Int. J. Sport Psychol., 2021; 52: 402-411
doi: 10.7352/IJSP.2021.52.402

Total Team Collapse in the 2014 FIFA World Cup semi-final (Brazil 1 - Germany 7): Implications for Coaching and Sport Psychology practice

EDSON FILHO

Wheelock College of Education & Human Development, Boston University, USA

To inform the development of athletes and teams, an applied analysis of the factors contributing to the team collapse experienced by the Brazilian soccer team against Germany during the 2014 FIFA World Cup semi-final is presented. Specifically, the iterative role of individual players, team processes, and contextual factors in the team collapse experienced by the Brazilian team is discussed within a multilayered view of performance. Applied recommendations to circumvent the absence of key players in decisive matches, faulty team processes in high pressure situations, and home field disadvantage in playoff stages of knockout tournaments are offered.

KEY WORDS: team collapse, group dynamics, soccer, FIFA World Cup.

> "Decades from now, football fans across the world will be able to tell you where they were the night Germany beat Brazil 7-1. This was a result and a match so stunning, so extraordinary, that even the FIFA World Cup™ - with its rich and varied history - has never seen its (sic) like before" (FIFA.com).

The Brazil loss to Germany in the 2014 FIFA World Cup is arguably the greatest defeat in Brazilian soccer history, as Brazil had never lost a World Cup match by a six-goal differential. Furthermore, up until that point in the competition, Brazil had only conceded four goals over the course of five matches. However, on that evening, within the first 30 minutes of the match, Germany was already leading by five goals to none, with four of these goals being scored within a 15 minute interval (minutes 16-30; see Figure 1). After conceding the first goal, the Brazilian team suffered a *collective team collapse* (see Apitzsch, 2009), as noted by the Brazilian coach: "We got disorganised and panicked after the first goal and then it all went wrong for us." (Luiz Felipe Scolari, Brazilian head coach; Mewis, 2014).

Correspondence to: Edson Filho, Wheelock College of Education & Human Development, Boston University, 2 Silber Way, Boston, MA 02215, United States (e-mail: efilho@bu.edu)

	1-15 min	16-30 min	31-45 min	46-60 min	61-75 min	76-90 min
Germany	⚽	⚽⚽⚽⚽			⚽	⚽
Brazil						⚽

Fig. 1. Goals scored by Germany and Brazil during the match as a function of 15 min time segments. Four goals happened within a 15-min interval (highlighted in grey).

Notably, a collective team collapse is said to occur when several teammates experience a severe and abrupt performance drop during a game (Wergin, Zimanyi, Mesagno, & Beckmann, 2018). In this context, an "outlier case analysis" (i.e., the study of cases that deviate substantially from other cases; see Aggarwal, 2017) can benefit both researchers and practitioners interested in performance in sports and beyond (see Boje, Haley, & Saylors, 2016). More specifically, studying a catastrophic performance may carry important applied implications to the formulation of best practice recommendations. For instance, crashes in civil aviation are studied in detail to identify "what went wrong and how future disasters can be averted" (see National Geographic, Air Crash Investigation at http://www.natgeotv.com). As popularized in the non-fiction movie Black Hawk Down, the military also scrutinizes operations that did not go according to plan. Although athletic pursuits do not carry the life-threating risks of military operations and aviation accidents, advancing knowledge of catastrophic performances in sports may help prevent them from happening again (Wergin et al., 2018).

Team Collapse: A Multi-Layered Analysis

> "There is nothing simple in this complex universe.
> Everything relates. Everything connects" Johnny Rich

The analysis that follows reflects a phenomenological hermeneutical approach as the author interpreted the aforementioned match based on first-hand reports from players and staff (as available in the public domain) in light of previous research in applied psychology. To this extent, it is important to note that several theories on optimal and poor performance exist (see Farrow & Baker, 2018). Although scholars do not agree on a general theory of human performance, there is consensus that performance in team settings is a multi-layered phenomenon influenced by individual, team, and contextual factors (i.e., players nested within a team, which in turn is bounded to a context; see Gorman, 2014). In other words, to understand the team collapse that affected the Brazilian team, it is important to consider the interaction among the players, the team, and the context at large (see Figure 2).

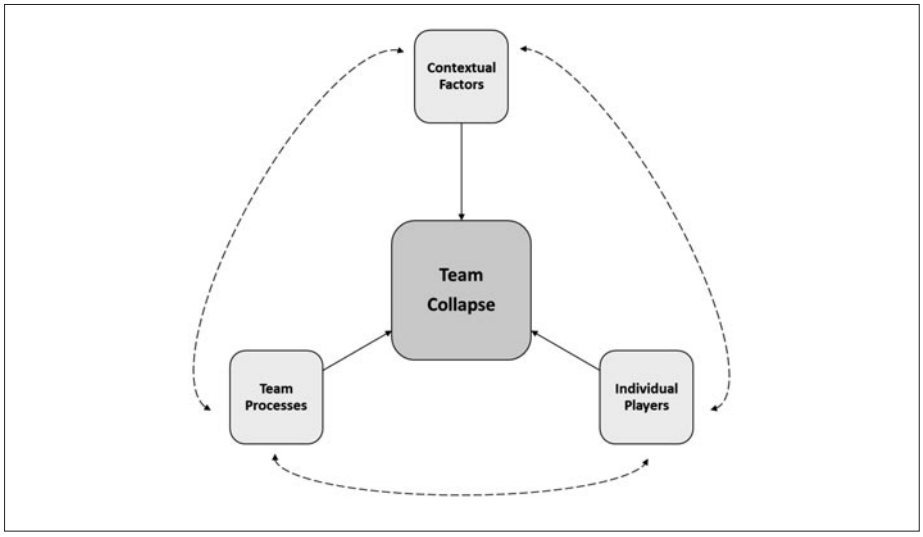

Fig. 2. Individual Players' Characteristics, Team Processes, and Contextual Factors Influence Team Collapse in Sports.

The Players

"A chain is only as strong as its weakest link." (Proverb)

As per the Pareto Law, as much as 80% of a system output may come from 20% of its inputs. For the semi-final game, the Brazilian squad did not have two of its strongest links, namely star player Neymar and team captain Thiago Silva. Neymar and Thiago Silva were critical components in the Brazilian team in terms of their skill and peer-leadership.

Athlete's Tenure and Skill. Neymar and Thiago Silva are highly skilled players that hold key assignments in the defensive and offensive spinal cord of the Brazilian national team. They were missed the night of the semi-final loss, as acknowledged by the German coach Joachim Low: "Weird things happened in that match against Brazil…Neymar was injured, and Thiago Silva was suspended, and Brazil was under a lot of pressure" (Lyra, Borges, Torre, & Lerne, 2014).

Sport teams and companies in all fields of knowledge rely on skilled personnel to perform highly complex, interactive tasks that require optimal coordination, i.e., teammates need to be at the right place, at the right time, doing the right thing. Moreover, skill level is linked to self-efficacy (see Bandura, 1997; Feltz, Short, & Sullivan, 2008), which influences collective effi-

cacy (team confidence), which in turn has been found to predict performance in team sports (Leo, Sánchez-Miguel, Sánchez-Oliva, Amado, & García-Calvo, 2013). As such, coaches and practitioners should be prepared for the worst-case scenario, including losing their leading goal scorer and team captain in a World Cup semi-final match. Indeed, the idea of "red teams" in the military is to think of all factors that might "go wrong" in a given event or performance situation in order to develop contingency plans (Romyn & Kebbell, 2018). By anticipating, simulating and training to counter worst-case scenarios, individuals and teams develop resilience and meta-stability skills (see Filho & Tenenbaum, 2020).

Role Clarity and Peer-Leadership. Neymar and Thiago Silva, two key players on the Brazilian squad, were not on the field that night. It is likely that the incoming substitute players were less clear on their roles for that match, partly because role clarity takes time to develop, which might have negatively affected the team's performance (see Leo et al., 2015). Moreover, Neymar and Thiago Silva exerted significant leadership roles in the Brazilian team. Neymar was a technical leader (with four goals and two "man of the match" titles at that point in the tournament), while Thiago Silva was the official team captain. Lack of leadership on the field might have amplified the team collapse as acknowledged by David Luiz:

"I was the team captain on that night and maybe I should have had a different reaction. Maybe, after they had scored their second goal, I should have tried to bring everybody together, to try to calm everybody down, to cool down the game, to lock our defense (Valeika de Barros, 2016).

To aid team functioning and prevent team collapse, coaches and practitioners should foster a sense of shared leadership within the team by developing multiple peer-leaders capable of taking on task, social, and motivational roles during high-pressure situations (see Cotterill & Fransen, 2016; Haslam et al., 2017). Indeed, during high-pressure situations athlete leadership is paramount to ensure that tactical and psychological information is properly distributed within the team, thus preventing negative momentum from occurring (Cotterill & Fransen, 2016; Filho et al., 2014). That is, leaders' behaviours (or lack thereof) influence the team as a whole by altering important team processes.

The Team

> "The whole is greater than the sum of its parts." (Aristotle)

Although key individual players were missing in the Brazilian squad, team dynamics transcends "I" individual factors. Rather, team dynamics is a

"we" process that is influenced by myriad team attributes, including team mental models, collective efficacy and psychological momentum (Filho, 2019).

Team Mental Models and Team Coordination. Team mental models pertain to "the collective task and team relevant knowledge that team members bring to a situation" (Cooke, Salas, Cannon-Bowers, & Stout, 2000, p. 153). Importantly, whether the unit of analysis is an atom or a sports team, coordination hinges on the synchronization of shared and complementary features. On that July night, the Brazilian players were unable to bring their shared and complementary knowledge to the pitch to coordinate defensive and offensive play: "[…] I asked everybody that was on the pitch and they told me: We do not know what happened. Nothing worked. We could not do anything. Nothing" (Neymar; Monteiro, 2017).

Enhancing social and task cohesion and communication dynamics through team-building interventions are ways to promote the development of team mental models (Filho & Tenenbaum, 2020). More cohesive and communicative teams are more likely to share knowledge and complement each other's strengths and weaknesses, thus preventing coordination breakdowns while enhancing the chances of optimal confidence in major competitions. Team coordination can also be enhanced through rehearsal of set pieces and contingency plans, cross training and role-playing, and the analysis of videos and performance statistics (Filho & Tenenbaum, 2020).

Collective Efficacy and Psychological Momentum. Collective efficacy is more than the sum of each individual player's confidence (Bandura, 1997; Feltz et al., 2008). A player might be confident in him/herself but still not trust the team as a whole, or the team might be very confident in its ability, but a given player might be lacking confidence in him/herself. Paramount to the present analysis is the fact that collective efficacy is related to team functioning and time-bounded. With respect to the former, Bandura (1997) has posited that team processes are bounded to *reciprocal determinism*, insofar that efficacy beliefs impact myriad team properties (e.g., cohesion, team mental models, transactive memory systems) and outcomes, and vice-versa. With respect to the latter, team confidence effects come in spiral bouts and can fluctuate significantly during the course of a given match (see Fransen et al., 2015). In other words, collective efficacy is time-bounded and related to psychological momentum, insofar that poor performance triggers subsequent poor performance or, at the opposite end of the continuum, that optimal performance is more likely to be followed by optimal performance. As Germany scored goal after goal the Brazilian team's confidence diminished, which in turn decreased the players' ability to coordinate effective plays on the pitch: "We did not have time to react. They scored two, three goals in less

than 10 minutes…It is not easy. It is hard for you to recover the players' morale in the locker room when you are losing by five goals" (Luiz Felipe Scolari, Brazilian head coach; Prosperi, 2016).

Noteworthy, coaches and practitioners should be cognizant of key sources of collective efficacy (e.g., vicarious experiences; see Bandura, 1997) to prevent poor team functioning and negative spirals of team performance in high-stake competitions. Applied professionals should also be aware that the context at large may contribute to team collapse in interactive team tasks.

The Context

> "Those who don't know history are doomed to repeat it."
> Edmund Burke

In 1950, Brazil played at home in the FIFA World Cup final and lost. That was in the past, or so many thought. Media, fans, and players thought that playing at home would be an advantage this time around. As it turned out, playing at home was a big misfortune again. As the quote above hints to, it is important to know and reflect on past performances. Home field advantage is true up to a point. However, in playoff stages, research suggests that playing at home might have ironic effects (Carron, Loughhead, & Bray, 2005).

Home Field Disadvantage. Generally, playing at home is considered an advantage. To name a few positives, teams that play at home are familiar with the local conditions, have the crowd on their side, and are more likely to benefit from the referees in contentious calls (see Carron et al., 2005). However, these positive effects tend to be washed out or even reversed in decisive matches in a phenomenon known as "home choke" (Baumeister & Steinhilber, 1984). To this matter, previous research has shown that supportive home audiences tend to amplify both the costs of failure and the rewards of success (Wright, Voyer, & Wright, 1995).

More specifically, when playing decisive games at home, athletes might focus more on avoiding failure than on seeking success (Wallace, Baumeister, & Vohs, 2005). When the attention of the players, and the team as whole, is not directed to the task at hand and the "here and now" (space-time synchrony) team coordination breaks down and performance suffers (Filho & Tenenbaum, 2020). Thus, what seems to be an advantage might actually turn out to be a disadvantage and may partially explain sudden and severe drops in team performance during decisive matches. Accordingly, sport actors and organizations (e.g., athletes, coaches, governing bodies and federations) should be educated on the importance of mental training, as noted by the

psychologist who worked with the Brazilian national team during the 2014 tournament: “Despite having so many qualities, the team had little experience to face so much pressure […] There was not enough time to develop a mental training program for the players.” (Regina Brandao; The State of S. Paulo, 2014).

Bouncing Back from Chaos: Final Remarks

> “It has been said that something as small as the flutter of a butterfly’s wing can ultimately cause a typhoon halfway around the world.”
> Chaos Theory

After the match, many sport actors (e.g., fans, players, journalists) tried to blame “someone, somehow” for the vexing loss. It is, however, unlikely that it was a single individual’s fault as is often the case in team collapses across domains of human performance, from sports to the military to civil aviation and beyond. What likely happened in the Germany versus Brazil match was an interaction among individual, team, and contextual factors. At times, certain inputs can lead to large catastrophic outputs, as per the well-known “butterfly effect”. Accordingly, practitioners should be aware of pre, during, and post-match factors that can prevent severe and abrupt underperformance occurrences in team sports. Based on the analysis of the present case, a summary of proposed intervention strategies to avoid team collapse is presented in Table 1. Specifically, anticipating how to adapt to worst case scenarios, developing multiple leaders in the team, learning the sources of collective efficacy (team confidence), and appreciating the notion of home-field disadvantage are lessons to be learned and passed onto sport psychologists and coaches.

Moreover, coaches and practitioners should be cognizant that cross-level interventions are paramount to both performance restoration and optimization. That is, applied interventions should target the athletes (e.g., developing peer-leaders), the team (e.g., developing collective efficacy and team mental models), and the context at large (e.g., considering home-field advantage and disadvantage). Strong players make strong teams, which are able to adapt to challenging contexts. Accordingly, future research on the individual, team and contextual factors underpinning team collapse is warranted, especially given that other examples of such phenomenon have occurred in recent years (e.g., Barcelona versus Bayern Munich in the 2019 UEFA Champions League; Barcelona versus Paris Saint Germain in the 2016 UEFA Champions League).

To conclude, it is important to acknowledge that the interpretations

Table I
Strategies to Prevent Team Collapse

Performance Issue	Proposed Intervention Strategy
Tenure and Skill-Level	Create "red teams" to anticipate and practice worst-case scenarios where several of your best and more experienced athletes cannot play, thus forcing the team to develop coping strategies.
Peer-Leadership and Role Clarity	Incorporate leadership training workshops aimed at developing multiple leaders, (e.g., task, social, and motivational) and thus a shared leadership dynamic, as opposed to a leader-follower dichotomy within the team.
Team Mental Models and Coordination	Engage in cross-training to develop awareness of the shared and complementary strengths and weaknesses of each team member, and the team as a whole. The emergence of this collective awareness will help athletes to co-regulate their bio-psycho-social states in high pressure situations.
Collective Efficacy	Educate athletes on the various sources of collective efficacy. When the objective outcome is poor during a match, athletes must be aware that sticking together (cohesion) and exerting effort during a bad moment in a match will help to bring confidence back.
Home Field Disadvantage	Educate athletes on home field disadvantage, which may lead athletes to engage in avoidance rather than approach motivation.

offered here are limited to the author's phenomenological stance and focused on Brazil's performance only. Space is limited in this commentary paper but practitioners should also reflect on what Germany did to perform so well that night as Neymar said himself: "Everything went wrong [for Brazil]! And, at the same time, everything worked well for them" (Neymar; Monteiro, 2017). In this regard, consideration of the growing literature on mental resilience might be fruitful in future performance analyses in sports and beyond. Finally, although the circumstances of that match will never be repeated in the exact same way in the future, it is worth remembering that tough losses are "teachable moments" that carry many growth opportunities for players, teams, coaches, and countries.

REFERENCES

Aggarwal, C. C. (2017). *Outlier analysis*. Cham, Switzerland: Springer.

Apitzsch, E. (2009). Coaches' and elite team players perception and experiencing of collective collapse. *Athletic Insight*, *1*(2), 57-74.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W.H. Freeman.

Baumeister, R.F., & Steinhilber A. (1984). Paradoxical effects of supportive audiences on per-

formance under pressure: The home field disadvantages in sports championships. *Journal of Personality and Social Psychology*, *47*, 85-93.
Boje, D. M., Haley, U. C., & Saylors, R. (2016). Antenarratives of organizational change: The microstoria of Burger King's storytelling in space, time and strategic context. *Human Relations*, *69*, 391-418.
Carron, A. V., Loughhead, T. M., & Bray, S. R. (2005). The home advantage in sport competitions: Courneya and Carron's (1992) conceptual framework a decade later. *Journal of Sports Sciences*, *23*, 395-407.
Cooke, N. J., Salas, E., Cannon-Bowers, J. A., & Stout, R. J. (2000). Measuring team knowledge. *Human Factors*, *42*, 151-173.
Cotterill, S., & Fransen, K. (2016). Athlete leadership in sport teams: Current understanding and future directions. *International Review of Sport and Exercise Psychology*, *1*, 116-133.
Farrow, D. & Baker, J. (2018). The future of sport expertise research: Barriers and facilitators in theory and practice. In J. Baker & D. Farrow (Eds.), *Routledge handbook of sport expertise* (pp. 439-444). New York, NY: Routledge.
Feltz, D. L., Short, S. E., & Sullivan, P. J. (2008). *Self-efficacy in sport*. Champaign, IL: Human Kinetics.
FIFA.com (2014, July 9). The Mineirazo in numbers. Retrieved June 6, 2018, from http://www.fifa.com/worldcup/news/the-mineirazo-in-numbers-2402146
Filho, E., & Tenenbaum, G. (2020). Team mental models: Taxonomy, theory, and applied implications. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (4th ed., pp. 611-631). Wiley Publication.
Filho, E., Gershgoren, L., Basevitch, I., Schinke, R., & Tenenbaum, G. (2014). Peer leadership and shared mental models in a college volleyball team: A season long case study. *Journal of Clinical Sport Psychology*, 8, 184-203. https://doi.org/10.1123/jcsp.2014-0021
Fransen, K., Decroos, S., Vanbeselaere, N., Vande Broek, G., De Cuyper, B., Vanroy J., & Boen, F. (2015). Is team confidence the key to success? The reciprocal relation between collective efficacy, team outcome confidence, and perceptions of team performance during soccer games. *Journal of Sports Sciences*, *33*, 219-231. http://dx.doi.org/10.1080/02640414.2014.942689
Gardner, F. L., & Moore, Z. E. (2007). *The psychology of enhancing human performance: The mindfulness-acceptance-commitment (MAC) approach*. New York, NY: Springer Publishing Company.
Gorman, J. C. (2014). Team coordination and dynamics: Two central issues. *Current Directions in Psychological Science*, *23*, 355-360.
Haslam, S. A., Steffens, N. K., Peters, K., Boyce, R. A., Mallett, C. J., & Fransen, K. (2017). A social identity approach to leadership development: The 5R program. *Journal of Personnel Psychology*, *16*(3), 113.
Leo, F. M., Sánchez-Miguel, P. A., Sánchez-Oliva, D., Amado, D., & García-Calvo, T. (2013). Analysis of cohesion and collective efficacy profiles for the performance of soccer players. *Journal of Human Kinetics*, *39*, 221-229.
Leo, F. M., González-Ponce, I., Sánchez-Miguel, P. A., Ivarsson, A., & García-Calvo, T. (2015). Role ambiguity, role conflict, team conflict, cohesion and collective efficacy in sport teams: A multilevel analysis. *Psychology of Sport and Exercise*, *20*, 60-66.
Lyra, F., Borges, L., Torre, P. H., & Lerne, T. (2014, July 12). 7 to 1 again? Brazil did not have Neymar and Thiago Silva and was under pressure, says Schweinsteiger. Retrieved June 6, 2018, from http://www.espn.com.br/noticia/425016_7-a-1-de-novo-brasil-nao-tinha-neymar-e-thiago-silva-e-estava-pressionado-diz-schweinsteiger
Mewis, J. (2014, July 9). "The worst day of my life": Brazil boss Luiz Felipe Scolari asks for forgiveness after Germany trashing. Retrieved June 6, 2018, from https://www.mirror.co.uk/sport/football/world-cup-2014/the-worst-day-life-brazil-3830788
Monteiro, M. A. (2017, December 27). Neymar talks about the eternal 7 to 1 in the 2014

World Cup: "It was a disaster for us, nobody forgets". Retrieved June 6, 2018, from http://www.alemanhafc.com.br/2017/12/neymar-7x1-copa2014.html

National Geographic - Air Crash Investigation. Retrieved from http://www.natgeotv.com/air-crash-investigation

Prosperi, L. A. (2016, December 26). Interview/Felipao: I do not think it's fair to say that I'm the only one to blame". Retrieved June 6, 2018, from http://chuteirafc.cartacapital.com.br/felipao/

Romyn, D. J., & Kebbell, M. R. (2018). Mock terrorists decisions' concerning use of the internet for target selection: A red-team approach. *Psychology, Crime & Law*, *24*, 589-602.

The State of S. Paulo. (2014, July 14). Brazilian team suffered too much pressure, says psychologist. Retrieved June 6, 2018, from https://esportes.estadao.com.br/noticias/futebol,copa-do-mundo,selecao-brasileira-sofreu-demais-com-pressao-diz-psicologa,1528700

Valeika de Barros, F. (2016, June 28). 'My dream is not over', says David Luiz for the magazine Placar. Retrieved on June 6, 2018, from https://veja.abril.com.br/placar/meu-sonho-nao-acabou-diz-david-luiz-para-a-revista-placar/

Wallace, H. M., Baumeister, R. F., & Vohs, K. D. (2005). Audience support and choking under pressure: A home disadvantage? *Journal of Sports Sciences*, *23*, 429-438.

Wergin, V. V., Zimanyi, Z., Mesagno, C., & Beckmann, J. (2018). When suddenly nothing works anymore within a team-Causes of collective sport team collapse. *Frontiers in Psychology*, *9*, 2115.

Wright, E., Voyer, D., Wright, R., & Roney, C. (1995). Supporting audiences and performance under pressure: The home-ice disadvantage in hockey championships. *Journal of Sport Behavior*, *18*, 21-28.

Manuscrfipt submitted May 2020. Accepted for publication March 2021.