

The Effectiveness of Avoidance Coping and Learned Coping in Mitigating Choking Experiences
in Sports

Comparatively, how effective are avoidance coping and learned coping in managing 'choking
under-pressure' in athletes?

Psychology

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Introduction

In the semi-final game of the 2019 Women's World Cup, powerhouse teams of the USA and England faced each other to determine who would advance in the tournament. With a little less than 10 minutes remaining of 2-1 match, England's team captain Steph Houghton steps up to take a penalty kick, the placement of the ball just a mere length of 12 yards from the goalie. It is just USA's goalkeeper, Alyssa Naehar, and 12 yards separating England from tying the tight game. Houghton strikes the ball and it is easily saved by Naehar. In a later interview Houghton states, she "just didn't get a good connection."

As a team captain and a well-seasoned player, it is undeniable Houghton possesses the technical ability to score a PK. With the weight of that moment, was she just overly self-conscious? Too focused on her movements? Or was it just a bout of bad luck?

These moments aren't localized to women's soccer. In fact, in Men's World Cup shoot outs 90% of kicks to win are scored, however, that number drops to 60% when the shooter must score to keep the shoot-out alive. In essence, it is clear pressure affects performance.

This phenomenon, shown in these examples, has been coined as the term *choking*. The occurrence of choking is universal, not only the world of sports but other activities of competitive nature as well. Choking is defined as the occurrence of suboptimal performance under pressure conditions (Baumeister and Showers, 1985). Choking, specifically in sports, is caused by disturbances which is due to self-focus and / or distraction (Beillock and Gray 2007).

A variety of theories have been postulated regarding the most effective ways to manage choking in sports. Despite the plethora of theories, not all theories are credible, as choking can be difficult to study. This is due to the difficulty of creating an experiment with ecological validity.

Choking is directly correlated with perceived, extreme pressure which is difficult to accurately facilitate in an artificial environment.

Moreover, two main categories of coping strategies have come to the attention of psychologist in recent years. These categories include avoidance coping which includes strategies that come more naturally like rushing, denial and hoping. In contrast to learned coping strategies, which can be taught and learned by an individual. Examples of learned coping strategies include: cognitive reappraisal, simulated practice, practiced distraction and a pre-shot routine.

The aim of this essay is to investigate these two coping strategies in regards to their effectiveness in eliminating choking in athletes through analysis of studies on both methodologies. In essence; **Comparatively, how effective are avoidance coping and learned coping in managing ‘choking under-pressure’ in athletes?**

Learned Coping

As previously outlined, there are two coping strategies on the forefront of the field and study of sports psychology. Learned coping focuses on creating routine in order to minimize the unfamiliarity, a common ingredient in high pressure situations that lead to choking. Firstly, to understand the complexities of coping, the tendency it is aimed at preventing must be further explained. To qualify an occurrence as choking, one must consider the skill level of the athlete in relation to their given task, and if pressure is significant enough to affect one’s performance. If an athlete’s ability exceeds the expected task yet, under pressure, they perform far lower than the expectation of them, it is considered choking. Also, choking assumes the performer has a desire to succeed. If an athlete isn’t motivated they aren’t experiencing any pressure to perform.

Learned coping is based on the working model on choking of a distraction model (Beilock, Kulp et al. 2004) which explains suboptimal performance a product of attentional shifts from task-relevant cue to irrelevant ones. This theory asserts that athletes will become too immersed in their own task-irrelevant thoughts to deal with the task at hand. Of course, additional details have been added to the distraction theory as well. Overall, learned coping can be summarized by the phrase 'mind over matter' as it is the conscious, cogitative, and repeated practices that can overcome difficult, pressurized circumstances in sports. Some of these practices include a pre-shot routine (deep-breath, trigger word, etc.), cognitive reappraisal (a logical evaluation of stressors), and other practiced measures.

A study on learned coping is Balk *et al.* (2013). The sample included forty golfers from a Dutch golf club, 12 women and 28 men. Moving into the methods used in the case study, the group was randomly assigned either emotion regulation strategies of reappraisal or distraction or were chosen to be a control group. Participants were directed to put 8 holes in 3 different blocks, all varying distances in order to decrease familiarity. A monetary reward was used as an incentive to preform and participants were also videotaped to increase the pressure. These arousal techniques were proven effective in simulating pressure during a pilot study where heart rate was taken and self-reports of arousal were given by participants. The conclusions of the study were that both emotion regulation techniques were effective in preventing choking and performance increments or clutch performances were even seen in golfers employing the distraction technique.

Though present, limitations of this study are few. One limitation was that the study uses convenience sampling as all golfers are from the same golf club and the subjects were disproportionately male. These factors take away from its generalizability.

However, in terms of strengths, this study is abundant. This study maintained ethicality as the participants were given the money they were promised. Arousal levels were taken qualitatively and quantitatively throughout the study to ensure the environment created held ecological validity to a real pressurized scenario. *Pressure is defined as the presence of situational incentives for optimal, maximal or superior performance.* (Baumeister and Showers, 1985) Without the presence of perceived pressure choking is not possible. This measure in case studies on choking cannot be underestimated as the validity of the results directly depend upon perceived pressure on the part of the individuals. A strength related to sample size is that the chosen group were golfers. A team sports player would've been more difficult to study as pressure only applies to single performances in the sense that it's not correct to say a team 'choked' in a lost game, rather pressure hindered various individual performances. Further, a choking instance in a team sport would've been harder to isolate and pinpoint, in contrast, a choking instance in a non-team sport, like golf, is evident.

A similar study is Mesagno *et al* (2008). Consisting of 3 single case studies, the tenpin bowlers were chosen for their mastery at their sport as well as meeting planned choking intervention criteria. Multiple phases ensued with varying degrees of pressure facilitated through a monetary incentive, audience and video camera, for the purpose of both analysis and creation of pressure, and a pre-shot performance routine (PPR) was used as the method of learned coping assigned. At each phase performance routine completion time (PRCT) and variability was measured to provide quantitative data, and after these phases were completed interviews were conducted and translated verbatim. Through consistency in PRCT and evidence in the interviews, a PPR aided all participants in pressure management, therefore, avoidance of choking.

Interviews were analyzed by first the researcher and then sent out to an independent researcher to be interpreted, the initial analysis was corroborated by this independent researcher. This strengthens the study as biases in interpretation are avoided and the validity of results is increased. Ethicality was also taken into consideration in this study. The promised monetary was delivered after the study and not only were participants briefed about the study in general, but specifically on pressure manipulation. However, this can be also seen as a weakness as necessary deception would've strengthened results.

Avoidance Coping

Firstly, it must be understood that avoidance coping works off of *The Explicit Monitoring Theory* (Baumeister 1984). When anxiety causes athletes to become overly conscious of their movements, actions that have been learned to perfection so that the athlete does not normally think about them will suddenly do so. In other words: athletes will sometimes consciously monitor explicit components of skill in response to pressure. Paradoxically put, the deterioration of a well-learned automatic skill, *for they are normally processed through procedural implicit knowledge, outside conscious control* (Carver and Scheier 1978). However, in recent years, scientist have built upon the definition of choking or come up with updated explanations of their own. Jackson et al. adds that choking occurs when athletes attempt and fail to consciously monitor and control movements

Avoidance coping is appropriately nicknamed “escape coping” as in response to a stressor an athlete will employ methods of denial, hoping or other “escape” strategies. Avoidance coping was one of the first theories in the journey of piecing together a way to combat choking under pressure. At that time, avoidance coping was logical because the initial explanations for choking were ascribed to a self-focus theory, that choking is only caused by over fixation on

ones' perfected skills. Therefore, the idea that through avoidance coping one will lessen the fixation on the skill at hand made sense.

A study that embodies these beliefs is Wang *et al.* (2004), the present study focuses on the connection between coping styles and choking susceptibility. Using a Coping Style Inventory for Athletes (CSIA) (Anshel & Kaissidis, 1997) a questionnaire used to evaluate subjects' approach and avoidance coping strategies, eighty-eight basketball players were recruited to partake in this study. Participants were asked to take 20 free throws in low-pressure conditions and 20 free throws in high-pressure conditions and performance was evaluated quantitatively. During the low-pressure phase only a researcher was present, in contrast to high-pressure, where an audience, video camera and monetary prize was present. Anxiety levels were recorded before each test through Competitive State Anxiety Inventory tests (Martens, Burton, Vealey, Bump, & Smith, 1990). Researchers determined through correlation and hierarchical regression analysis that learned coping is tied to choking and avoidance coping to clutch performances. In contrast to choking, clutch performance is any performance *increment* or *superior* performance that occurs under pressure circumstances. This result is what both types of coping strategies previously mentioned, learned coping strategies and avoidance coping, strive to achieve clutch performance. The researchers' hypothesis was further confirmed by their findings as a significant positive correlation between a learned coping style to intense cognitive state anxiety.

This study relies on quantitative information, in itself, this is not a wholly bad thing. However, the method in which researchers collected data serves as a weakness to the investigation at hand. The CSIA was given to the athletes' weeks before the actual case study, and the researchers didn't confirm or assign strategies to any of the athletes the day of the tests. This sacrifices the validity of the results greatly as the whole basis of this experiment is related to

their coping strategies that were not confirmed. In addition, athletes' state of anxiety and perceived pressure were only taken into account before the tests and no interviews were conducted after the tests to gauge anxiety levels. This is flawed as anxiety levels might've dropped or gotten higher during the test, this inconsistency could've affected their quantitative calculations.

A theory that postulates the legitimacy of avoidance coping is detailed by a study done by B. Noël, van der Kamp and Memmert (2015) on penalty kicks in soccer and the subtle asymmetric positioning on the goalkeeper's line having an influence on an expert soccer player's decision. The discussion section details, 'implicit influences of the goal keeper's position on goal side section were consistently overridden by the perceptions of the direction of the goalkeeper's dive... only if the penalty kickers monitored deliberately monitored the goalkeeper's action and the goalkeeper committed early enough for the penalty takers to respond.' This excerpt means that actions of experts are fluid. They have the ability to subconsciously adjust to their environment based off of implicit cues without self-monitoring. In essence, because self-monitoring is a part of learned coping one can assume experts can rely on their own avoidance coping to avoid choking.

Jordet and Hartman (2008) was a study conducted in order to analyze professional penalty shootouts through shot valence and visual avoidance behavior. Shot valence is split into two classifications, negative shot valence: where a missed shot leads to a loss and positive shot valence: where a shot is made to win the shootout. This information was coded by two independent observers and data showed that a negative shot valence was associated with avoidance behavior. Also, high preparation speed was a part of avoidance behavior and equated to poor performance/choking.

A strength of Jordet and Hartman (2008) is the sample size as 36 shootouts were observed equating to 359 kicks. This is a strength in the study as it was hundreds of kicks that confirmed the trends observed. In addition, the film obtained was from men and women's World Cup, UEFA Champions League, and European Championships. The expertise of the players is affirmed by the fact that these are all professional leagues and the variety of different leagues and types of games makes this sample more reliable. As far as method, the film was analyzed by observers independent of the study. Therefore, biases on the part of the researchers were mitigated. As far as methodology chosen to assess avoidance behavior, observers only relied on visual displays of avoidance behavior. This limits the strength of the results as it is not taken into account what mental processes are going being employed at the time.

Overall, avoidance coping is theorized to work off of the more dated self-focus theory to explain choking, when athletes are overly conscious of their movements because of increased self-awareness and anxiety. Without adequate research done to wholly refute or confirm this self-focus theory, avoidance coping cannot be discredited at its root.

Comparative Studies

An example of the idea of learned and avoidance coping being put to the test is in the study of Hills and Hemmings (2015). The sample of this study was a group of 6 elite golfers who experienced choke and clutch performance and had ages ranging from 17 years old to 25 years old. An interviewer asked open ended questions allowing the participants to provide details from both choking and clutch experiences.

The study found that all 6 golfers had avoidance coping associated with their choking episodes. A common method being self-focus and hope, as 3 of 6 participants detailed this as well as venting (frustration or anger). The reasoning participants gave for avoidance coping was

because they perceived it as helping in previous experiences. Though avoidance coping may have worked at some point in the past, given avoidance coping associated with choking for all participants their reasoning is flawed. Importantly, in clutch performances all 6 golfers had a pre-shot routine, cognitive reappraisal and/or stimulated practice (practicing under similar pressure/threatening conditions).

Despite the findings from Hills and Hemmings (2015) overwhelmingly supporting the implementation of learned over avoidance coping, the limitations and strengths of this study must be considered in order to evaluate this study.

The chosen sample for this study has a variety of weaknesses including the size of it and the ages of the participants. The size only being 6 participants limits the generalizability of the findings. The study would've been more reliable had there been a larger pool of participants to collaborate their experiences. That being noted, all 6 golfers had nearly identical accounts therefore mitigating the limitation of having a smaller sample size. As for the age of the golfers only being 17 to 25, again, the smaller range of age in the sample limits the generalizability of results. That being said, naturally given the peak age of most athletes being on the younger side, it is logical that participants ages favor adolescence/young adult-hood. Though these limitations are present, they do not greatly interfere with the validity of the findings

Strengths and limitations can also be explored through the method in which the researchers chose to conduct the study. Again, as Balk *et al.* (2013) chose, the focus of the study is golfers, a non-team sport. Specific to this study, 2 of the 6 interviews were conducted over the phone. This sacrifices the interviewer notes and only provides a verbal interview transcript which weakens the validity of those two interviews. The choice of an interview over a case study is a strength as choking is difficult to observe in a case study so the patterns of coping are most

straightforward method of analysis. However, the method of interviewing can also be influenced by lapses in memories or the recollection of memories, for example confirmation bias.

An additional study of similar nature supports these findings. Hill et al employed interviewing a group of golfers who performed poorly under pressure, a group of golfers who excel under pressure and golf coaches. The universal consensus was those who excelled under pressure employed a variety of learned coping. A chief method includes a post-shot routine. One participant who excels under pressure details:

I use my glove as my kind of mechanism... if I hit a bad shot, then I think about it... I tap my club on the floor... and then I move on. As soon as my Velcro comes off my glove, I forget about it... and I will always reward myself for a good shot. It is usually a tap on my leg... and I tap my putter head.

Anecdotes like this can be seen throughout the study and widely support the implementation of learned coping. Further, these ideas are supported by accounts from coaches on their most successful golfers. The golfers who performed poorly under pressure detail either the failure of follow through in a chosen learned coping strategies or the usage of avoidance coping such as rushing.

A strength of this study is that a pamphlet was given to participants. This pamphlet detailed choking experiences as well as high pressure environments. This encouraged recall of their choking and pressured experiences. A weakness of this study was sample size as it was a majority men, limiting its generalizability to females.

Evaluation

Learned coping and avoidance coping, whilst different in their implementation, aim to combat the phenomenon of choking, through conscious changes in athletes' behavior and mental

processes under pressure. Both coping methods format their practices based off of different explanations for choking, a self-focus model vs distraction model, self-focus and distraction theories contrast and scientist such as Baumeister and Showers (1986) advise “The development of therapeutic techniques for ameliorating choking must wait for this debate to be resolved” (p. 377). With avoidance coping’s roots in a self-focus explanation, this theory employs strategies that aim to lessen an athlete’s focus on themselves examples of avoidance coping include denial and hoping. This contrast learned coping that is developed off a distraction theory meaning that treatment aims to manage pressure, this includes more measured methods like cognitive reappraisal and a pre-shot performance routine. They, nonetheless, attempt to manage the pressure and re-direct focus in some way and are, therefore, more effective than not acknowledging and treating the potential for choking at all.

Moreover, the basis of these methods of coping are similar but differ in the ways in which they address and treat choking. Each of these theories has a solid argument through a different approach, and have a following from psychologist in the study of choking. However, because learned coping is based off of a distraction explanation and avoidance coping is based off of a self-focus explanation, without a unanimous consensus from the sports psychology community about either self-focus or distraction explanation being disproven, it is impossible to refute either coping theory.

One similarity is that both coping practices fail to address other variables specific to subjects such as perfectionism, Obsessive Compulsive Disorder and psychological resilience and there is little research available in the field to address how these personal traits make the coping styles more reliable or flawed. Also, avoidance and learned coping are umbrella terms as they have a variety of different techniques organized under each category. This is a weakness, for

example, an evaluation of a pre-shot performance routine and stimulated practice (both learned coping) can be different in their effectiveness even though they are of the same learned nature. This appears to be where the similarities between the methodologies end.

One of the central differences is the sophistication of these techniques. The employment of strategies like denial and rushing are gut reaction to stressors. Though this does not necessarily sacrifice the validity of avoidance coping it is much less calculated than its counterpart, learned coping. Learned coping can be taught by a sports psychologist or just self-taught overtime. Because the athlete can choose what form of learned coping to use, they can self-evaluate which one works best for them to avoid choking. This contrasts avoidance coping as they are come naturally as a means of escape and the athlete is, for the most part, stuck with their bodies' default choice of escape/avoidance.

An additional difference is the date of development. Avoidance coping predating learned coping can be seen as a strength and weakness. It is strength to learned coping in the sense that this theory was developed with hindsight and a large amount of research had already been done on choking under pressure. Similarly, learned coping has not had the time to show long-term effectiveness or time to be challenged or disproven by psychologist.

Avoidance coping and learned coping differ in the available data, qualitative and quantitative, done on each method. Studies are more limited on avoidance coping and in these studies empirical data is lacking. In contrast, learned coping has an abundance of studies as well as being thoroughly studied through case studies, single case studies and interviews. Further, in these studies, avoidance studies have more overall weaknesses that are detrimental to the support of avoidance coping. Learned coping studies have a plethora of strengths that encourage the validity of the findings. Overall, learned coping is not only better supported by the amount of

evidence but the strength of its studies as well, making learned coping the more effective strategy.

Conclusion

Weaknesses prevail in both methods; however, the more effective method is outweighed by strengths. The studies supporting avoidance coping have weaknesses that sacrifice validity of the data. Studies on learned coping have less detrimental weaknesses and strengths that reinforce learned coping. In the same vein, there is more quantitative and qualitative evidence to support learned coping. Coupling these two factors, it can be asserted learned coping is the more effective method to remedy choking under pressure in athletes.

The implications of the usage of these techniques is evident for athletes. The most straightforward application of these techniques, more so learned coping, is the avoidance of choking. On the professional level, this is monumental for the world of sports and sports entertainment. Ideally, the total elimination of choking through the usage of these techniques saves professional athletes from the embarrassment and stress of choking under pressure. When choking occurs in a championship game or important moment, the advertisement and commentary is magnified as naturally these moments get a lot of viewership. For every superstar athlete, there is a guarantee that somewhere on the internet compilations of “worst moments” exist.

The establishment has been made that learned coping is the superior method but; Are there times one coping method is more viable than the other? This is dependent on the resources and motivation of the athlete. For example, a college soccer player is most likely to have the means to contact a sports psychologist to be taught how to employ a pre-shot routine or cognitive reappraisal. Further, because this athlete is at a higher level than a youth and or a recreational

player and the colligate athlete will have more tenacity in applying these techniques. Therefore, avoidance coping would be a more viable option for those who do not see a future in sports. Despite this implication, learned coping could have application outside the world of sports. Mastering techniques of learned coping can manage choking on an exam or a presentation. Overall, through comparative analysis, it is undeniable the application of learned coping and even avoidance coping at times can aid in the mitigation of choking experiences in athletes.

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