

University of Wollongong

Research Online

Faculty of Social Sciences - Papers (Archive)

Faculty of Arts, Social Sciences & Humanities

2016

Psychological states underlying excellent performance in professional golfers: "Letting it happen" vs. "making it happen"

Christian F. Swann

University of Wollongong, cswann@uow.edu.au

Richard J. Keegan

University of Canberra, richard.keegan@canberra.edu.au

Lee Crust

University of Lincoln

David Piggott

Leeds Beckett University

Follow this and additional works at: <https://ro.uow.edu.au/sspapers>



Part of the [Education Commons](#), and the [Social and Behavioral Sciences Commons](#)

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

Psychological states underlying excellent performance in professional golfers: "Letting it happen" vs. "making it happen"

Abstract

Objectives: In this study we aimed to better understand the occurrence and experience of flow in elite golf. As flow is more likely to occur during peak performances, and for elite athletes, our objectives were to: (i) identify golfers who achieved exceptional performances (e.g., winning a professional tournament), and (ii) explore if and how they experienced flow within that performance. **Design:** Mixed-method multiple case study. **Method:** Participants were 10 professional golfers (M age = 30; SD = 9.9). Performance data and participant observations informed semi-structured interviews which took place as soon as possible after an excellent performance (M = 4 days). Data were interpreted using within-case then cross-case thematic analysis. **Results:** These golfers reported that they experienced two different psychological states during their excellent performances. These states were described as: (i) "letting it happen" which corresponded with the definition and description of flow; and (ii) "making it happen" which was more effortful and intense, involved a heightened awareness of the situation, and therefore differed to flow. Both states occurred through different processes, and "letting it happen" was a relatively gradual build-up of confidence, whereas "making it happen" was a more sudden stepping-up of concentration and effort. **Conclusion:** These findings are discussed in relation to existing literature on flow and related optimal psychological states in sport. Recommendations are then made for future research into the experience and occurrence of both states reported in this study.

Keywords

excellent, underlying, making, vs, happen, letting, states, golfers, psychological, professional, performance

Disciplines

Education | Social and Behavioral Sciences

Publication Details

Swann, C. F., Keegan, R. J., Crust, L. & Piggott, D. (2016). Psychological states underlying excellent performance in professional golfers: "Letting it happen" vs. "making it happen". *Psychology of Sport and Exercise*, 23 101-113.

1 Running Head: PSYCHOLOGICAL STATES IN EXCELLENT GOLF PERFORMANCE

2

3

4

5

6 **Psychological States Underlying Excellent Performance in Professional Golfers:**

7 **“Letting it Happen” vs. “Making it Happen”**

8

9 Christian Swann ^a, Richard Keegan ^b, Lee Crust ^a, David Piggott ^c

10 ^aUniversity of Lincoln; ^bUniversity of Canberra; ^cLeeds Beckett University

11

12

13

Author Note

14 Christian Swann and Lee Crust are with the School of Sport and Exercise Science, University

15 of Lincoln, Brayford Pool, Lincoln, LN6 7TS, UK; Richard Keegan is with the Research

16 Institute for Sport and Exercise, University of Canberra, Canberra, ACT 2601, Australia;

17 David Piggott is with the Carnegie School of Sport, Leeds Beckett University, Leeds, LS1

18 3HE, UK.

19

20 Correspondence concerning this article should be addressed to Christian Swann, School of

21 Sport and Exercise Science, University of Lincoln, Brayford Pool, Lincoln, LN6 7TS.

22 Email: cswann@lincoln.ac.uk; Telephone: (+44) 1522 886 030.

23

24

25

Highlights

- Mixed-method data were collected from professional golfers' excellent performances
- Two distinct psychological states were reported to underlie these performances
- "Letting it happen" corresponded with the description and definition of flow
- "Making it happen" was more effortful and intense, and therefore different to flow
- Both states occurred through separate processes and goals, which are described

Abstract

Objectives: In this study we aimed to better understand the occurrence and experience of flow in elite golf. As flow is more likely to occur during peak performances, and for elite athletes, our objectives were to: (i) identify golfers who achieved exceptional performances (e.g., winning a professional tournament), and (ii) explore if and how they experienced flow within that performance.

Design: Mixed-method multiple case study.

Method: Participants were 10 professional golfers (M age = 30; SD = 9.9). Performance data and participant observations informed semi-structured interviews which took place as soon as possible after an excellent performance (M = 4 days). Data were interpreted inductively using within-case then cross-case analysis.

Results: These golfers reported that they experienced two different psychological states during their excellent performances. These states were described as “letting it happen” which corresponded with the definition and description of flow, and “making it happen” which was more effortful and intense, involving a heightened awareness of the situation and therefore differing to flow. Both states occurred through different processes, and “letting it happen” was a relatively gradual build-up of confidence, whereas “making it happen” was a more sudden stepping-up of concentration and effort.

Conclusion: These findings are discussed in relation to existing literature on flow and related optimal psychological states in sport. Recommendations are then made for future research into the experience and occurrence of both states reported in this study.

Keywords: clutch performance; elite athletes; flow; peak performance.

1 **Psychological States Underlying Excellent Performance in Professional Golfers:** 2 **“Letting it Happen” vs. “Making it Happen”**

3 Positive psychology emphasises the study of optimal human functioning, with key
4 themes including the fostering of excellence, exceptional performance, and positive subjective
5 experiences (Seligman & Csikszentmihalyi, 2000). Indeed, a primary goal for many sport
6 psychology practitioners and coaches is to help athletes achieve optimal levels of performance,
7 and to do so more consistently (Harrison, 2011). One valued subjective experience of
8 particular interest to positive psychologists is flow: a harmonious and intrinsically rewarding
9 state characterized by intense focus and absorption in a specific activity, to the exclusion of
10 irrelevant thoughts and emotions, and a sense of everything coming together or clicking into
11 place, even in challenging situations (Csikszentmihalyi, 2002). Flow has frequently been
12 associated with a range of positive outcomes such as elevations in well-being (Haworth, 1993),
13 self-concept (Jackson, Thomas, Marsh & Smethurst, 2001), and peak performance (Jackson &
14 Roberts, 1992). This intersection of peak experience and peak performance means that flow is
15 extremely relevant, and highly sought after, in sport. Therefore, understanding the nature of
16 flow and its occurrence has great potential for athletes, coaches, practitioners, and researchers,
17 for example, in terms of how these states may be experienced more often. In this study we
18 aimed to better understand the occurrence and experience of flow in elite golf by interviewing
19 players within a week of an exceptional performance (e.g., winning a professional tournament)
20 to obtain more recent, specific, and detailed data of these optimal states.

21 **Flow States in Sport**

22 Current understanding of flow in sport is commonly derived from Csikszentmihalyi’s
23 (2002) conceptualisation of the experience as nine dimensions. Three dimensions are
24 proposed to be conditions through which the experience occurs (Nakamura &
25 Csikszentmihalyi, 2002), namely: *challenge-skill balance* (a balance between high perceived
26 skills and demands in the situation); *clear goals* so that one knows exactly what to do during

1 the performance; and *unambiguous feedback* about the progress that is being made. The other
2 six dimensions are suggested to be characteristics which describe what the experience is like
3 (Nakamura & Csikszentmihalyi, 2002): *action-awareness merging* (deep involvement leads
4 to automaticity and spontaneity); *concentration on the task at hand* (complete focusing of
5 attention); *loss of self-consciousness* (concern for the self disappears and the individual
6 becomes absorbed in the activity); *sense of control* (e.g., over the performance); *time*
7 *transformation* (i.e., either slowing down or speeding up); and *autotelic experience* (the
8 experience is perceived as enjoyable and intrinsically rewarding).

9 However, despite over 20 years of research in sport, these experiences remain elusive,
10 rare, and unpredictable (e.g., Chavez, 2008). Indeed, flow has been described as one of the
11 least understood phenomena in sport (Jackson & Csikszentmihalyi, 1999). As a result, there
12 have been calls for better understanding and explanation of flow in order to help athletes
13 achieve its performance-based and psychological rewards (Author 1 et al, 2012, in press).

14 A range of quantitative (e.g., Koehn, Morris, & Watt, 2013) and qualitative (e.g.,
15 Chavez, 2008) studies have investigated how flow occurs in sport (see Swann, Keegan, Piggott
16 & Crust, 2012 for a review). In particular, qualitative methods (i.e., semi-structured interviews)
17 have been used to gain rich descriptions and insights into athletes' perceptions regarding the
18 factors involved in flow occurrence. Ten factors have been identified as facilitating,
19 preventing, and disrupting flow across a range of sports: focus, preparation, motivation,
20 arousal, thoughts and emotions, confidence, environmental and situational conditions,
21 feedback, performance, and team play and interaction (see Author 1 et al., 2012a). In their
22 positive form, these factors facilitate flow. However, if they are absent (e.g., preparation) or
23 inappropriate (e.g., arousal, focus), they can prevent the experience. Further, if certain factors
24 develop in their negative form (e.g., inappropriate focus, loss of confidence) during the
25 experience, then flow can be disrupted. While this approach has yielded important insights

1 into factors influencing flow, most understanding of how flow occurs in sport is based upon
2 associations rather than explanation (Author 1 et al, in press).

3 To date, these qualitative studies have mainly employed career-based interviews
4 which seek the athlete's general understanding and awareness of flow throughout their career.
5 While such interviews can obtain rich descriptions, this method has been criticised because it
6 relies on memory of events which may have occurred years in the past (cf. Jackson &
7 Kimiecik, 2008). The career-based nature of these interviews means that athletes' accounts
8 can be subject to forgetting details (Yarrow, Campbell & Burton, 1970) or biased recall of
9 their experiences (e.g., the 'rose-tinted glasses' effect; Brewer, Van Raalte, Under, & Van
10 Raalte, 1991).

11 In response to the limitations of career-based interviews, researchers identified the
12 need to develop methods that can capture more detailed, recent, and trustworthy description
13 of participants' mental states in order to enhance the possibility of generating important
14 information about these experiences (Csikszentmihalyi & Csikszentmihalyi, 1988). The
15 Experience Sampling Method (ESM; Csikszentmihalyi & Larson, 1987) was developed to
16 collect 'experience-near' data of flow, that is, data collected in real-time or soon after the
17 experience. Although the ESM has been employed successfully in other domains (e.g.,
18 Hektner, Schmidt & Csikszentmihalyi, 2007), it has limited practicality in most sports -
19 especially in competition (see Jackson & Kimiecik, 2008). Questionnaires have also been
20 used to capture recent data on flow, such as the Flow State Scale-2 which is designed to be
21 administered soon after a performance, and Dispositional Flow Scale-2 which measures the
22 frequency with which athletes experience flow (Jackson & Eklund, 2004). While this
23 approach has been used extensively, such questionnaires lack the rich, detailed data that
24 interviews can provide – especially regarding *how* flow occurs in specific performances.
25 Conversely, in a leisure context, Houge Mackenzie, Hodge and Boyes (2011) obtained recent

1 data on flow by conducting stimulated-recall interviews using footage obtained from head
2 mounted cameras during river surfing. Although it is not possible to use head mounted
3 cameras in many competitive sports, it is important to note that they interviewed participants
4 on the same day as the event to maximise recall (see also Houge Mackenzie & Kerr, 2012).
5 This approach is promising in terms of collecting recent data about flow experiences while
6 maximising richness and depth through the use of event-focused interviews.

7 The flow-peak performance relationship suggests that athletes who achieve
8 outstanding results in competition are more likely (although not guaranteed) to have
9 experienced flow (Jackson & Roberts, 1992). The elite level also presents opportunities to
10 identify exceptional performances due to well-publicised competitive events (e.g., with
11 results available online), and highly skilled athletes are suggested to be more likely to
12 experience flow (Jackson, 1996). Therefore, by identifying exceptional performances in elite
13 sport, it could be possible to purposively sample athletes who are more likely to have recently
14 experienced flow. These athletes could then be interviewed about that specific experience in
15 order to obtain “experience-near” data of flow, and reduce/avoid the possibility of collecting
16 data about events which may have occurred up to years in the past (as can be the case in
17 career-based interviews). This event-focused approach would arguably aid recall (Reis &
18 Gable, 2000), reduce the limitations of career-based interviews and generate more
19 trustworthy data. This approach could also lead to new insights into flow, such as the
20 chronological sequence of its occurrence - which Pentland (1999) considered to be a “key
21 organising device” in developing an explanation (p. 712).

22 Furthermore, the individual, self-paced, and stop-start nature of golf (Singer, 2002)
23 means that golfers can recall the shots they hit as well as their thoughts and emotions during
24 the periods of time between shots. Thus, golfers are in a good position to reconstruct
25 performances in sequence and detail compared to athletes from other activities (e.g.,

1 externally-paced or team sports). While flow in golf has previously been explored in elite
2 (Author 1 et al, 2012b, 2014, in press) and recreational players (Catley & Duda, 1997), no
3 studies have yet employed such an event-focused approach. Therefore, in this study we aimed
4 to purposively sample elite golfers after exceptional performances and interview them as
5 soon as possible after the event to identify whether the players had experienced flow in that
6 specific performance, and if so, to explore their perceptions regarding its occurrence. In turn,
7 we sought to maximise the accuracy and detail of data on flow occurrence, address
8 limitations of the traditional interview approach, and answer calls for refined methods for
9 studying flow in sport (Jackson & Kimiecik, 2008).

10 **Method**

11 **Design and Approach**

12 This study was grounded in a critical realist ontology (Easton, 2010). Critical realism
13 implies the triangulation of multiple data sources, as a form of retroduction, moving from
14 empirical experiences to hypothesise and test underlying causal mechanisms, which are
15 emergent in nature (Downward & Mearman, 2007). Furthermore, explanation lends itself to
16 the in-depth study of a few cases or a relatively small sample of individuals, and to forms of
17 data that retain the chronological and contextual connections between events (Maxwell,
18 2012). Generally, case study research provides rich, empirical descriptions of particular
19 instances of phenomena with emphasis on the real-world context in which they occur (Yin,
20 2014), and is useful for answering 'how' and 'why' questions (Schwandt, 1997). Multiple-
21 case studies enable comparisons that clarify whether findings are simply idiosyncratic to a
22 single case or consistently replicated by several cases (Stake, 2006). These comparisons
23 facilitate broader exploration of research questions with the potential to yield more robust,
24 testable findings (i.e., in comparison to single-case studies; Eisenhardt & Graebner, 2007).
25 Therefore, we based this study on a multiple-case study design to explore how and why flow

1 occurred in specific, recent golf performances. This design enabled us to use within-case
2 analysis which retained chronological and contextual detail in each case, as well as cross-case
3 comparisons to identify patterns and consistencies in the participants' experiences (see
4 Analysis). Furthermore, a key principle in case study research is the use of multiple data
5 sources (Yin, 2014), and we employed a mixed-method approach in order to collect richer
6 and stronger evidence than could be achieved using one method alone (Moran, Matthews &
7 Kirby, 2011).

8 **Participants**

9 Participants in this study were 10 male professional golfers¹ (see Table 1). Stake
10 (2006) recommended that multiple-case studies should employ between four and 10 cases to
11 optimise the benefits of this approach. Four players had competed full-time on the European
12 Tour² ($M = 8$ seasons; range = 1-23), of whom two had won European Tour events. Two
13 players had competed full-time on the Challenge Tour ($M = 6$ seasons), with nine Challenge
14 Tour wins between them. Two participants had previously won tournaments on the Europro
15 Tour ($n = 4$), and one player was formerly the number-one ranked amateur golfer in the
16 world. Therefore, these participants were considered to be 'competitive-elite' and
17 'successful-elite' athletes based on the criteria outlined by Swann, Moran and Piggott (2015).
18 Male participants were sampled because the authors had more access to men's tournaments
19 than those on women's professional tours (see below).

20 **Definition and Bounding of Cases**

¹ Note: Two participants had outstanding performances in two separate tournaments and were therefore interviewed twice. Thus, 10 participants were involved in the study but 12 interviews took place.

²The European Tour is the highest standard of professional golf in Europe and one of the major tours worldwide involving world-class playing standards (www.europeantour.com). The Challenge Tour is the second tier of professional golf in Europe, used as a training ground for promotion to the European Tour. The Europro Tour is the third tier of professional golf in Europe through which players can graduate to the Challenge Tour (www.europrotour.com). The Senior Tour is the main tour for competitors over 50 years of age in Europe.

1 The cases of interest were specific and recent flow states experienced by elite golfers.
2 Due to the elusive nature of these states, we sought to maximise the likelihood of capturing
3 recent accounts of flow by pursuing certain criteria which bounded the cases (Yin, 2014).
4 First, flow was more likely to be experienced during peak performances due to the close
5 association between these two constructs (e.g., Jackson & Roberts, 1992). Therefore, we
6 considered the final group (i.e., leaders) in the last round of professional tournaments to have
7 the best chance of winning the event and in turn were more likely to achieve a peak
8 performance. Being in contention to win was also expected to present the challenging
9 conditions that produce flow; while players who shot the lowest score of the day or
10 tournament were considered more likely to have performed close to (if not at) their peak. We
11 judged performances satisfying these criteria to be suitable for data collection (see Table 1 for
12 case selection rationale for each player). While these assumptions did not guarantee the
13 identification of flow, they represented the most predictable situations in which flow was
14 likely to occur within a tournament.

15 **Recruitment**

16 To recruit participants, the first author attended 11 tournaments on the European Tour
17 (i.e., Final Qualifying for The Open), Challenge Tour, Senior Tour, and Europro Tour. These
18 tournaments were chosen based on playing standard and access (i.e., location). Men's
19 tournaments were sampled because no women's events at a comparable standard were easily
20 accessible during the data collection period. The lead investigator attended tournaments until
21 the intended total of 10 participants was sampled (in accordance with Stake, 2006). Of the
22 eleven tournaments attended, a player from the final group won in seven of the events and
23 these players were approached after the round with an invitation to take part in the study. For
24 the remaining five interviews, the researcher monitored leader boards to identify other
25 players who had achieved similar outstanding performances (e.g., the lowest round of the

1 tournament). Four players were approached in person after the round, and one was contacted
2 through his management agency. When approaching players, the researcher explained the
3 purpose of the study and asked if they would be interested in being interviewed about their
4 performance in that tournament.

5 **Data Collection**

6 Ethical approval for the study was granted by an ethics committee at a British
7 university. We employed mixed-methods in this study to obtain a more in-depth account of
8 the performances which were deemed most likely to be conducive to flow by using: (i) direct
9 observations; (ii) performance data; and (iii) interviews. In keeping with principles of case
10 study research, information was collected from these multiple sources with the aim of
11 corroborating findings (Yin, 2014). In this study, corroboration referred to whether the player
12 had experienced flow, and if so, at what specific stages of the performance it occurred (e.g.,
13 specific shots or holes). We used the observation and performance data for each player to
14 develop individualised probes within semi-structured interviews, which were then used as the
15 primary data source³.

16 **Direct observations.** At each tournament that the lead author attended, the last group,
17 which typically comprised of two players (i.e., the leaders), was observed for the final round
18 on the assumption that those players were most likely to win and therefore experience an
19 exceptional performance. In these direct observations we sought to understand the context of
20 each golfer's performance by focusing on factors such as their behaviour, weather conditions,
21 shot/hole difficulty, potential distractions (e.g., crowds), and the actual shots they hit - all of
22 which could influence the likelihood of the player winning and/or experiencing flow. The
23 observations were collected as verbal field notes recorded via Dictaphone while the lead

³ Examples of the observation transcripts, performance data, and individualised interview schedules are available from the lead author upon request.

1 author followed each group. Through these observations the researcher was able to identify
2 key incidents, reflections, and questions from the performance which could be explored
3 during interviews. These field notes were later transcribed and analysed.

4 **Performance data.** A performance monitoring tool was developed for this study (see
5 supplementary data) which we used to: (i) record each shot taken by the players during their
6 round; (ii) log the performances and act as a reminder for the researcher afterwards; and (iii)
7 indicate peaks and troughs in the player's performance which may have represented periods
8 when they may have been in, or closer to, flow. These data were collected during the
9 performance in addition to the verbally-recorded observations (above), and were also used to
10 develop player-specific probes. Furthermore, available scores and statistics were collected
11 from score boards and websites (i.e., from each tour) after the performance. These were used
12 primarily for players who could not be observed directly (e.g., players who won but were not
13 in the final group).

14 **Interviews.** To develop a deeper understanding of the observation and performance
15 data, we used interviews to gain an account of the performance from the player's perspective.
16 These interviews were conducted as soon after the performance as possible, while still 'fresh'
17 in the participant's memory (range = same day to 7 days later; $M = 4$ days). We employed a
18 semi-structured approach to allow participants to elaborate and develop areas of perceived
19 importance. While addressing general themes, specific probing questions were prepared for
20 each player based on the other data sources, such as "Can you describe what it was like to be
21 five under par through seven holes?" Further, the interviewer adopted a conversational and
22 open-ended approach in order to develop rapport and allow new themes and discussions to
23 emerge (cf. Potter & Hepburn, 2005). Before the interview began, the researcher encouraged
24 players to challenge and clarify any assumptions or terminology used which did not
25 correspond with their experiences.

1 First, flow was introduced and defined using the procedure used within recent
2 research on flow in elite golf (Author 1 et al., 2014, 2015). Players were asked if they were
3 familiar with the term *flow*, and to provide an example of such a state which stood out in
4 their memory. The interviewer then judged whether or not they were referring to flow (as
5 defined by the research team⁴). All examples from these players were judged to refer to flow,
6 and after establishing familiarity with the concept, they were asked if they had experienced
7 the same state during the recent performance for which they were sampled. Seven
8 participants reported that they had experienced flow in that performance, and were then
9 asked to describe the state which was again compared to the definition employed by the
10 research team (above). All of these descriptions used terminology which corresponded with
11 previous descriptions of flow, referred to specific dimensions of flow, and were therefore
12 deemed relevant to the study.

13 Then participants were asked to: (i) specify at which stage in the round/tournament it
14 occurred and how long it lasted; (ii) describe the shots and holes before, during, and after the
15 period in which flow was identified; (iii) and discuss what they were thinking and feeling
16 before, during, and after the flow state. If the player did not report experiencing flow, they
17 were asked to describe the performance and reflect on why flow had not occurred (e.g., by
18 making comparisons to the example they drew upon at the beginning of the interview).
19 Specific probes were used to encourage these reflections, such as “what would have needed
20 to happen at that point for flow to occur?”

21 The interviews were conducted which mainly took place in the clubhouse of the
22 player’s home golf club. All participants provided written consent after the researcher

⁴ This definition was based upon awareness of those used by researchers previously (Jackson & Csikszentmihayi, 1999), definitions used in previous studies (Jackson, 1995, 1996), and athletes’ quotes describing flow in previous research (Author 1 et al., 2014; Jackson, 1996).

1 explained the purpose of the study. Interviews were conducted face to face and lasted, on
2 average, 61 minutes ($SD = 14.9$). Each interview was digitally recorded and was later
3 transcribed verbatim, while brief notes were also taken.

4 **Analysis**

5 A team approach, employing all four authors, was used to guide the analysis. Data
6 were analysed using a two-stage process as recommended in multiple-case study literature
7 (e.g., Stake, 2006). First, within-case analysis was conducted to become familiar with each
8 case as a stand-alone entity, which allowed the unique patterns of each case to emerge (i.e.,
9 regarding how flow had occurred for each player individually; Eisenhardt, 1989). The first
10 author, who collected the data, enhanced his familiarity with it through a process of “in-
11 dwelling” (e.g., by reading and re-reading the transcripts; Maykut & Morehouse, 1996).
12 Preliminary analysis of the observation and performance data was conducted to develop
13 player-specific probes for the interviews. This process involved identifying key stages of
14 each player’s performance, or events (such as a good shot or holed putt) which could have
15 influenced flow occurrence. After the interviews were conducted, the transcripts were then
16 searched for quotes which described the experience of flow, and key events or factors during
17 the performance which led to its occurrence. By triangulating against the observation and
18 performance data, it was possible to note the specific stage in the round at which those
19 events/factors occurred (e.g., which hole the player was on) in order to understand the
20 chronological and contextual connections between those events which produced flow
21 (Maxwell, 2012). Detailed write-ups were made for each case, in which the relevant quotes
22 were used to generate initial codes (see Braun & Clarke, 2006).

23 Once the data for each participant, and their individual accounts of flow (or its
24 absence) had been collated, cross-case analysis was conducted (Stake, 2006). This process
25 forces researchers to search for similarities and differences between cases in order to

1 recognise patterns and relationships among constructs (Eisenhardt & Graebner, 2007; Stake,
2 2006) – in this case, consistencies in the occurrence and experience of flow. Specifically, the
3 write-ups for each case were compared to identify similarities and patterns, that is, the extent
4 to which the same codes were present, and whether they occurred in a similar order. This
5 process revealed consistent factors (i.e., themes) involved in the occurrence of these states, as
6 well as the specific sequence in which they were present (see Results). Consistent codes were
7 categorised and defined as higher-order themes which represented the players' experiences
8 and the processes through which they occurred. Finally, those themes were reviewed for
9 consistency and transparency (e.g., using the trustworthiness processes outlined below; see
10 Braun & Clarke, 2006). The players are referred to by randomly chosen pseudonyms.

11 **Quality and Trustworthiness**

12 Various approaches have been proposed to judge the quality and authenticity of case
13 study research (e.g., Yin, 2014; Stake, 1995). Generally, the term *trustworthiness* has been
14 used by qualitative researchers to describe methods aiming to ensure quality in their work and
15 as this case study was based primarily on qualitative data (i.e., the interviews), a number of
16 steps were taken to establish trustworthiness according to Bassey's (2003) checklist. First,
17 observing participants before conducting interviews enabled *prolonged engagement* with the
18 performance of interest during data collection, and by continuing this process for 10
19 participants (the maximum for this research design according to Stake, 2006), we attempted
20 to achieve *persistent observation of emerging issues*. In addition, we used *triangulation* of
21 data in an attempt to corroborate findings (e.g., whether the participant experienced flow) and
22 develop more specific/analytical questions within the interviews through individualised
23 probes. Through these individualised interviews we attempted to obtain a *thorough account*
24 of the player's experience, which is conveyed using direct quotes below. An *audit trail* was
25 also used to record instrument development (e.g., for the monitoring tool), data collection,

1 triangulation, and interpretation of data. This audit trail was reviewed by two independent
2 researchers who had extensive experience in qualitative and mixed-methods research. These
3 researchers agreed that the study's inferences were logical, that the findings were grounded in
4 the data, and that the study followed suitable processes.

5 *Peer debrief* was also conducted throughout the study, in that the second, third and
6 fourth authors provided on-going guidance on the research process, reviewed data, and
7 challenged the researcher's assumptions (Creswell & Miller, 2000). For example, a number
8 of conversations debated the best way of coding themes, as well as the most suitable labels
9 for these themes (i.e., did the label accurately reflect the content?). This process took place
10 via formal meetings between all members of the research team, and regular informal
11 discussions with each member. While peer debrief was concerned primarily with the on-
12 going *process* of collecting and analysing the data, participant reflections were sought to
13 critique and provide feedback about the *results* of these processes (Maxwell, 2012). Engaging
14 in dialogue with the participants was seen as an opportunity for elaboration, affirmation, and
15 disagreement, in order to enhance credibility. This dialogue centred on the fairness,
16 appropriateness, and believability of the researchers' interpretations of the data and analysis
17 as a form of member-checking (Maxwell, 2012). Participants were provided with their
18 verbatim transcript and a copy of the preliminary analysis. They were asked if the themes and
19 categories made sense, and whether the overall account was realistic and resonant with their
20 experiences. Due to elite nature of this sample, who were often in the country for short
21 periods with busy schedules, this process took place via email. No modifications to the results
22 or analysis resulted.

23 **Results**

24 In this study we aimed to better understand the occurrence and experience of flow in
25 elite golf by interviewing players within a week of an exceptional performance in order to

1 obtain “experience near” data. These players reported experiencing two different
2 psychological states during their excellent performances; although they used similar
3 terminology to describe their experiences (e.g., referring to both states as “the zone”; see
4 Table 2). Martin was conscious of, and able to distinguish between both states: “It’s the same
5 zone but it’s a different mind-set... One of them is a more relaxed state of mind than a more
6 intense ‘[being] in the zone’ ... but they’re both as good as each other.” These states were
7 described as “letting it happen” and “making it happen”, as illustrated by Jack: “Sometimes
8 what they say is “just let it happen”... getting your mind to where it doesn’t hurt you; to
9 where it doesn’t think... [and] it doesn’t have the questions... But then... sometimes I’ll say
10 “let’s make it happen” where it ups your focus”. Specifically, six players reported
11 experiencing *letting it happen* while four described *making it happen*. One golfer did not
12 report either state, and two players only reported micro-states (i.e., only for one shot, or in
13 one aspect of their game; see Table 2). Furthermore, each of these states occurred through
14 different processes. In the following sections we describe the occurrence and experience of
15 both states, before they are compared in terms of similarities and differences.

16 **“Letting it Happen”: Flow State**

17 **Occurrence.** The state of “letting it happen” closely resembled previous descriptions
18 of flow (see Table 3). This state was described by quotes such as: “I just relaxed and let it
19 happen instead of forcing the issue” (Martin), and its occurrence was summarised by Jack:

20 You get so focused on the process and staying in the present and focusing on what
21 you want to do with the golf ball, then that can help you click into it... You start
22 hitting some good shots... and your confidence rises up a little bit... And when you
23 have that confidence you can just get in the zone and start making everything... it’s
24 just a ton of confidence.

1 Flow occurrence began with a *positive event* in the performance, such as holing an
2 important putt, making a birdie, hitting a good shot, or getting a good feeling in their swing:
3 “you hit one [shot] and something clicks and you know that’s what you should do every
4 time... I just knew after that one [shot] that this is what feels good today and I was able to
5 reproduce that for the rest of the round” (Shane). The players’ confidence increased after this
6 positive event which, in turn, helped them produce a similarly good result in their next shot.
7 By repeating this cycle, the players developed *confidence and momentum*, including David:

8 I stepped up... [to] my first tee shot of the day, and striped it down the middle. That
9 was it; that was my confidence back with driving because I knew if I could do it once
10 I could repeat it again and again. And then... I made a good up and down... on my
11 third hole... so I felt my chipping and short game was good. Then... I holed the putt
12 on my fifth or sixth hole for birdie, so “okay, the putter’s going well”... [That] was
13 kind of how it builds up... It’s like it snowballs... your confidence grows and grows.

14 The process above continued until the players became *totally confident* in their game and in
15 how the performance was progressing. For example, in reference to the quote above, David
16 described that “all of a sudden it’s like ‘well my game feels good!’” Similarly:

17 I was just confident in pretty much everything... It was kind of a feeling like “well
18 there’s not really too much in my way right now, everything’s going my way,” and I
19 just felt like I can shoot the lights out... My swing was beginning to feel good and... I
20 liked the holes coming up, I knew I could play well (Alex).

21 This perception also seemed to involve an awareness of what a “good score” was, and the
22 player’s potential to reach it. In turn, this involved a sense of exceeding certain expectations:

23 There’s a point when you can go like four under, five under for the round which a lot
24 of people are going to shoot; once you start going six, seven (under) then not a lot of
25 people are going to get up there (Ian)

1 Once the players reached this point of total confidence, and were aware that they
2 could perform well, they appraised the situation to be a *challenge*. For example, David
3 reported how “that’s when you start sort of challenging yourself”, and Alex described that “I
4 wanted to keep making sure I did the right things... I really wanted to try and... test yourself
5 [sic] in a way, you know, challenge yourself to do it in the most pressure-packed situation”.
6 After they perceived the situation to be challenging, these players pursued *open-ended goals*
7 which did not have a fixed outcome. To illustrate, Alex reported that: “I’m at the top [of the
8 leader board]; all I’m thinking about is... trying to go forward, trying to get further in front...
9 It’s the kind of one-sighted vision that I had to go further ahead.” Similarly, “I was just trying
10 to get it [my score] lower, trying to hit it closer and hole the putts... I just saw going lower,
11 keep going lower” (Martin).

12 **Experiencing Flow.** Being totally confident and pursuing challenging, open-ended
13 goals led these players into flow. Interestingly, Martin described being aware of the point at
14 which he entered flow during this process:

15 I was three under [par] after nine [holes], and then... [hit] a really good second shot in
16 close, and... walking up to the green, seeing it sort of 4 feet away, I was kind of
17 walking into that sort of zone where I was just playing, just relaxed and playing.

18 Similarly, the players described positive feedback with phrases commonly associated with
19 flow, such as feeling like “nothing can go wrong... you feel things going your way” (Alex),
20 and “everything seems to fall into place” (Lee). The players also reported a relaxed
21 concentration on the task at hand: “I think it’s just something that happens naturally... I’m
22 concentrating aren’t I, that’s for sure - you can’t be in the zone and not concentrating - but
23 it’s just something that seems to happen” (Lee). These players also experienced absorption in
24 the performance:

1 All we carried on doing was just trying to take one shot at a time... the same routine
 2 for every single shot: stood back, picked the yardage, picked the club, picked the shot,
 3 picked the target again, hit the shot... I've come off the 18th, looked at my caddy and
 4 said "what score have I shot?" Because I didn't know... I just knew I made a birdie,
 5 made a par, made another birdie, but never added it up... I was like "How are we
 6 doing?"... and he's like "yeah, we're doing all right, we're leading!"

7 The players described altered cognitive and kinaesthetic perceptions, including tunnel vision,
 8 feeling stronger, and feeling less tired afterwards, as well as absence of negative thoughts: "I
 9 didn't have any negative thoughts – everything I saw was positive" (Martin). Other main
 10 themes included being calm/relaxed ("you're comfortable, you're calm, you're relaxed";
 11 Lee), as well as sense of control, automaticity and a sense of ease/effortless performance,
 12 time transformation, and enjoyment (see Table 3).

13 **"Making it Happen"**

14 **Occurrence.** The second state was characterised by quotes such as: "[when] you have
 15 no choice... If you're going to win you *have* to shoot this score" (Jack), and "when you're
 16 fully... aware of what the situation was... [and being in] control of the situation" (Nick). ,
 17 Oliver described what this state was like: "when the pressure's on, when I'm in the heat of
 18 battle...and when I get that feeling inside me, that's when I play my best golf...all I feel is
 19 different is that it really matters." The occurrence of this state began with the player
 20 becoming *aware of the situation* that they were in and realising what was required of them.
 21 For example, they described: "realising you've only got a two shot lead... with two [holes] to
 22 play" (Oliver); and "It's the evaluation of the situation... I walked towards the tee and saw
 23 that leader board and knew the situation... I saw I was one clear and... then I knew my job"
 24 (David). This realisation commonly occurred after the player saw a leader board, but could
 25 also occur through their own reflections: "Walking to the [next] tee, it just dawned on me that

1 I was seven under and I had three holes to play, and... that's when it kicked in and I thought
2 "this could be my best ever score"" (Ian).

3 After becoming aware of the situation, the players identified structured, *fixed goals*
4 that they needed to pursue in order to achieve the desired outcome. For example, Oliver
5 reported that: "There's only two shots between me and the next guy, so now there's a goal
6 there, to finish with two pars... There was like a target at the end that you had to produce."
7 These goals were very specific in that they involved a fixed outcome (e.g., winning the
8 tournament), with definite requirements in order to achieve them (e.g., making two pars),
9 which were usually over a certain period of the performance (e.g., the final two holes): "I
10 knew the job, if I finished par, par, par, I was going to win the golf tournament. So that was...
11 like the mini-goal I then gave myself... and I did win the golf tournament" (David).
12 Furthermore, these goals were usually imminent, in that they became important at the end of
13 the round or tournament.

14 Awareness of the situation and fixed goals led to a *challenge appraisal* for these
15 players: "I only had three holes left of the tournament to play... the three [most] important
16 holes... This was it, this was my time now. This is where I can win" (David). These
17 appraisals occurred even when such reactions seemed unlikely. For example, one player
18 double-bogeyed the 15th hole when leading in the last round of a tournament, yet:

19 I evaluated the situation... If someone said to you "you're leading by one... with three
20 holes left to play to win a golf tournament", you'd take that every day of the week...
21 So what bad thing could I possibly have to think about at that point?... I genuinely
22 couldn't lose. And the reason I felt like that is because I had the belief in myself... I
23 had the ability to be able to assess the situation properly... [and] came to a logical
24 conclusion, which was [that] I was one shot clear (David).

1 Hence, a key factor influencing these challenge appraisals was the golfers' confidence that
2 they could meet the challenge they were facing and, in turn, achieve their goal. Indeed, Jack
3 described how self-talk was helpful in maintaining such confidence under pressure:

4 I'd be like "okay let's just hit this fairway, one shot at a time, let's stay in the present,
5 you can do this, just take it easy, calm it down, breathe, don't worry about it, it's just
6 a golf shot, go execute it. You can do it"... Anything to add that little bit of
7 confidence.

8 Subsequently, these players reported that their *concentration increased* in response to
9 that challenge appraisal:

10 It's the end of the round, end of the tournament, I'm leading by two... so I knew that I
11 had to concentrate and be in the zone... to finish it off... That just made me step up
12 the concentration and get me... more in the zone (Oliver).

13 Indeed, the players suggested that their concentration was at its height during this stage: "It
14 definitely reached its peak... literally it was at its height... I don't think I could have
15 concentrated any more" (David).

16 **Experiencing "Making it happen"**. The resulting state was characterised by
17 heightened focus towards the achievement of fixed goals, and more effortful concentration on
18 the task at hand: "I made myself focus even more on that last hole... I was trying a little bit
19 harder to be intense" (Ian). Indeed, participants described feeling intense and nervous during
20 the experience: "[When it's] closer to the end... that's when I start thinking about it a little bit
21 more I definitely get more nervous... It definitely intensifies" (Jack). This state was also
22 reported to be purposeful and effortful: "I knew standing on the 17th I needed to finish birdie-
23 birdie for second... [and] it felt like I was trying more to get in that zone" (Ian). David also
24 reported being confident: "I... feel like I couldn't hit a bad shot in that situation... I was in
25 the moment, I could hit the shot, and I hit the shot. It's as simple as that". Indeed, the golfers

1 who experienced this state reported being intrinsically motivated, even in the final holes of
 2 tournaments with the opportunity to win substantial financial (i.e., extrinsic) reward:

3 Even though I knew the importance of the shots, I couldn't wait to hit [each] shot...
 4 because I... wanted the satisfaction of hitting it out of the middle of the golf club,
 5 hitting that perfect shot to the green. That's what I was sort of striving for then, so it
 6 wasn't just about... winning the tournament, it was about hitting the perfect shots at
 7 the time as well (David).

8 Absorption was also described as part of this state: "it just feels like I'm so focused and
 9 nothing else is around me... it's just me and the ball... that's it, I don't think about anything
 10 else... nothing else was happening as far as I was concerned" (Ian). Altered cognitive and
 11 kinaesthetic perceptions were also reported in terms feeling stronger, hitting the ball further,
 12 and "everything around me is just a blur, I can't hear or see anything else – it's just me"
 13 (Oliver). Indeed, David described loss of memory:

14 [I saw] a few of the pictures from the final hole [afterwards], and I was like "I can't
 15 remember any of that!"... The thing that really stuck in my mind was that... the
 16 camera man was almost in my face... but I didn't notice. [I] didn't even notice the
 17 camera man was there! [I] didn't notice anything going on around me (David).

18 Furthermore, enjoyment of the experience, optimal arousal, and *time transformation*
 19 ("looking back on it yeah it did go pretty quick"; Oliver) were reported, as was a sense of
 20 control: "I just felt in control of everything... it felt like I had complete control of myself and
 21 my emotions" (David; see Table 4).

22 **“Letting it Happen” vs. “Making it Happen”: Similarities and Differences**

23 **Goals pursued.** A consistent difference between these two states (i.e., present in
 24 every case), was the nature of the goals that the players pursued (see Table 5). When *making*
 25 *it happen*, their goals involved fixed demands, time frames, and outcomes: "If I finished par,

1 par, par, I was going to win the golf tournament” (David). Conversely flow involved less
2 structured, open-goals, such as “trying to get further in front” (Alex). Therefore, *making it*
3 *happen* appeared to involve more structured and fixed demands (i.e., they either won or they
4 did not), whereas flow was more exploratory and self-referenced, involving a sense of ‘seeing
5 how well I can do.’

6 **Performance context.** The state that these players entered was influenced by
7 variables within the performance, such as the stage of the round, stage of the tournament, and
8 their position in the tournament. *Making it happen* occurred more suddenly, in response to
9 realising the demands of a situation, and players experienced this state towards the end of the
10 round. Conversely, *letting it happen* occurred more gradually and was reported to begin
11 during the early and middle stages of the round. Indeed, players articulated how the stage of
12 the round could lead to differences in their approach: “At the start of the round and during the
13 middle you’re just playing – see[ing] what it gives you” (Oliver).

14 For these players, *making it happen* occurred when they were trying to win (i.e., at the
15 end of the final round), whereas *letting it happen* was reported during all stages of the
16 tournament. To illustrate, the players perceived that each round of the tournament
17 encompassed its own objectives:

18 The first round... [you’re] just trying to shoot a decent score, give yourself a chance
19 in the tournament. Second round’s making the cut or pressing on, and then you’ve got
20 your [final] round where you’re trying to win or...finish as high as you can (Phil).

21 Furthermore, the players attached different levels of importance to the final rounds compared
22 to the last. For example, David reported that on “the first two days you can get yourself in
23 contention but you can’t actually win it then... (so) in all reality it doesn’t matter... the final
24 round is the time when you can win the golf tournament.” Similarly, the early rounds were
25 reported to be much more relaxed: “The first two rounds are so... relaxed... there’s no real

1 pressure... (I) just try and do what I can control and see how the score pans out really” (Phil).
2 As a result, the players explained that their concentration changed during the course of the
3 tournament: “I was probably more focused on my own performance in the first and second
4 [rounds], but then by the end of the tournament you’re more aware of your position” (Nick).
5 Such self-referenced focus was more conducive to *letting it happen*, whereas *making it*
6 *happen* was more relevant at the end of the tournament when the players’ focus switched to
7 the outcome and their position.

8 A final factor was the player’s position in the tournament, and in particular, whether
9 or not they were in contention to win. In the final round these players reported that they tried
10 harder: “you’re in contention to win the tournament, so yeah... you’re trying like hell!”
11 (Lee). Similarly, Martin suggested that “there’s more pressure on winning as opposed to
12 shooting nine under.” *Make it happen* was therefore more likely to occur once the player was
13 in contention to win or achieve a personal best score, whereas *letting it happen* seemed to
14 occur regardless of whether the player was in contention or not (again, because it was more
15 self-referenced and less dependent on external factors). Figure 1 summarises the occurrence
16 of each state relative to the performance context.

17 **Relationships with elevated performance.** All players reported performing at their
18 peak during both states, including Lee: “to be in the zone you’ve got to be playing well, that’s
19 the key... I think that’s the zone really, playing at your true potential.” Consistent differences
20 emerged regarding the direction of the flow-performance relationship between states. When
21 *making it happen*, the players reported “stepping up” their performance and “raising their
22 game” to meet the demands of the challenging situation. The players’ response to those
23 demands improved their performance - that is, the state led to improved performance:

24 In general play, I feel like if you hit a good shot... it goes roughly where you’re
25 aiming, you’re fairly pleased... but when I’m fully concentrating [in the zone] I feel

1 that normally it goes exactly where I'm aiming... I just feel like my shots are so much
2 better. Even putting. (Oliver)

3 Conversely, flow occurred via a "build-up" of performing well (see above); that is, good
4 performance led to flow: "I played my way into the zone... You've got to that point by
5 hitting good shots" (Martin).

6 Discussion

7 In this study we aimed to better understand the occurrence and experience of flow in
8 elite golf by interviewing players within a week of an exceptional performance in order to
9 obtain "experience near" data. Rather than solely experiencing flow, the primary finding was
10 that these players experienced two different subjective states during their excellent
11 performances. "Letting it happen" corresponded with the definition and conceptualisation of
12 flow (e.g., Jackson & Csikszentmihalyi, 1999), and although some characteristics were
13 common to both states, "making it happen" appeared to be somewhat different to flow. In the
14 following sections we discuss these findings in relation to existing flow research, as well as
15 attempting to understand and conceptualise "making it happen" within the wider literature on
16 optimal psychological states in sport.

17 "Letting it happen": Flow

18 *Letting it happen* was described as a calm state with a focus on the shot at hand,
19 absence of negative thoughts, perceptions of ease and automaticity in the performance, sense
20 of control, enjoyment, and feeling like nothing could go wrong. These themes correspond
21 closely to the common conceptualisation of flow (e.g., Jackson & Csikszentmihalyi, 1999).
22 These players also described a process through which this state occurred, which seemingly
23 involved a relatively gradual and consistent build-up with some broad overlaps with the flow
24 conditions (Nakamura & Csikszentmihalyi, 2002) in terms of high perceived challenge and
25 skills (i.e., build-up of confidence), positive feedback, and goals. It is important to note that

1 the goals for these players were very specific in that they encompassed the challenge of
2 discovery and exploration (e.g., “seeing how well I can do”). Therefore, it could be the case
3 that this specific type of goal is important for flow occurrence, and that the dimension “clear
4 goals” could be refined if these findings are supported elsewhere. Momentum also appeared
5 to be particularly important in the build-up of flow. This construct has previously been
6 identified as a facilitator of flow in elite golf (Author 1 et al, 2012b, in press), and the process
7 described in “letting it happen” displays similarities with Taylor and Demick’s (1994)
8 Multidimensional Model of Momentum which involves a “momentum chain” beginning with
9 a “precipitating event.” Therefore, this model may provide a useful template for flow
10 occurrence, and for these players, momentum emerged as an important condition for flow.

11 Flow is considered to be elusive and unpredictable, with most knowledge to date
12 based on factors facilitating or associated with its occurrence. The findings of this study have
13 contributed new and refined insights into the conditions for its occurrence, as well as
14 tentatively identifying a process through which it appeared to occur for these players. These
15 findings could therefore represent a step towards the development of an explanation for flow
16 in elite golf.

17 **“Making it Happen”**

18 The state described as “making it happen” shared a number of characteristics with
19 flow, including enjoyment, sense of control, absorption, and confidence. However in contrast
20 to flow, “making it happen” was described as a more intense state of optimal arousal, with
21 heightened and effortful concentration, and awareness of the situation (e.g., of the score and
22 position in the tournament). These characteristics do not resonate with common descriptions
23 of flow which is instead considered to be effortless, automatic, with little awareness of the
24 situation (Csikszentmihalyi, 2002; Jackson & Csikszentmihalyi, 1999). This state occurred in
25 situations similar to the definition of clutch performance, that is, when an athlete is aware that

1 they are performing in a challenging situation, care about the outcome, has the capacity to
2 experience stress about that situation, and succeeds primarily due to skill (see Hibbs, 2010 for
3 full definition and conceptual analysis). This definition of clutch performance focuses on the
4 outcome rather than the subjective experience, and therefore may describe the conditions for
5 “making it happen” but not the resulting subjective experience. Indeed, there appears to be
6 scant qualitative descriptions of athlete’s experiences of clutch performance to date. Hence,
7 “making it happen” does not appear to be fully described by flow or clutch performance.

8 Other researchers have explored the state of peak performance: an episode of superior
9 functioning resulting in optimal performance outcomes that exceeded prior standards of
10 performance (Privette, 1983). However, qualitative descriptions of peak performance refer to
11 automatic, effortless execution of performance (Anderson et al, 2014; Cohn, 1991) which
12 differs to the effortful, purposeful, and intense state described by these players. Therefore,
13 “making it happen” does not appear to be fully described by peak performance either.

14 An alternative interpretation of these findings can be drawn from leisure and
15 adventure activities, in which researchers have integrated the flow perspective with reversal
16 theory (Apter, 2001). Houge Mackenzie et al (2011) qualitatively distinguished between
17 paratelic flow states (playful and defined by the absence of salient and/or important outcome
18 goals) and telic flow (more serious and characterised by the presence of specific, important
19 outcome goals). Their participants’ descriptions of telic flow appear similar to “making it
20 happen” in terms of optimal arousal (feeling calm yet energised), intensity, and heightened
21 focus on the achievement of outcome goals. Therefore, one interpretation could be that
22 “letting it happen” and “making it happen” are two different types of *flow* state. However, it
23 remains that characteristics such as intensity, heightened awareness, and effortful
24 performance do not appear to correspond with the definition or dimensions of flow according
25 to Csikszentmihalyi, and therefore this interpretation could be questioned.

1 Regardless of the terms used to describe this state, it is important to note that a second
2 subjective state appeared to underlie the excellent performances of these golfers. While flow
3 provided one perspective on excellent performances in golf, “make it happen” also appeared
4 to be highly relevant and important for this sample. These findings require testing and
5 dedicated attempts at ‘falsification’ (Popper, 1959). However, if corroborated (e.g., across
6 other activities) they could provide a refined understanding of the psychological states and
7 processes underlying exceptional performances in sport.

8 **Comparing Both States**

9 In the present study, a consistent difference between both states was the nature of
10 goals that the players pursued. These goals were similar to those reported in studies
11 suggesting two types of flow (Houge Mackenzie et al, 2011) in that *make it happen* involved
12 a fixed outcome, whereas *let it happen* was more exploratory with an absence of a fixed
13 outcome. Indeed, when *letting it happen* the players reported pursuing goals which were self-
14 referenced and challenging (e.g., “how well can I do?”), yet seemed deliberately avoidant of
15 outcome. These open-goals differed from “do your best” goals (Locke & Latham, 2006)
16 which do not encompass the exploratory element of “seeing how well I can do.” Therefore,
17 these open-goals may warrant further exploration (e.g., in relation to creativity).

18 It could also be the case that different types of challenge are encountered within
19 performances which require pursuit of these types of goal. For example, in his original work
20 on flow, Csikszentmihalyi (1975) distinguished between activities that involve *creativity*,
21 *problem-solution*, and *competition*. Indeed, Csikszentmihalyi suggested that challenges can
22 be of two types: the challenge of the unknown, which requires discovery and exploration; and
23 the more concrete challenge of competition. He argued that flow involves “a stretching of
24 one’s self toward new dimensions of skill and competence” (1975, p.33) which again can be
25 measured either: (i) against the boundaries of one’s own competence, or (ii) by competition.

1 Therefore, more specific conceptualisation of the challenge and clear goals dimensions of
2 flow could help researchers better understand the nature of flow occurrence and the
3 experience of “making it happen.”

4 It appears that the similarities and differences between cases were influenced by the
5 performance context. The stage of the round, stage of the tournament, and player’s position in
6 the tournament combined to influence the goals that they pursued (i.e., open or fixed) and
7 subsequently the state that they experienced. Players were more likely to *make it happen*
8 towards the end of their performance when an important outcome was at stake (e.g.,
9 winning). Conversely, *flow* was typically experienced earlier in the performance when there
10 was more opportunity for momentum and confidence to build. Koehn and Morris (2014)
11 examined performance context by comparing flow across training and competition; however
12 with these findings we suggest that it is important to understand how the context within a
13 specific performance (i.e., training *or* competition) can influence both flow and “making it
14 happen”.

15 **Methodological Discussion**

16 It could be the case that ‘career-based’ interviews used previously have been unable
17 to identify the subtle differences reported here. For example, athletes may have ‘blurred’ their
18 recall of these states into description of one flow state, or researchers may have coded the
19 data from both states as one type of experience. By adopting an event-focused approach, it
20 was possible to collect data from flow states soon after they had occurred (ranging from the
21 same day to one week later). In turn, the players were able to recall in detail the chronology
22 of their performances and, in turn, the processes through which “letting it happen” and
23 “making it happen” occurred. Therefore, in this study we have begun to answer calls for
24 refined methods of studying flow in sport (Jackson & Kimiecik, 2008), and have generated
25 insights into the nature of these states which, if supported elsewhere, could help build

1 towards an explanation of flow and “making it happen.”

2 **Limitations and Future Directions**

3 As with any study, there are limitations. In this study we have described the
4 experiences of a specific sample of 10 elite male golfers. Single rather than repeat interviews
5 were used with most participants, and it would have been valuable to conduct repeat
6 interviews with all participants to explore other performances and possibly enable more
7 critical discussion of the states identified (e.g., by making comparisons to other excellent
8 results, or even average and poor performances). Research into the experiences of elite
9 female golfers would add to these findings, while future studies could also explore different
10 levels of expertise (e.g., recreational golfers) and different types of sport (e.g., fast-paced,
11 team sports). Similarly, other research avenues could lie in individual differences and
12 whether, for example, athletes are more or less likely to enter either state.

13 We also focused on the initiation and experience of these states, meaning that future
14 studies employing an event-focused approach should explore issues such as their
15 management/maintenance (Author 1 et al, 2014), disruption/prevention (e.g., Jackson, 1995),
16 and restoration (e.g., Chavez, 2008). Furthermore, as a means of conducting event-focused
17 interviews in future, researchers could track longitudinally a number of athletes (e.g., over the
18 course of a season) who report flow after it occurs and can then be interviewed. This event-
19 focused approach could be an alternative method to ESM in sport which is not as random or
20 disruptive, yet enables access to more than just one performance/experience (e.g., via repeat
21 interviews). Finally, while we have presented our interpretations of the data, others could
22 have coded them differently and may have arrived at alternative conclusions. Further research
23 will enable better understanding of these ideas, which could lead to applied recommendations
24 concerning, for example, how athletes and coaches can prepare for and manage each state
25 during training and competition to optimise performance.

References

Note: Four references have been removed to preserve the authors' anonymity

Anderson, R., Hanrahan, S., & Mallett, C. (2014). Investigating the optimal psychological state for peak performance in Australian elite athletes. *Journal of Applied Sport Psychology, 26*(3), 318-333. doi: 10.1080/10413200.2014.885915

Apter, M.J. (Ed.) (2001). *Motivational styles in everyday life: A guide to reversal theory*. Washington D.C.: American Psychological Association.

Bassey, M. (2003). Case study research. In J. Swann & J. Pratt (Eds.), *Educational Research in Practice* (pp. 111-124). London: Continuum.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi:10.1191/1478088706qp063oa

Brewer, B.W., Van Raalte, J.L., Darwyn, E., & Van Raalte, N.S. (1991). Peak performance and the perils of retrospective introspection. *Journal of Sport and Exercise Psychology, 13*(3), 227-238.

Catley, D. & Duda, J. (1997). Psychological antecedents of the frequency and intensity of flow in golfers. *International Journal of Sport Psychology, 28*(4), 309-322.

Chavez, E. (2008). Flow in sport: A study of college athletes. *Imagination, Cognition and Personality, 28*(1), 69-91. doi:10.2190/IC.28.1.f

Cohn, P.J. (1991). An exploratory study on peak performance in golf. *The Sport Psychologist, 5*(1), 1-14.

Creswell, J. & Miller, D. (2000). Determining validity in qualitative inquiry. *Theory into Practice, 39*(3), 124-130. doi:10.1207/s15430421tip3903_2

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass

Csikszentmihalyi, M. (2002). *Flow: The psychology of optimal experience* (2nd edition). New York: Harper & Row.

- 1 Csikszentmihalyi, M. & Csikszentmihalyi, I. (1988). *Optimal experience: Psychological studies*
2 *of flow in consciousness*. Cambridge, UK: Cambridge University Press.
- 3 Csikszentmihalyi, M. & Larson, R. (1987). Validity and reliability of the experience
4 sampling method. *Journal of Nervous and Mental Disease*, 175(9), 526-536. doi:
5 10.1097/00005053-198709000-00004
- 6 Downward, P. & Mearman, A. (2007). Retrodution as mixed-methods triangulation in
7 economic research: reorienting economics into social science. *Cambridge Journal of*
8 *Economics*, 31, 77-99. doi:10.1093/cje/bel009
- 9 Easton, G. (2010). Critical realism in case study research. *Industrial Marketing Management*,
10 39, 118-128. doi:10.1016/j.indmarman.2008.06.004
- 11 Eisenhardt, K.M. (1989). Building theory from case study research. *Academy of Management*
12 *Review*, 14(4), 532-550. doi: 10.2307/258557
- 13 Eisenhardt, K., & Graebner, M. (2007). Theory building from cases: Opportunities and
14 challenges. *Academy of Management Journal*, 50(1), 25-32.
- 15 *The European Tour* (n.d.). Retrieved from <http://www.europeantour.com>
- 16 *The PGA Europro Tour* (n.d.). Retrieved from <http://www.europrotour.com>
- 17 Harmison, R. (2011). Peak performance in sport: Identifying ideal performance states and
18 developing athletes' psychological skills. *Sport, Exercise and Performance Psychology*,
19 1(S), 3-18.
- 20 Haworth, J. (1993). Skills-challenge relationships and psychological well-being in everyday life.
21 *Society & Leisure*, 16(1), 115-128. doi: 10.1080/07053436.1993.10715445
- 22 Hektner, J.M., Schmidt, J.A., & Csikszentmihalyi, M. (2007). *Experience sampling method:*
23 *Measuring the quality of everyday life*. Thousand Oaks, CA: Sage.
- 24 Hibbs, D. (2010). A conceptual analysis of clutch performances in competitive sports.
25 *Journal of the Philosophy of Sport*, 37(1), 47-59. doi: 10.1080/00948705.2010.9714765

- 1 Houge Mackenzie, S., Hodge, K., & Boyes, M. (2011). Expanding the flow model in
2 adventure activities: A reversal theory perspective. *Journal of Leisure Research*, 43,
3 519-544.
- 4 Houge Mackenzie, S., & Kerr, J. (2012). Head-mounted cameras and stimulated recall in
5 qualitative sport research. *Qualitative Research in Sport, Exercise and Health*, 4(1),
6 51-61.
- 7 Jackson, S. (1992). Athletes in flow: A qualitative investigation of flow in elite figure skaters.
8 *Journal of Applied Sport Psychology*, 4, 161-180. doi:10.1080/10413209208406459
- 9 Jackson, S. (1995). Factors influencing the occurrence of flow state in elite athletes. *Journal of*
10 *Applied Sport Psychology*, 7(2), 138-166. doi: 10.1080/10413209508406962
- 11 Jackson, S. (1996). Toward a conceptual understanding of the flow experience in elite athletes.
12 *Research Quarterly for Exercise & Sport*, 67(1), 76-90. doi:
13 10.1080/02701367.1996.10607928
- 14 Jackson, S., & Csikszentmihalyi, M. (1999). *Flow in sports: The keys to optimal experiences and*
15 *performances*. Champaign, IL: Human Kinetics.
- 16 Jackson, S., & Eklund, R. (2004). *The Flow Scales Manual*. Morgantown, WV: Fitness
17 Information Technology.
- 18 Jackson, S., & Kimiecik, J. (2008). Optimal experience in sport and exercise. In T.Horn (ed.),
19 *Advances in sport psychology* (3rd edition, pp.377-399). Champaign, IL: Human Kinetics.
- 20 Jackson, S., & Roberts, G. (1992). Positive performance state of athletes: Towards a conceptual
21 understanding of peak performance. *Sport Psychologist*, 6(2), 156-171.
- 22 Jackson, S., Thomas, P., Marsh, H., & Smethurst, C. (2001). Relationships between flow, self-
23 concept, psychological skills, and performance. *Journal of Applied Sport Psychology*,
24 13(2), 129-153. doi: 10.1080/104132001753149865

- 1 Koehn, S., Morris, T., & Watt, A. (2013). Imagery intervention to increase flow state and
2 performance in competition. *The Sport Psychologist*, 28(1), 48-59.
- 3 Koehn, S. & Morris, T. (2014). The effect of performance context and skill level on the
4 frequency of flow experiences. *European Journal of Sport Science*, 14 (S1), S478-S486.
5 doi:10.1080/17461391.2012.718364
- 6 Locke, E., & Latham, G. (2006). New directions in goal-setting theory. *Current Directions in*
7 *Psychological Science*, 15(5), 265-268. doi: 10.1111/j.1467-8721.2006.00449.x
- 8 Maxwell, J. (2012). *A realist approach for qualitative methods*. California: Sage.
- 9 Maykut, P. & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical*
10 *guide*. London: Falmer Press.
- 11 Moran, A., Matthews, J., & Kirby, K. (2011). Whatever happened to the third paradigm?
12 Exploring mixed methods research designs in sport and exercise psychology. *Qualitative*
13 *Research in Sport, Exercise and Health*, 3(3), 362-369. doi:10.1080/2159676X.2011.607843
- 14 Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C.R. Snyder & S.J.
15 Lopez (Eds.), *Handbook of positive psychology* (pp.89-105). New York: Oxford
16 University Press.
- 17 Pentland, B.T. (1999). Building process theory with narrative: From description to
18 explanation. *Academy of Management Review*, 24(4), 711-724. doi: 10.2307/259350
- 19 Popper, K.R. (1959). *The logic of scientific discovery*. London: Routledge.
- 20 Potter, J., & Hepburn, A. (2005). Qualitative interviews in psychology: problems and
21 possibilities. *Qualitative Research in Psychology*, 2(4), 281-307.
22 doi:10.1191/1478088705qp045oa
- 23 Privette, G. (1983). Peak experience, peak performance and flow: A comparative analysis of
24 positive human experience. *Journal of Personality and Social Psychology*, 45(6), 1361-
25 1368. doi: 10.1037/0022-3514.45.6.1361

- 1 Reis, H.T. & Gable, S.L. (2000). Event-sampling and other methods for studying everyday
2 experience. In Reis H.T., and Judd C.M., (Eds.), *Handbook of research methods in social
3 and personality psychology* (pp. 190-222). Cambridge, UK: Cambridge University Press.
- 4 Schwandt, T. (1997). *Qualitative inquiry: A dictionary of terms*. London: Sage.
- 5 Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American
6 Psychologist*, 55(1), 5-14. doi: 10.1037/0003-066X.55.1.5
- 7 Singer, R. (2002). Preperformance state, routines and automaticity: What does it take to realise
8 expertise in self-paced events? *Journal of Sport and Exercise Psychology*, 24(4), 359-375.
- 9 Stake, R.E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- 10 Stake, R.E. (2006). *Multiple case study analysis*. New York: Guilford Press.
- 11 Stavrou, N., Jackson, S., Zervas, Y., & Karteroliotis, K. (2007). Flow experience and athletes'
12 performance with reference to the orthogonal model of flow. *The Sport Psychologist*, 21,
13 438-457.
- 14 Swann, C., Keegan, R., Piggott, D., & Crust, L. (2012). A systematic review of the experience,
15 occurrence, and controllability of flow states in elite sport. *Psychology of Sport and
16 Exercise*, 13, 807-819. doi:10.1016/j.psychsport.2012.05.006
- 17 Swann, C., Moran, A., & Piggott, D. (2015). Defining elite athletes: Issues in the study of
18 expert performance in sport psychology. *Psychology of Sport and Exercise*, 16(1), 3-14.
19 doi:10.1016/j.psychsport.2014.07.004
- 20 Taylor, J. & Demick, A. (1994). A multidimensional model of momentum in sports. *Journal
21 of Applied Sport Psychology*, 6(1), 51-70. doi: 10.1080/10413209408406465
- 22 Yarrow, M., Campbell, J., & Burton, R. (1970). Recollections of childhood: A study of
23 retrospective methods. *Monographs of the Society for Research in Child Development*,
24 35(5), 1-83. doi: 10.2307/1165649

1 Yin, R. (2014). *Case study research: Design and methods* (5th ed.). Newbury Park, CA:
2 Sage.

3 Young, J., & Pain, M. (1999). The zone: Evidence of a universal phenomenon for athletes
4 across sports. *Athletic Insight*, 1(3), 21-30.

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Tables

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19

Table 1: Participant demographics

Pseudonym	Age	Professional experience (yrs)	Nationality	Case selection rationale
Alex	20	1	England	Won tournament on Europro Tour
David	26	3	England	Won tournament on Europro Tour
Lee	37	14	England	Won tournament on Europro Tour
Nick	52	34	Australia	Won tournament on Senior Tour
Oliver	23	2	England	Won tournament on Europro Tour Finished second in tournament on Europro Tour
Phil	25	5	England	Won tournament on Europro Tour Finished third in tournament on Europro Tour
Shane	24	1	USA	Won tournament on Europro Tour
Ian	39	17	England	Finished second in tournament on Europro Tour
Martin	28	8	England	First round leader in tournament on Europro Tour
Jack	23	1	USA	Qualified for The Open via Local Final Qualifying
Mean (SD)	30 (9.9)	9 (10.6)		

1 Table 2: Overview of players who experienced “letting it happen,” “making it happen,” or
 2 neither

	Player	Illustrative quote
Letting it happen	Alex	The last round... I was pretty zoned in [on the] front nine... That was just the perfect way to play golf
	David _A	On the Thursday, I had a putt... to go 10 [under par] for the tournament... everything was just flowing nicely... I did feel like I was sort of indestructible almost at that point
	Lee	The first round, yeah I think I kind of experienced a little bit of the zone... I wasn't fazed by anything, you know, I felt good. I think everything just seems to fit into place
	Ian _A	Yeah... yesterday was [in the zone]... [I shot] seven under.
	Martin	The times that I have been in it is obviously when my good rounds have been, i.e., on Wednesday when I shot eight under.
	Jack	I recently was just in it, at the qualifying. I posted seven under [par] on my back nine to shoot eight under [par in total], and I was definitely in the zone on that back nine.
Making it happen	Ian _B	I knew standing on the 17 th I needed to finish birdie-birdie for second... [and] it felt like I was trying more to get in that zone
	Oliver ₁	My lowest round really was two days ago... I shot ten under, course record... and I was definitely, definitely in the zone then
	Oliver ₂	I knew that I had to concentrate and be in the zone... to finish it off... That just made me step up my concentration and get me...more in the zone
	David _B	I don't think I could have concentrated any more from 16 to 18... on 17... I literally think I stayed in the zone the whole time through that hole
Micro-states	Nick	I was really in the zone for that wedge shot and I got it close...I walked straight up to it, I knew exactly what I had to do and I pulled the club and I just hit it
	Shane	I was pretty close to being in the zone...[but just] on the greens
None	Phil ₁	Last week...(I) just went about doing my own business, and wouldn't say I was in the zone
	Phil ₂	Yeah I wasn't in the zone at all...I just don't think I was bothered enough

3
 4 Note: _{1,2} refer to different interviews held with the same player; _{A, B} denote between different
 5 experiences in the same tournament (i.e., second round and final round for both players).
 6

7

8

9

10

11

12

13

14

1 Table 3: Analysis of the occurrence and experience of “letting it happen”

	Themes	Codes	Example Quotes
Occurrence	Positive Event	Holing a putt	Holing an important putt; holing a long putt
		Making a birdie	It started with birdie
		Hitting a good shot	Hit a good shot off first tee, set tone for the day
		Get a good feeling in the swing	Something clicked in my swing
	Confidence and momentum builds	Develop momentum	Create snowball by hitting good shots and making birdies; I had momentum
		Confidence grows from hitting good shots	Confidence grows as momentum builds Confidence rises from hitting good shots
		Confidence in performance	Swing was starting to feel good Knew I could play well/score well
	Become totally confident	Total confidence	Confident in everything/all parts of game; Extra belief/confidence in yourself because of what’s just happened Start firing at everything – know you’re going to make it; Know before hitting it that it’ll go in
	Challenge appraisal	Start challenging yourself	Start challenging yourself - “how low can I go?” Wanted to test/challenge myself in the most pressure-packed situation
	Pursue open-ended goals	Get further in front	Just go forward; get further in front
Get another birdie		Get another birdie, then another, then another – I was so focused on getting next birdie	
Experience	“Letting it happen”	Get further under par	Just trying to get it lower; when I got to 8 I wanted to get it to 9
		Positive feedback	Nothing could go wrong; working out unreal; felt indestructible
			Everything was comfortable; flowing nicely
	Absence of negative thoughts	Not worried about next shot	
		Fear and doubt go down Didn’t have negative thoughts Didn’t feel pressure	
	Relaxed concentration	So focused on the process and staying in the present I was concentrating well; 100% focused on what I was doing; mind never wandered	
	Absorption	Didn’t realise how many under par I was because so focused on making another birdie	
	Calm/relaxed	Felt calm; relaxed	
	Ease/automaticity	That was easy; the game felt easier to play	
	Sense of control	Ball was under control	
	Enhanced motivation	Couldn’t wait to hit the next shot	
	Enjoyment	Enjoying the situation	
	Altered perceptions	Walk taller, stand stronger	
Tunnel vision Time went by quickly			

2

3

4

1 Table 4: Analysis of the occurrence and experience of “making it happen”

	Themes	Codes	Example Quotes	
Occurrence	Become aware of the situation	Saw leader-board and knew the situation	I saw on the leader-board that I was one clear, knew my job; knew the situation	
		Situational demands	Knew only had two holes left; it's the end of the round, end of the tournament, leading by two	
		Own realisation	Dawned on me that I could shoot my best ever score	
	Identify fixed goals	Fixed goals		Finish par-par to win
				Finish birdie-birdie for second
				Finish with three birdies for best ever score
	Challenge appraisal	This is my time		This was my time; this is where I can win the tournament
		Challenging situations		This is my time, two shot lead with six to play
		Confidence		It was like the heat of the battle Had belief in myself; knew I was going to play well; knew I was going to win Didn't realise severity of the shot because I was confident in my ability
	Concentration increases	Peak of concentration		100% concentration Concentration definitely peaked; at its pinnacle
		Awareness of demands steps up concentration		Knew I had to concentrate; knowing what you have to do really steps up my concentration
		More intense focus		Made myself focus more; more intense focus
Concentration on task at hand			Wasn't thinking anything other than hitting the shots and winning the tournament	
Experience	Intensity of effort		Intensity levels are higher; feeling really intense to do it properly; trying harder to be more intense	
	Absorption		Didn't notice anything going on around me; didn't notice the cameraman right in front of me Didn't take notice of surroundings - It's just me and the ball, nothing else is around me	
	Enjoyment		You're enjoying it Couldn't wait to hit the shots	
	Enhanced motivation		It wasn't just about winning, it was about hitting perfect shot; wanted satisfaction of hitting it out of the middle	
	“Making it happen”			Concentrating on shooting my best ever score, wasn't thinking about first prize
		Sense of control		Felt in control of everything; complete control of self and emotions; in control of the ball all day Relaxed, calm; wasn't too pumped-up or excited
		Optimal arousal		Adrenaline in your body makes you hit it further; adrenaline was going; had butterflies; nervous Didn't hear much; can't see or hear much around me
	Altered perceptions			I was just seeing me and the flag, that was it Felt stronger; can hit the ball further
				Loss of memory - I can hardly remember; can remember hitting the shots but not the other normal details Happened very quickly; did go pretty quickly

2

3

1 Table 5: Examples of the different goals pursued in both states

State	Player	Goal
Make it happen	Jack	I figured before teeing off if I shoot 6 under I'll have a chance (of qualifying for The Open)...I was just so into that number, I'm like "okay let's just get to 6...6 under will get it done"
	Oliver ₁	I want to finish with three birdies for my best ever score
	Oliver ₂	on the last two holes there's only two shots between me and the next guy, so now there's a goal there, to finish with two pars...to win...my first tournament
	David _A	If I finished par, par, par, I was going to win the golf tournament
	Ian	I knew standing on the 17 th I needed to finish birdie-birdie for second
Let it happen	Alex	All I'm thinking about...trying to go forward, trying to get further in front...so I'd say it's the kind of one-sighted vision that I had to go further ahead
	David _B	You're just sort of...trying to go "right, how deep can I go?"
	Martin	I was kind of like "let's just see what happens"...It was just normal and "(let's) go see what I can do"... when I got it to 8 (under)...I just thought "just get more."

2 Note: _{1,2} refer to different interviews held with Oliver; _{A, B} denote between different
3 experiences David had in the same tournament.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

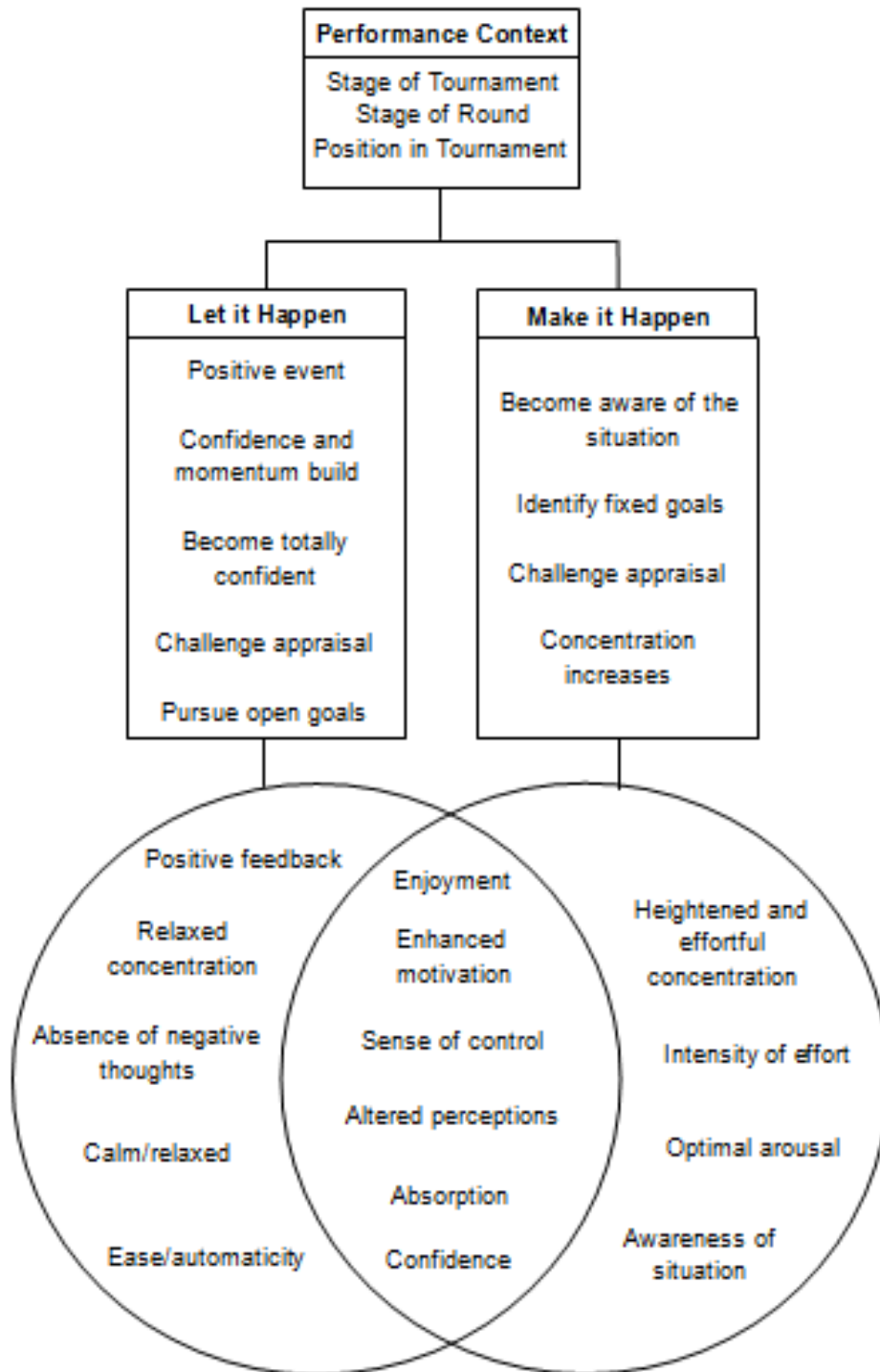
1

Figures

2

Figure 1: Summary of the occurrence and experience of both states reported

3



4