertheless more contemporary sources have suggested that physiological and affective states should be further divided into two distinct sources: physiological states, and emotional states (Feltz et al., 2008).

Bandura (1997) suggested mastery experiences to be the most important source influencing efficacy beliefs, this is because the beliefs derived from mastery experiences are based upon the individuals' personal experience. Mastery experience refers to the confidence we gain in our ability following previous success and the doubt we suffer following failure. In the sport domain several researchers have reported that positive mastery experiences through practice and previous exposure to similar situations significantly increases self-efficacy (Munroe-Chandler, Hall, & Hall, 2014; Valiante & Morris, 2013). Findings suggest mastery experience have a greater effect on self-efficacy in the earlier stages of a sporting career when the success of future performance is still in doubt (Feltz, 1988). These findings suggest

early in an athletes career may be the time to address the problem rather than focusing purely on high-level athletes. While in the closely linked physical activity domain mastery experiences have been found to be a strong predictor of self-efficacy and future behaviour in physical activity (McAuley et al., 2007; Netz, & Raviv, 2004), these findings were supported in longitudinal and cross-sectional designs.

Vicarious experience, also known as modelling or observational learning, refers to the belief in ones ability gained from watching and copying others or imagining oneself performing an action, either in person or indirect methods such as videos (Bandura, 1997). The five main forms vicarious experience is reported to take are: instructional information such as watching an experienced athlete model the skill; the modelling of coping strategies; social comparison by comparing ability or physique; visual media such as televised competitions; and self-imagery. Positive effects of vicarious experiences on self-efficacy have been reported in many sports including: volleyball (Barzouka, Bergeles & Hatziharistos, 2007); cricket (Hayes et al., 2006); and football (Horn, Williams, & Scott, 2002). Vicarious experiences have also been reported to have greater effect on younger athletes than older athletes (Law, & Hall, 2009). Self-efficacy gained through the social comparison aspect of vicarious experiences can also be influenced by the athlete's perceptions of their opponent. For example, if an opponent is injured the athletes self-efficacy may improve as the chance of success is perceived as greater (Weinberg, Gould, & Jackson, 1979). Research has also suggested than self-imagery in preparation for competition increases efficacy beliefs in the competition setting (Callow, Hardy, & Hall, 2001).

Social persuasion refers to the positive or negative effects gained from others, such as teammates, coaches or audiences. Social persuasion is sometimes referred to as verbal persuasion, but in this study the term social persuasion will also encompass

non-verbal communication such as body language. Self-efficacy beliefs gained through social persuasion can be influenced in three main ways: feedback given by coaches, parents or other people; the perception of others opinions; and self-talk (Bandura, 1997). Efficacy beliefs gained through social persuasion are one reason used to explain the 'home advantage' seen in many sports (Gomez, Pollard, & Luis-Pascual, 2011). Negative coaching practices and negative feedback have also been found to not only lower athlete self-efficacy but have a negative effect on performance (Stirling, & Kerr, 2013). Contemporary evidence supports the view that positive feedback increases self-efficacy beliefs while negative feedback decreases self-efficacy beliefs (Woodgate, & Brawley, 2008).

The fourth influence on self-efficacy beliefs in Bandura's (1977) model of self-efficacy is physiological and affective states. The actual effect of the stimuli is not as relevant as how these stimuli are perceived and interpreted (Bandura, 1977). In Bandura's (1977) social cognitive theory, athletes with higher self-efficacy would interpret the somatic responses to a sporting environment as energizing or being 'psyched up'. Nevertheless athletes with lower self-efficacy beliefs would interpret the same somatic responses as signs of nervousness and inability to perform the task. More recent research has suggested this source should be further divided into two separate sources: physiological states and emotional states (Feltz et al., 2008). Physiological states refers to the effect of physical indicators on self-efficacy beliefs, such as heart rate, fatigue and pain, whereas emotional states refers to the effect of emotion on self-efficacy beliefs, for example fear, joy or self-doubt (Feltz et al., 2008). Research has suggested that the perceptions of physical symptoms have an effect on the development of self-efficacy beliefs (Feltz, & Mugno, 1983). There is also a body of research supporting the influential effects of emotional state on self-

efficacy, that positive emotional states increase self-efficacy beliefs and negative emotional states decrease self-efficacy beliefs (Kavanagh, & Bower, 1985). These findings have also been reported in sports such as wheelchair road racing (Martin, 2002) and basketball (Mack, & Stephens, 2000).

Self-Efficacy and Development

The literature demonstrates the effect of self-efficacy on athlete performance. Yet a second body of literature highlights the potential mediating effects of self-efficacy on the physical and psychological stresses of high performance sport in youth athletes (Gustafsson, & Skoog, 2013). Participation in sport has been shown to have a positive effect on mental health and wellbeing in adolescence (Garber et al., 2011). Recent research has begun to highlight the potential negative effects of high-level sport participation on younger athletes. Jayanthi et al. (2013) emphasised the risks of early specialisation, which refers to the intense concentration on one sport at an early age. The risks associated with early specialisation include: injury, increased psychological stress and drop out from the sport. Current research also suggests that early specialisation and intense training in pre-pubescent athletes does not ensure elite success (Jayanthi et al., 2013). The effects of early specialisation have been seen in several sports, for example, in pre-pubescent rhythmic gymnasts involved in intense training reported lower levels of health and sports enjoyment (Law, Cote, & Ericsson, 2008). In addition, psychological fatigue was reported as one of the main reason for sports dropout in Russian elite swimmers (Barynina et al., 1992). Recent research has begun to investigate the influence of self-efficacy about athlete development in sport. Cascio et al. (2014) reported that self-efficacy acted as a protective factor and facilitator to coping with psychological stress in teachers. These new findings open up

the possibilities of developing athletes' self-efficacy as a way of protecting against the negative effects of early specialisation.

Springboard and Highboard Diving

Springboard and highboard diving is a highly competitive, cognitively complex sport, involving aerial skills performed to exact precision followed by a splash-less entry into water (Huber, 2016). Similar to many acrobatic sports, divers are expected to reach their competitive peak at a young age. The average age for elite male divers is 22 years and for elite female divers is it 20 years old (British Diving, 2016). Nevertheless children as young as 13 years old can be competing at international elite level and national competitive diving start at the age of eight years old (Amateur Swimming Association, 2016). Competitive diving has an organised skill level within competitions, the first level is known as 'skills', is the first national level competition available for children between the ages of 8 – 16 years which involves simple skills but with the expectation of excellent performance. 'Skills' is followed by 'age groups', which is the second level of national level competition for children between the ages of 10 – 18 years, this level involves the execution of much more complicated skills but at an average standard. 'Age groups' is followed by 'junior elite', which is where children aged 12 – 18 years begin to compete at an international level, competing complex skills to a very high standard. Athletes who show podium potential will move into 'senior elite' and work towards events such as the Commonwealth Games and the Olympic Games. Divers who do not reach the 'senior' standard after the age of 18 years or take up diving later in life often go on to 'masters' level diving, which is available at national level from 16 years old and international level from 25 years old (British Diving, 2016). The levels of expectation and low competitive age is likely to put young divers under a lot of pressure and

stress at a very young age, a statement by the American Medical Association for Sports Medicine has heighted similar concerns across sport (DiFiori et al., 2014).

Psychological set-backs are not rare within diving. Greg Louganis the 4 time Olympic gold medallist, often referred to as the best diver in history, has regularly mentioned in interviews and documentaries the difficulties of facing inner demons about his diving (Furjanic, 2014). More recently Great Britain's own Tom Daley has reported to be suffering from lost move syndrome and took a severe set back in his training following a loss of confidence after the London Olympic games (Hart, 2014).

A young demographic group highlights the need for better interventions and training programmes to address the stress and possible long-term self-efficacy issues that may come from exposure to a highly competitive environment at such a young age. Another issue that warrants addressing is the high drop out rate in the teenage years. Many divers at this age begin to struggle with the more difficult skills and lose motivation, causing drop out (British Diving, 2005). As divers progress through their training they inevitably have to address both positive and negative stimuli that affects all sources of self-efficacy.

As self-efficacy has been shown to have a positive effect on sports performance and a mediating effect on stress, it warrants further investigation into the potential uses of self-efficacy theory within a diving context.

Method

Participants

A convenience sample of two adult divers, (M Age = 38 years) and ten adolescent divers, (M Age = 14.5 years) were recruited to participate in this study. Adult participants were all competitive at a masters' level with an average experience level of two years, adolescent participants were competitive at skills and age groups

level with an average experience level of four and a half years. All participants were competing at a regional or national level at the time of the study. Inclusion criteria were set to allow for the investigation into the levels and perceived effects of self-efficacy in competitive divers. The criteria for inclusion included: participants were current competitive divers who had been at a competitive level for at least one year and have previously experienced anxiety, physical or emotional difficulties during competition and skill acquisition.

Procedure

All participants were recruited through a city-based diving club in the North-East of England via email invitation sent from the organisation's head coach. Email contact went to approximately 20 potential participants who met the inclusion criteria. Twelve participants agreed to participate in the study. During the recruitment process the voluntary nature of the study was made clear and participants were given the option to withdraw from the study at any point before, during and up to two weeks after the focus group session.

Two multi-perspective focus groups were conducted with 6 participants. Focus groups were used as the preferred method of data collection as they facilitate group discussion in a supportive environment (Krueger & Casey, 2014). Before the focus group session began participants were asked to fill in demographic information to record their age, gender, level of diving and years of competitive experience. The focus groups lasted between 30-40 minutes. The focus groups were conducted using a semi-structured approach with guideline questions designed to encourage discussion on pre-selected topics. Existing research on the areas of self-efficacy and sports performance were used to design a set of five main questions written using an ideal style and nine prompting questions written in an interpretive style (Llwellyn et al.,

2008; Vealey, 1998; Zelenak, 2010). To account for the lack of knowledge of self-efficacy theory and the age of participants the questions used simple, direct language. The questions focused on the perceived barriers and facilitators to performance within a diving environment. Ethical approval was gained from a University Research Ethics Committee before any participants were contacted.

Data Analysis

The focus groups were recorded using a Dictaphone and transcribed verbatim. The focus groups were conducted and transcribed by the same researcher. To ensure trustworthiness narrative and framework analysis were used to interpret the focus group transcripts from an abductive reasoning standpoint by the researcher and an independent coder (Gale et al., 2013). During the analysis initial coding was written in the margins of the focus group transcripts. Responses were coded into meaning units and similar meaning units were grouped using deductive reasoning. The initial coding methodology was based on the approach in Samson (2014).

The second phase of analysis involved an independent coder, who was familiar with self-efficacy theory but not diving, who coded the transcriptions (Auer-Srnka & Koeszegi, 2007). The independent coder was not privy to the initial researchers interpretations, in an attempt to reduce researcher bias. Interobserver agreement was 93%, which was calculated by directly comparing both researchers coding. A discussion between the researcher and the independent coder was conducted to reach a unanimous decision about the remaining 7% of analysis.

Results

Nine main themes were identified during the analysis: preparatory skills, family influences, coach influences, peer influences, competition, emotions, imaginary barriers, watching diving, and memories. Three lower order themes were

also highlighted: imagery/self-talk, control, and mood. Themes were identified through deductive reasoning using two major methods of theme identification: repetition, phrases or opinions that were consistently mentioned and indigenous categorisation, identifying phrases or words specific to the situation or sub-culture (Ryan & Bernard, 2003). Higher order themes were identified using both methods where as lower order themes were low in repetition, thus less descriptive of the wider diving community. The themes highlighted in the analysis will form the basis of the following discussion.

Preparatory skills

Some participants highlighted that the preparatory skills they perform before a new dive provide them with a strong confidence base and assurance that they are able to perform the next step. For example in focus group one participant felt that "I've got to do everything in a certain order … I've got to start with the basic and work up to the slightly less basic". Nevertheless an alternative view on preparatory skills, was offered by some participants in focus group one, suggesting they act as a safe zone that gets more and more difficult to move on from:

> If you do too many just back summersaults you're programmed to come out and then when you actually go for the back 1 ½ it's actually different because you kind of need to hold on for a bit where as you're not doing that with the single summersault.

Several other participants in similar ways expressed this different use of preparatory skills as an encouragement and a safety net. Nevertheles over all preparatory skills were seen as a positive facilitator for diving performance.

Family influence

Family influence was apparent during the discussions. The difference in influence from positive family input and negative family input was clear. Some participants mentioned the negative influenceof comments and actions from their families about their diving performance and motivation to attempt new skills. A participant in focus group one gave an example of a common interaction with his/her? parents about diving:

> Our parents think that they are some form of Olympic coaches, I'm not even kidding. They think they know everything, they are like ooh that wasn't very good, that one was a bit over, that would only be a four, it really irritates you. So you don't do it even more so they can't comment.

Several participants mentioned a similar set of circumstances relating to parents taking a coaching role; most participants saw this as a negative effect on their diving and their relationship with their parents. Other participants highlighted the positive comments and encouragement they got from their families and how this input made them feel better about their diving:

> When I'm scared to do a dive I always look over to me mam when she's there or me dad when he's there, and they always give me the thumbs up saying you can do it, so that really helps us.

Reassuringly other participants also mentioned the positive input of parental feedback, with many mentioning non-verbal feedback such as clapping or smiling having a positive effect on their diving and their willingness to try a new dive.

Coach influence

Coach influence emerged from the focus groups as the influence the coaching staff had on a divers ability, belief, motivation and mood in and out of the diving environment. The participants included in the focus groups had more positive points

about their coaching staff than negative comments. The of coach influence seen in the current study may not be the case across the wider diving community, as all the participants included in the current study were from the same clubs and only spoke of their current coaching staff. Most comments about coaching influence highlighted the positive effects of the coaches' support and skill. Participants mentioned the support their coach offers during skill acquisition "When he's calling me out it makes me feel better … you've just got to trust him". When talking about their trust in their coach one participant said:

> It is, completely, but what else do I have to go off, and he definitely wouldn't ask me to do something he really didn't think I was going to do because it's not in his interests for me to get hurt the same as it's not in my interests to get hurt.

Positive influence of the coach on skill acquisition was a common theme; many participants mentioned that their coach has a big influence on their approach to attempting new or frightening skills. There were limited negative comments about coaching staff, but they seemed to focus on the pressure that coaches put on the divers. A participant gave an example of an interaction with a coach that he felt was negative:

> He's trying to push you as hard as he can but it's really nerve racking. You feel like, will he go off it at me if I don't do it or will he be ok and be like you will get it next time.

A few participants did mention they felt pressure from their coaches but most did not see this as having a negative influence on their diving; some even mentioned a specific tell that their coach had when his mood was changing, "It's like when he sits on his step' and another participant added 'that's never good", which provided a level of amusement for the divers.

Peer influence

The affect of the divers' peers on the diver's overall enjoyment and performance in diving became apparent quite quickly during the discussions. Many participants had similar positive and negative opinions. Positive comments often centred on the support and camaraderie of the team environment:

> A lot of my team mates have a positive effect because its obviously support and it keeps you going, especially with people your own age because you can relate to them more, because they know what you are going through socially and at school and that.

The positive influence of peers was evident in the comments from participants, with many mentioning positive peer feedback both verbal, such as cheering and nice comments and non-verbal, clapping and splashing the water. There were a few negative comments about peer influence but the points raised mainly were about teammate's moods and negative verbal comments. One participant mentioned an example of a teammate's reaction "When they are in a bad mood they are just like woo (sarcastic cheer) and really like depressed". The majority of comments about peer influence were positive, however the club featured in the focus groups is not a highly competitive centre of excellence. Also all participants were teammates and this may have affected what the participants were willing to share.

Competition

Some comments were made about the competitive and comparative environment within diving. The comments mainly surrounded being compared with each other and constantly competing to be number one, in competitions and training. Several participants commented on the effect that the highly competitive environment of diving had their diving performance and approach to training. Some participants

mentioned the detrimental effect of a competitive environment, “If they are doing all the dives you wish you could do it can sometimes put you down because you feel like you will never be able to do that”. Yet other participants highlighted the motivational aspects of a highly competitive training environment, “The fact is I really wanted to do it because everyone else was doing it”. The effect of motivation to be better than peers seemed to be common to several participants, with participants mentioning the positive and negative influence of trying to compete with teammates and competitors.

Emotions

Emotions were mentioned by most of the participants at some point in the discussion. There were several emotions that were more common than others but most participants recognised that their emotional state had a noticeable effect on their diving performance and enjoyment. Fear was a prolific emotion felt by most participants about their diving, one participant illustrated their interpretation of fear, “the biggest thing of learning a new dive that stops me is the fear factor obviously, and it’s just the fear of splatting and hurting yourself”. Participants mentioned similar emotions such as anxiety, panic, and self-doubt; these emotions seemed to go hand in hand with fear but were described as an intense feeling that stopped progression. One participant recounted a memory of extreme panic “I think I’m going to do the dive until I get onto the board and then I have a panic attack and don’t do it”. Self-doubt also seemed to be intensified to feelings of self-loathing and tears. A different participant mentioned feelings of self-loathing when discussing a long-standing difficulty with a particular dive “I feel as if I can’t do anything when I can’t do that particular dive”. Although the majority of the discussion revolved around negative emotion there were some positive emotions mentioned including courage and joy. An example was given by participants in focus group two centred around the feeling of

joy after a successful dive “When you’ve done it, the achievement, when you go home you feel happy and positive”. Overall emotional responses were highly mentioned by most participants, with a strong connection to skill acquisition.

Imaginary barriers

The mention of imaginary or unexplainable barriers seemed to be prolific among the discussants. Participants seemed to recognise they felt a certain way but could not rationalise why or how those feelings emerged. One participant attempted to describe how they feel when experiencing their imaginary barrier “even if I feel I’m ready to do it there feels like there is a barrier that stops me”. Some participants mentioned the feeling that the imaginary barriers were internal, describing a fracture between the body and mind “I stand there for ages and my body just won’t want me to go”. Whereas other mentioned their feelings that the imaginary barriers were external and not in their control, “It feels like you can’t start you’re hurdle step because you’re stuck to the board”. Imaginary barriers seem to have a particularly profound affect on divers and when recounting the situations they experienced these barriers certain participants became visibly distressed at the memory.

Watching diving

Most participants mentioned watching diving in some form and the effects of this activity on their attitudes and approaches to their diving. Some participants mentioned watching people they admire, such as Olympic champions, and the positive reactions this had on their feelings about their diving. Others mentioned that watching competitions in person or via digital media made them feel that they could achieve the level of performances they were watching. One participant detailed their reaction to watching a recent televised competition:

If I watch a competition, I will be like I'm the new Olympic diver and I can try everything but then realistically when I come to the pool reality hits us and I'm like I'm never going to make it.

The short lived effects of watching diving were apparent by many participants commenting on the positive effect during watching the competition but the effects wearing off by the time the diver got to their training. The short-lasting effects of watching others also changed into negative influences in some participant's experiences, with some participants mentioning their mood dropping when they compared themselves with the divers they were watching. The negative effect of watching others dive seemed to be magnified when the person being observed was an opponent. One participant mentioned the negative affect of watching others of a comparable level, 'I try not to watch other people in competitions because it just makes me feel rubbish'.

Memories

Participants mentioned positive and negative memories having an effect on their diving. One participant recounted a memory held in a positive light, "I can remember when I was doing two-and-a-half off three and I was just thinking you can do it, even if you don't do it, it will just be like falling on a soft pillow with everyone splashing", this memory refers to a time that the participant attempted a dive that was at the top end of his ability. The positive memory gained from this has helped the diver keep themselves motivated to keep pushing forwards. The effect of positive memories is evident when the diver used the same an example in a later discussion, "if you were too scared to do two-and-a-half there is no chance you would try a triple". Yet many participants referred to the detrimental effects of negative experiences on their future progress. Highlighting that past failures made them feels

as if they were unable to move forward. A participant in focus group one explained how their negative memories affected their attempts to improve, “Your mind wants to go for it but your body just won’t let you, because it knows there is an outcome at the end, whether it’s entering well or smacking”.

Imagery

Techniques used to reinforce positive memories and adapt or alter negative memories were an area discussed by a smaller number of the participants. As all the divers came from the same club the techniques used were consistent with those taught by the coaching staff. Imagery is a technique where by the diver imagines the dive in their head from start to finish, visualising the different outcomes and what areas of the dive they need to be more aware of during their performance. To use a diving example, divers must be aware of their surrounding to locate their ‘spot’ the area of the environment they use as a cue for exiting the summersault or twist. The use of imagery seemed to be consistent through the participant, one participant detailed how they used imagery in their training “I watch myself doing the dive in my head and see myself doing it from different angles”.

Control

Control was not mentioned by a large proportion of the participant group but the severity of the reaction to the topic of control and loss of control offered it as an interesting point of investigation. One participant mentioned not being able to explain the processes that they experienced “I don’t know what goes through my head” again this declaration was coupled with nervous body language and difficulty with eye contact. The effect of physical reaction to the discussion of loss of control was evident in all participants who mentioned loss of control as a negative influence on their

diving. On the contrary participants who did not mention loss of control did not present with the same physical reaction.

Mood

Participants mentioned the effect that their mood had on their diving experience, and how it affected their confidence and motivation. Participants mentioned the effects of good moods and bad moods, for example "It depends on what mood you're in, if you're not feeling it at the start you're not going to do it, if you're in a bad mood it's not going to happen". Although this theme was not mentioned by many of the participants, the participants who mentioned the effects of their mood commented with surprising consistency.

Discussion

The current study explored the sources of self-efficacy in diving and if there are particular aspects of self-efficacy theory that divers feel are more influential than others. Twelve experienced competitive divers suggested a wide range of influences on their diving performance in training and competition environments. When the influences mentioned by the participants are compared to Bandura's (1977) sources of self-efficacy there are some obvious parallels. Themes such as family influences, coach influences, peer influences and competition can be easily linked with Bandura's (1977) sources of social persuasion. Divers discussed both the positive effects of social influences such as supportive coaches or healthy competition with peers, and the negative effects of social influence, for example pushy or controlling parents. Preparatory skills, otherwise known as 'lead ups' were identified strongly through the indigenous categorisation analysis. Divers referred to the term 'lead ups' regularly to mean the simpler skills performed as preparation for a more difficult skill. The method of drawing on simple skills and positive memories of performance of simple

skills was a common ways for divers to increase their self-belief about their ability to perform a more difficult skill. All participants were consistent in this area of discussion; suggesting that if the preparatory skills were successful they felt more able to perform the new, more difficult skill. Preparatory skills along with another theme of memories link with Bandura's (1977) theme of mastery experience, as these themes involved a strong element of drawing on positive past experiences and the detrimental effects of negative past experiences. Several divers mentioned gaining confidence in their ability by watching others dive, both peer and professional divers in person and via diving media. The theme of watching divers is similar to Bandura's (1977) theme of vicarious experience, drawing confidence and self-belief from watching and modelling others. Finally the themes of emotions and imaginary barriers draw several parallels with Bandura's (1977) theme of physiological and effective states. In addition the clear distinction between in the discussion between emotions and the more physical reactions to imaginary barriers supports Feltz et al. (2008) proposal to divide the single theme of physiological and affective states into two separate themes: physiological states and emotional states.

The ability to draw clear parallels to research by Bandura (1977) and Feltz & Mugno (1983) provides support for the hypothesis that divers are using self-efficacy beliefs within their training and competition. The current study succeeds in laying the foundations for further research into how self-efficacy can affect performance in diving and also be used as a potential intervention to reduce potential psychological harm to athletes. Although the study provided valuable insight into the use of self-efficacy in diving there were several limitations. The use of a qualitative methodology allowed for a more in depth exploration of divers opinions and feelings however it does not offer as much robustness when it comes to applying the findings to the larger

diving community. The findings of the current study should be generalised with caution, because all the participants came from the same diving club the picture formed by the findings may only apply to the specific environment in which the participants train. The opinions and concerns voiced by these divers may not be the same as divers from different diving environments. The replication of this study with a sample of divers from different clubs, countries and ability levels could provide more robust information on the sources of self-efficacy beliefs involved in diving. Further research from a qualitative standpoint is necessary to allow for generalisation across the diving community. The need for further qualitative research also raises a fundamental question of how self-efficacy is measured, and if existing measures in self-efficacy will be suitable for such a specific sport like diving. Finally, the retrospective nature of the study presented as a limitation in itself, as memories and self-recollection can be distorted over time and by the presence of others, which presents as a concern when relating to accuracy of data. However overall the study was a success by highlighting the use of self-efficacy within the diving environment and opening up opportunities for further research into potential uses for self-efficacy in diving.

Conclusion

In conclusion, the current study aimed to expand the current knowledge of self-efficacy within a diving context and explore how divers use the different sources of self-efficacy within a training and competition environment. The research within the field of self-efficacy in divers is limited, with previous research exploring diving as a novel task and not exploring the influence of diving on self-efficacy in existing divers (Feltz & Mugno, 1983). The current study has begun to address the gap in the current literature. The results of the current study enhance the current body of

literature by providing a detailed insight into the athlete experience within a diving environment, highlighting the potential influences and barriers to performance and outlining potential effects of these influences and barriers on development. Research can build on this knowledge by investigating these effects further in different diving populations.

In addition the current study contributes to the wider field of self-efficacy knowledge by suggesting the influence of the difference sources of self-efficacy many differ to the original model of self-efficacy (Bandura, 1977). Findings of the current study highlighted divers felt social influence and emotion to have a profound effect on their self-efficacy beliefs, and were less concerned about mastery experience or vicarious experience, suggesting a differing order of importance to that of Bandura's (1977) original model. If the influences on the development of self-efficacy beliefs differ from sport to sport it will impact the development and delivery of self-efficacy interventions in applied practise. Further research should investigate the interplay between sources of self-efficacy in a wider sporting context. Moreover, it is crucial that research in this area continues to gain further knowledge into the effects of sport on not only self-efficacy but on child development and wellbeing, in an attempt to future proof the mental health of our up and coming sporting stars.

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