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1 **Assessing Football Coaches' Stressors and**
2 **Coping Mechanisms, During Competition,**
3 **Using a Think Aloud Protocol.**

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ABSTRACT

The aim of the study was to examine the stressors and coping mechanisms of football coaches of underage teams (u18s or below), during competition, utilising Think Aloud. Six coaches (Age: M=27.17, SD=8.82) participated, all of which held some form of coaching accreditation and coached for at least 6 hours per week (M=8.17 hours, SD=1.57). All participants were trained to use Think Aloud and all verbalisations were recorded. Data was transcribed and analysed for potential stressors or coping mechanisms. Stressors experienced during competition for football coaches were related back to player performance, opposition, officiating, coach performance, player welfare and organisation. Coping mechanisms used included problem, emotion, and avoidance focussed strategies. This study displayed that Think Aloud can be used as a measure of stressors and coping mechanisms in coaches. This study provides practical implications for coaches, in that coaches may consider the use of Think Aloud to gain an understanding of their current stress and coping responses and in turn improve their coping responses during competition specific situations.

Key Words: Coaching, Think Aloud, Stress, Coping, Football, Competition

INTRODUCTION

Stressors and how they are consequently coped with, depict a key area of applied sport and coaching research (Thelwell et al., 2007; Whitehead et al., 2016). More specifically within coaching, it is important that we gain a knowledge and understanding of what stressors occur and the subsequent coping mechanisms that are in place. Stress in both the athlete and coach can have a significant impact on performance (Lazarus, 2000). According to Norris et al., (2017), coach stress can have a negative impact on an athlete, highlighting the need for stressors to be further researched within a coaching setting.

The Transactional Model of Stress and Coping (TMSC) (Lazarus and Folkman, 1984) will be used to underpin this research. The model depicts stress and coping instances occurring in a number of stages, the first of which is the primary appraisal. The primary appraisal represents a stage where threat, harm or a challenge must be dealt with (Swettenham et al., 2020; Quine and Pahl, 1991). Following this is the secondary appraisal, where there is an analysis of obtainable resources for coping (Quine and Pahl, 1991). Within athlete research, Swettenham et al., (2020) illustrates positive coping as seeing situations more as challenges rather than threats. Coping can be defined as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). The most widely used coping dimensions are problem-focused, emotion-focused and avoidance coping (Compas et al., 2001; Nicholls & Polman, 2008). Problem-focused coping responses involve an athlete or coach purposely trying to alter the stressful situation by eliminating the stressor (Lazarus & Folkman, 1984), whereas emotion-focused coping involves strategies to help the individual regulate emotional arousal and distress. Finally, avoidance coping consists of behavioural and cognitive efforts to disengage oneself from a stressful event (Kaiseler et al., 2012).

The primary appraisal of the TMSC has been examined in sport and coaching. Such research has provided evidence for the negative psychological effects of coaching, such as self-doubt and anger (Olusoga et al., 2010). These are indicative of the stressors coaching can bring. Further, research has evidenced how a football coach’s stress originated from bad performances, inappropriate training conditions and officiating (Thelwell, et al, 2010), in addition to competition environment and athlete behaviours (Rees, 2011). This suggests that these findings are potential stressors for football coaches. Surujilal and Nguyen (2011) performed a similar approach (mixed methods) in a football based study. The aim was to analyse coach stressors, both on and off the field, within South African football coaches. Findings indicated that stressors such as poor officiating and contract violation were popular within the tested sample. This research encapsulates a range of different stressors that a

1 coach suffers from within a football environment. However, due to the approach taken, their
2 appeared to be a neglect to in-game stressors, which are a paramount source of stress for
3 football coaches (Chroni et al., 2013). Additionally, in basketball, Kelley et al., (1999) found
4 that in non-elite coaches, emotional exhaustion, depersonalisation and a reduced sense of
5 personal accomplishment were the more predominant stressors. This differed from the other
6 studies results, with more of an internal origin of stressors for basketball coaches.

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8 As stress and coping is a transactional process and does not occur in isolation (Lazarus and
9 Folkman, 1984), it is important to consider the coping mechanisms that are employed by
10 coaches when experiencing stressors. Potts et al., (2019) found that the most salient coping
11 mechanisms within coaching involved problem solving, information seeking, self-reliance and
12 seeking support in coaches. Olusoga et al., (2010) also found that elite coaches prioritised
13 psychological skills, planning and the coach-athlete relationship in their coping. Other coping
14 mechanisms that have been reported involved mindfulness training. Longshore and Sachs
15 (2015) examined mindfulness training in coaches as a response to coping with stress, this
16 found that such a tool was effective in terms of lessening anxiety and enhancing emotional
17 stability in coaches. However, these studies did not capture real-time data.

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19 A common theme throughout the majority of these previous studies is a reliance on
20 retrospective methods of data collection (Potts et al., 2019; Olusoga et al., 2010). Capturing
21 stress and coping data from a participant at a later date may be distorted by memory decay
22 or knowledge about the success of the task, which may lead to biased reports (Ericsson and
23 Simon, 1980; Whitehead et al., 2015). Think Aloud offers an alternative method, that
24 eradicates such disadvantages (Ericsson and Simon, 1993). Think Aloud represents a form
25 of verbal reporting, that involve a person verbalising his or her thoughts during the duration of
26 a task (Eccles and Arsal, 2017). This permits information within the short term memory to be
27 captured in real time. Such thoughts and feelings may be forgotten if asked to recall at a later
28 time. Consequently, Think Aloud offers a potential solution to retrospective memory decay or
29 potential bias in reports. Ericsson and Simon (1980) propose three different levels of Think
30 Aloud exist. Level 1 (the expression of inner speech), level 2 (the articulation of thoughts that
31 are not in a direct focus but must be said aloud), level 3 (explanation surrounding certain
32 cognitions and reasons for actions). Nicholls and Polman (2008) demonstrated this method
33 to be effective for data collection within sport in a study with golfers. They used Think Aloud
34 to identify stressors and coping strategies in high performance golfers. Since this study, further
35 research has implemented the use of Think Aloud in sport. . For example, Whitehead, et al.,
36 (2016) has used Think Aloud to identify cognitive differences between higher and lower skilled
37 golfers. In addition, Samson et al., (2017) utilised Think Aloud to assess the in-event

1 cognitions of long-distance runners, which also collected stressors within the study.
2 Whitehead et al., (2018) assessed the cognitions of cyclists over a track of 16.1 kilometres
3 using Think Aloud. Within the study, stressors of the cyclists were gathered. Welsh et al.,
4 (2018) implemented a similar study for long-distance running. Additionally, Think Aloud was
5 also used in a coach-related study (Stephenson et al., 2020), however, this was not stress-
6 related. The study examined a coach's use of Think Aloud during coaching and found benefits
7 such as heightened engagement and awareness. However, the technique does not come
8 without flaws. According to Eccles (2012), descriptions/explanations can occur that are not
9 actually part of the actual thought process. Also, an occurrence called verbal overshadowing
10 can happen. This means that during Think Aloud, the participant can become distracted from
11 actually verbalising their thoughts (Lee et al., 2019; Chin and Schooler, 2008). Stephenson et
12 al., (2020) adds to this, displaying that the coach within this study experienced feelings of
13 anxiety whilst using Think Aloud. Despite these disadvantages, Think Aloud is a solidified
14 method of gathering data concurrently during the completion of a task and capture data such
15 as stressors and coping mechanisms.

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17 Therefore, this study aims to adopt the use of Think Aloud to capture the stressors and coping
18 mechanisms of male football coaches during a competition environment.

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METHODS

Participants

Six male participants took part in the study, all of which coached underage schoolboys league teams and participated in at least 6 hours of coaching per week (M=8.17 hours, SD=1.57). Of the six coaches (Age: M=27.17, SD=8.82), three were licensed (Uefa B license or above) and three were non-licensed (below Uefa B license). Despite this, all 6 coaches had a Football Association of Ireland (FAI) coaching accreditation. Additionally, within the sample all coaches coached on a part-time basis or voluntary basis. Ethical consent was granted from the authors institution and all participants signed a consent form prior to data collection.

Materials

The study took place on the side of football pitches around the Leinster region of Ireland. The coaches would perform normal duties with their own team. The Olympus DM-650 digital recorders gathered real time verbal data from participants during matches. These were placed in the participants' pocket, whilst the microphone was attached to their shirt collar.

Procedure

Approximately 45 minutes before the protocol, participants met with the author and executed a number of specific Think Aloud practice tasks (see Birch and Whitehead, 2019). This familiarised the participants with the Think Aloud process. Participants were instructed to verbalise their thoughts and instructed with the following instructions "please Think Aloud as much as possible, only say what you are thinking at the time, do not try to explain your thoughts". During the initial Think Aloud training tasks, participants were encouraged to ask questions and then clarify their understanding of the use of Think Aloud. All Think Aloud training was conducted within 30-40 minutes of the match situation.

Data Analysis

From each audio recording the first 40 minutes of the football match were taken from each participant. Only 40 minutes was taken as 2 participants were only willing to participate for this long. As a result, the first 40 minutes of each audio was taken to provide consistency. After the data collection process, all audio files were transcribed. NVivo, a qualitative analysis software, was used to analyse the data. The study was informed by a constructivist epistemology, although the authors believe that new knowledge is socially constructed, some of the themes have been generated from the previous knowledge of stress and coping known to the authors (Lazarus and Folkman, 1984; Kaiseler et al., 2012). Therefore, both a deductive and inductive approach was taken during data analysis, following Braun and Clarke's (2006) and Clarke and Braun (2013) six steps of thematic analysis and placed in distinct categories

1 (stressors and coping mechanisms). To identify stressor and coping strategies, we followed a
2 similar process to Kaiseler et al. (2012). This involved verbalisations that the first author
3 perceived had caused the participant's adverse concern or worry or had the potential to do so
4 being coded as stressors, and verbalisations, whereby participants attempted to manage a
5 stressor, were coded as coping strategies. The analysis then followed an inductive process
6 where the first author read all transcripts of TA (immersion in the data) in Nvivo 10 (step 1).
7 Once complete, the first author developed a list of codes from the first two transcripts. At this
8 stage, the initial codes were reviewed and considered by the second author (step 2). This
9 collaborative coding approach is supported by Saldana (2013) as it allows a 'dialogic
10 exchange of ideas' that support interrogation and discussion from multiple perspectives. From
11 the initial inductive process, codes were grouped into stressors and coping, and Lazarus and
12 Folkman's (1984) coding of emotion, problem and avoidance-focused coping was used in a
13 deductive way to allocate the initial inductive 'coping responses' into these 'umbrella' coping
14 categories. This inclusion of Lazarus and Folkman's (1984) coping responses were a result of
15 the second author's involvement in the analysis process, where they linked previous theory to
16 initial generated themes. These deductive codes were then used as a starting point to analyse
17 the remaining transcripts. However, as the first author identified new codes, they were also
18 included in the analysis and again they were considered and reviewed by the second author.
19 Once all transcripts were analysed, a further review was conducted by the authors (step 4).
20 Once complete and consistent with the potential limitations of inter-rater reliability as
21 highlighted by Smith and McGannon (2018), a different researcher (outside the author team)
22 acted as a critical friend to ensure data collection and analysis were plausible and defensible
23 (step 5; Smith & McGannon, 2018). Following this refining and naming of themes, the findings
24 were produced (step 6) and are presented in the results section. It is important to note that
25 this was a process of critical dialogue between authors, and rather than to agree or disagree
26 to achieve consensus, the critical friend encouraged reflexivity by challenging the first authors
27 construction of knowledge (Cowan & Taylor, 2016).

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RESULTS

Table 1. Stressors experienced by football coaches during competition

<i>Higher-order Theme</i>	<i>Lower-order Theme</i>	<i>Score at time</i>	<i>Opponent</i>	<i>Quotation</i>
Performance	Performance Tactics	1 - 1	Above in table	'We haven't had a good phase of play at all'.
	Technical Performance	1 - 1	Above in table	<i>'Poor decision making is such a freaker. Particularly from set-pieces when you have a chance to keep the f*****g football'.</i>
	Team holding onto winning position	1 - 1	Above in table	'They still have a mental battle I suppose, in the case of not conceding, not winning games, chasing games. So they can go away thinking we played well and won rather than we played well and didn't win'.
	Conceding goals	1 - 4	Above in table	'It's not good conceding 3 goals from set plays and crosses'.
Opposition	Opposition players	0 - 0	Below in table	<i>'So the panic there was, our centre half and right back keep stepping in front, every time they're stepping in front they're being turned by more physical boys and that's what's going to cause us trouble'.</i>
	Opposition tactics	1 - 0	Below in table	<i>'How're we in the middle? They've an extra man in the middle, the 8, the 16 and the 10 and the 17 is coming in as well'.</i>
	Opposition actions	1 - 3	Below in table	<i>'So the ref blew up for an injury and we had possession of the ball and the other team were pressing us. A big thing I hate is when players don't give the ball back to the keeper and instead kick it out of play, really frustrating'.</i>

Officiating	Referee decision-making	1 - 4	Above in table	<i>'Why would you wait that long to blow like? I hate refs. Ref is frustrating me anyway, do your job right'.</i>
	Referee interference with play	1 - 0	Below in table	<i>'So the noise there was the refs been in the way of the play. Third time he's been in the way of the play. 2 seconds later he was in the way. Josh fouled again cause you can see the frustration in him from trying to make key passes and the referee is constantly in the way. Were constantly trying to play central balls but he keeps on being in the centre too much'.</i>
	Referee living location	0 - 0	Below in table	<i>'Home referee. They are literally just going to wind us up until the last'.</i>
Coach Performance	Attaining perfection	0 - 0	Above in table	<i>'I think, I'm not a psychologist, but definitely in football you like to be in control and the fact we couldn't set up our dressing room, warm up properly, get the kit out on time, I feel like I'm out of control and get stressed'.</i>
	Own coaching methods	0 - 0	Above in table	<i>'Throws have been freaking me out lately. Been trying to coach it but the details and decisions. It's funny how sometimes when its off the cuff it's a lot better'.</i>
	Sharing information	0 - 0	Above in table	<i>'As the game is getting more and more away from us, its gets frustrating you know? Quite tough to impact it as well from this position'.</i>
Player Welfare	Player injury	1 - 0	Below in table	<i>'Player just pulled out of a challenge and I'm concerned because that's where you could pull a hamstring'.</i>

	Player safety	2 - 0	Below in table	<i>‘This is the same craic as the **** game with this lad, people milling people. So the referee has let a few decisions go and were probably 15, 16 minutes in and the issue is at this time of the game if nobody has been dealt with due to a decision, he’s given a yellow to our left sided midfielder *****, so there’s been a few tackles now and the referee should’ve pulled them up but it looks like people think they’ve a license now to make a few tackles and in my opinion that’s how somebody gets hurt’.</i>
Organisational Stressors	Coach performing officiating duties	2 - 0	Below in table	<i>‘The coach shouldn’t do the linesman job’.</i>
	Dishonesty from other coaches	2 - 0	Below in table	<i>‘He goes ‘do you want a copy of it?’, I says you can’t copy it, he says yea you can, ***** told me you couldn’t, snakes aren’t they?’</i>
	Organisation disorganisation	0 - 0	Above in table	<i>‘Maybe we put too much pressure on ourselves as coaches to do everything perfect when really with facilities and everything here is difficult to have 100%’.</i>

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1 **Table 2. Coping Mechanisms used by football coaches during competition**

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Higher-order Theme	Lower-order Theme	Score at Time	Opponent	Quotation
Problem-focused Coping	Concentration	1 - 0	Below in table	'***** *****don't be caught, now look, better. Now you have it'.
	Planning	1 - 0	Below in table	'So the info I put onto the pitch was there we tried to press the ball 60 -40 to pass the ball onto their weakest centre half so our right sided forward is going to press their other centre back so the ball goes to the other one so were going to angle our run and hopefully the ball goes to the other centre half and try nick it in their half'.
	Technical correction	2 - 0	Below in table	'***** , tell **** to stop trying to beat men, tell him now. Were losing possession every time he does it'.
Emotion-focused Coping	Positive talk	0 - 0	Above in table	'Find straight away kids make a mistake, heads go down. Be more positive and actually give them some positive encouragement'.
	Venting emotion	2 - 0	Below in table	'***** bleeding kicked the ball away (t2a). Crying like a baby in front of ref, he deserves it'.
	Acceptance	1 - 1	Above in table	'Just realised we scored a goal just there, obviously morale goes up straight away, start playing better. Relieves the pressure. But it was the style of goal and the reaction was 2 minutes in'.
	Relaxation	0 - 0	Above in table	'Okay straight away it's a bit calmer from me. Once I hear the whistle kind of gets me in the mindset'.

Avoidance Coping	Humour	0 - 0	Below in table	'Pick him up boys, don't be complicating it (mocking other manager)'. '
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DISCUSSION

Findings

This study aimed to discover the different stressors and coping mechanisms experienced by male football coaches during competition using Think Aloud. The main stressors experienced during competition related to performance, opposition, officiating, coach performance, player welfare and organisational stressors. The coping mechanisms exhibited, fit into the three coping responses of problem-focused, emotion-focused and avoidance based.

Performance-related stressors appear to be salient with the coaches within this study. Two primary themes, technical performance and performance tactics (where coaches stressed over tactical decisions or individual player errors) are in accordance with previous findings by Thelwell et al., (2010), who found that a soccer coach's main stressor was linked to poor performances. The description of this stressor included performances with errors made by players, relating to technical performance. Similarly, Chroni et al., (2013) found that during competition player/athlete performance was one of the most prominent stressors. The implication of these results is that the performance aspect of sport is a prominent stressor for both athletes and coaches.

Another noticeable stressor was the opposition. This stressor related mainly to the opposition players, however, opposition actions and tactics also provided stress. The officiating of matches was a common finding both in the literature and this study (Chroni et al., 2013; Surujilal and Nguyen, 2011; Thelwell et al., 2010). The decision-making of the referee played a critical role in formulating this stress. Surujilal and Nguyen (2011) describe this stressor as being a common occurrence and also having a high capacity to manipulate coaching outcomes, which can affect the coach's position, giving reason to its sustained appearance in stress-related studies on sport coaches.

The coach's performance was a key stressor with lower-order themes such as attaining perfection, own coaching methods and sharing information appearing. Chroni et al., (2013) and Potts et al., (2019) both unearthed comparable outcomes to these findings. What can be concluded from this is that the coach may consistently stress over their own performance both in and out of competition. Player welfare was an additional higher-order theme, which is supported by the literature (Potts et al., 2019; Chroni et al., 2013). Potts et al., (2019) displayed this primary theme in their study, where full-time paid coaches stressed over player injury. What this demonstrates is that player injuries can be labelled as a consistent stressor for coaches whether it is in or out of competition.

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The final main stressor was organisational-related. Three lower-order themes came about, including dishonesty from other coaches, organisation disorganisation and the coach performing officiating duties. Potts et al., (2019) provides support for the first two lower-order themes, conversely, the last finding has not been documented in previous studies, to the author's knowledge. This adds to the literature in the area as the coach's stressors come about from the demand to do other duties. This stressor could appear due to the coach's concentration being taken away from the match.

How the coaches managed these stressors is displayed in a variety of coping mechanisms, which were separated into problem-focused, emotion-focused and avoidance coping categories. Problem-focused coping was a key strategy of coping, with planning being its main form. This supported findings by Olusoga et al., (2010). This would regularly be carried out by consulting with another colleague/coach. This also matched the findings of Surujilal and Nguyen (2011), who suggested that talking with colleagues assisted with coping. Technical correction was also displayed to be a reoccurring coping mechanism. This was achieved usually in the form of direct instruction. As far as the author is aware, this last finding has not been cited previously, adding to the literature. In more simple terms, coaches shout onto the pitch to tell players what to do technically, in order to cope with stressors brought about from competition.

Emotion-focused coping was employed regularly, with positive talk being a prominent form of managing stress. The coach would give positive words to other coaches or players. Venting emotions was also key in coping throughout the study. Thelwell et al., (2010) found that emotion-focused coping was applied in relation to performances. The coach would show frustration by shouting at players. However, the literature also suggest that psychological skills are often used as a means to control emotions (Olusoga et al., 2014; Levy et al., 2009; Thelwell et al., 2008). Additionally, Longshore and Sachs (2015) displayed, in an intervention-based investigation, that mindfulness is advantageous to calming coaches. No apparent psychological skill (other than Think Aloud) was used. The indication this gives is that coaches neglect, or are not aware, of psychological skills to assist them with their own coping/performance.

Avoidance coping was used by the sample (mainly humour). This was also the case in another Think Aloud study, however, this was non-related to coaching (Swettenham et al., 2020). Additionally, avoidance coping is a method used in previous coaching literature. Olusoga, et al., (2010) accounted for it being used 7 times by coaches. Surujilal and Nguyen (2011)

1 displayed it coming up twice within soccer coaches, however, this was in the form of ignoring
2 the issue. This differs from its use in the form of humour, in this study. In align with the
3 literature, avoidance coping was utilised but not to a great extent. This could mean it is not a
4 beneficial coping mechanism as its use throughout the literature is minimal.

6 *Limitations*

7 The current study is not without limitations. Coaching may not always be a conscious process
8 and Think Aloud cannot assess what happens to decision making and coaching processes
9 outside of awareness (Bowers et al., 1990; Jacoby et al., 1992). Therefore, future research
10 may consider adopting both Think Aloud and video observations, where coaches can engage
11 in stimulated recall to supplement the additional Think Aloud data.

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13 Furthermore, Think Aloud could have had an impact on the coaches verbalisations of stress.
14 Despite there being no noticeable evidence in the audio recordings, coaches may have felt
15 self-conscious (Stephenson, Whitehead, & Cronin, 2020) and as a result reactivity may have
16 occurred, where the coaches think more about their thinking (Double and Birney, 2019), this
17 may in turn have had an impact on what the coaches may have verbalised.

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19 The sample size used in the study was only 6. This depicts a relatively small sample size in
20 comparison to previous research in Think Aloud literature. Swettenham et al., (2020) and
21 Whitehead et al., (2016) used 16 participants, Welsh et al., (2018) employed 7 and Samson
22 et al., (2017) used 10. Although the study differed slightly from these above in the sense that
23 it took a qualitative constructivist approach. A larger sample could have provided additional
24 stress and coping themes or further strengthened the current findings. Future research should
25 aim to match or go beyond what is expected in terms of sample size in current Think Aloud
26 studies.

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28 Additionally, the use of a single-gender sample limits the results to males. The study only
29 offers results from the male perspective meaning results cannot be applied to both genders.
30 Future studies should aim to include a mixed gender sample or a female-specific sample.

CONCLUSION AND PRACTICAL IMPLICATIONS

The purpose of this study was to analyse male football coaches' stressors and coping mechanisms, during competition, utilising Think Aloud. The findings of the study demonstrate six main stressors (Performance, Opposition, Officiating, Coach Performance, Player Welfare and Organisational) during competition and a range of coping mechanisms (all allocated into problem, emotion or avoidance focused categories). These results provide readers with real time stressors and coping mechanism experience by football coaches, using a novel method of data collection (Think Aloud).

From a practical perspective, coaches may want to adopt the use of Think Aloud in their future coaching to gain an insight into their own stress and coping responses, which in turn can help support their development in managing this stress and incorporating more successful coping responses. Consecutively, this could lead to an improved performance within the team or athlete being coached. This is something that we also recommend for future researchers who wish to adopt the use of Think Aloud as a coach development tool.

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Key Points

- Think Aloud is an effective measure of stress and coping for football coaches.
- Football coaches stressors, during competition, span over performance, opposition, officiating, coaching performance, player welfare and organisational-related stressors.
- Football coaches cope with such stressors by mainly dealing with the problem itself directly (concentration, planning, technical correction) or through focusing on the emotional aspect of the situation (positive talk, venting emotion, acceptance and relaxation).
- Football coaches may benefit from adopting certain psychological techniques to cope with stress during competitive match coaching.

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