

Psychological Strategies in Sport Stacking: A Study on How Top Stackers Overcome Nerves On-Deck

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1. Introduction

How do athletes manage and overcome the nerves they experience when competing?

The way athletes handle nervousness can significantly impact their performance, leading them to explore various strategies to ease their anxiety. Nervousness appears differently depending on the nature of the sport, and the methods to overcome it vary based on individual preferences and approaches. For instance, table tennis demands quick reflexes, while basketball centers around endurance and teamwork, meaning the different techniques each sport requires could influence the ways athletes use to reduce their nerves. Even within the same sport, athletes may adopt different techniques. Thus, selecting the “best method” to overcome nerves during competition is a complex and challenging task.

This study focuses on how athletes in one particular sport—Sport Stacking—overcome nervousness. Sport Stacking involves swiftly stacking and unstacking a set of nine or twelve plastic cups in a specific sequence. Athletes in this sport are called “Stackers,” and the competition area is known as “On Deck.” The thrill of Sport Stacking lies in the intense and exhilarating battles that unfold in mere fractions of a second on deck. Stackers relentlessly train to reduce that margin of difference in those brief moments.

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² Saeryung Park is a South Korean national athlete ranked 5th in the world among female sport stackers. She secured 2nd place overall in the women’s individual all-around at the 2019 World Championship and returned to the podium in 2022 by finishing 3rd. In 2024, she solidified her position by claiming 1st place overall in the women’s division at the AAU Junior Olympics. Saeryung is also dedicated to the growth of sport stacking and actively contributes to its development. You can learn more about her on her YouTube channel: https://www.youtube.com/@_3ryung

Many people might assume that the world's top stackers have conquered their nerves on deck. However, in a sport like Sport Stacking, where outcomes can be determined by the smallest of margins, overcoming nerves is no easy feat. As authors of this study and members of the South Korean national team, we have competed in numerous tournaments, yet we still feel nervous and anxious every time we step on deck. Nervousness can prevent athletes from performing at their best, even after extensive practice. So, how do stackers manage and overcome their nerves on deck?

This study begins with these questions and aims to analyze how world-class stackers overcome nervousness on deck. By sharing these insights with the stacking community, we hope to help stackers worldwide overcome their nerves and achieve their best performance.

2. Theoretical Background

1) Sport Stacking

Sport stacking is a sport that originated in Southern California in the early 1980s. It gained significant attention after the activity of "cup stacking" was featured on "The Tonight Show" in the 1990s.³ The sport is divided into individual and team events, with individual events including the 3-3-3, 3-6-3, and Cycle, while team events consist of Doubles and Relay.⁴ According to the World Sport Stacking Association (WSSA),⁵ as of September 26, 2024, South Korea's Si Eun Kim holds the world records in all women's categories, with times of 1.547 seconds in the 3-3-3 event,⁶ 1.901 seconds in the 3-6-3 event,⁷ and 5.005 seconds in the Cycle event.⁸

In the men's division, William Orrell from the United States holds the 3-3-3 world record with a time of 1.392 seconds,⁹ while Chan Keng Ian from Malaysia holds the world records for the 3-6-3 event

³ Speed Stacks Inc. *History of Sport Stacking*. [Website] <https://www.speedstacks.com/instructors/resources/history/>

⁴ Speed Stacks Inc. (2014.12.18.). *Episode 1 - Introduction - Learn To Stack*. [Video] <https://www.speedstacks.com/learn/?lang=en>

⁵ WSSA. *World Records*. [Website] <https://www.thewssa.com/records>

⁶ World Sport Stacking Association. (2024.01.13.). *Female Individual 3-3-3 Sport Stacking World Record 1.547 (Si Eun Kim // Korea)*. [Youtube] <https://www.youtube.com/watch?v=dkVQnW-127Q>

⁷ World Sport Stacking Association. (2024.07.11.). *Female Individual 3-6-3 Sport Stacking World Record 1.901 (Si Eun Kim // Korea)* [Youtube] <https://www.youtube.com/watch?v=Et3GBIwsYzA>

⁸ World Sport Stacking Association. (2024.07.13.). *Female Individual Cycle Sport Stacking World Record 5.005 (Si Eun Kim // Korea)* [Youtube] <https://www.youtube.com/watch?v=uLx7Y8V2PvA>

⁹ World Sport Stacking Association. (2024.07.11.). *Male Individual 3-3-3 Sport Stacking World Record 1.392 (William Orrell // U.S.A.)*. [Youtube] <https://www.youtube.com/watch?v=otEBtJlHXEU>

with a time of 1.751 seconds¹⁰ and the Cycle event with a time of 4.739 seconds.¹¹ Additionally, in the Doubles event, Chan Keng Ian and Woo Xin Yi from Malaysia set a world record with a time of 5.603 seconds.¹² The Frisbee team from the United States holds the world record for the 3-6-3 Relay event with a time of 12.234 seconds.¹³

2) The Concept of 'Nerves'

What exactly is nervousness, and when and how does it occur? It arises when athletes perceive a challenge or threat to their performance, often triggered by the significance of the event, expectations from others, or self-imposed pressure. Symptoms can include increased heart rate, sweating, and anxiety. While a certain level of nervousness can enhance focus, excessive nervousness can impair performance by causing tension and decreased motor control.¹⁴

In the context of sport stacking, stackers frequently experience excessive nervousness due to pressure related to setting records, the gaze of the audience, or the expectations of those around them. However, because sport stacking competitions can be decided by differences as small as 0.001 seconds, precise movements and quick reactions are essential. Therefore, managing nervousness to maintain an optimal state is crucial. For this reason, in sport stacking, regulating nervousness and maintaining peak condition is considered even more critical than in many other sports.

3) 7 Strategies for Overcoming Sports Performance Anxiety

As we embark on this study, it is valuable to explore potential solutions that athletes can refer to, drawing on the findings of experts. Joe Puentes, a researcher at the Performance Psychology Center, has proposed the following strategies for athletes to overcome nervousness and improve their performance.¹⁵

¹⁰ World Sport Stacking Association. (2023.03.15.). *Male Individual 3-6-3 Sport Stacking World Record 1.751 (Chan Keng // Malaysia)*. [Youtube] <https://www.youtube.com/watch?v=j4Fus6We8Sw>

¹¹ World Sport Stacking Association. (2023.11.30.). *Male Individual Cycle Sport Stacking World Record 4.843 (Chan Keng // Malaysia)* [Youtube] <https://www.youtube.com/watch?v=KMsYKpMFBn8>

¹² World Sport Stacking Association. (2024.07.11.). *Overall Doubles Cycle Sport Stacking World Record 5.603 (Chan Ken Ian & Woo XinYi // Malaysia)*. [Youtube] <https://www.youtube.com/watch?v=62003Q0Pnuo>

¹³ World Sport Stacking Association. (2024.03.19.). *Overall Timed 3-6-3 Relay Sport Stacking World Record 12.234 (Frisbee!)*. [Youtube] <https://www.youtube.com/watch?v=1BFvwogAvZ0>

¹⁴ Weinberg, R. S., & Gould, D. (2018). *Foundations of Sport and Exercise Psychology* (7th ed.). Human Kinetics.

¹⁵ PERFORMANCE PSYCHOLOGY CENTER. (2023.11.14.). *Overcoming Sports Performance Anxiety: 7 Proven Strategies for Athletes*. <https://www.performancepsychologycenter.com/post/sports-performance-anxiety>

① Mindfulness and Relaxation Techniques

'Mindfulness and Relaxation Techniques' help athletes maintain a calm and stable mental state before or during competitions. Joe Puentes suggests deep breathing, meditation, and stretching as examples of this strategy. Deep breathing supplies ample oxygen to reduce both physical and mental tension, while meditation helps athletes focus on the present moment, freeing them from unnecessary thoughts or worries. These techniques help relax muscles, allowing athletes to stay focused and composed, even in high-pressure situations.

② Positive Visualization

The second strategy is 'Positive Visualization.' This involves athletes mentally rehearsing successful performances during competitions or training and internalizing those positive images. By visualizing success, athletes can enhance their confidence and reduce nervousness, which helps them approach competitive situations with a more positive mindset.

③ Goal Setting and Reframing

'Goal Setting and Reframing' involves setting realistic and achievable goals. This strategy helps alleviate the pressure from unrealistic or overly ambitious goals, allowing athletes to embrace the process positively through gradual and attainable milestones. Ultimately, it builds athletes' confidence, helping them feel less burdened by external expectations and scrutiny.

④ Pre-Performance Routines

This strategy emphasizes the importance of establishing consistent 'routines' before a competition. Examples include actions like clapping hands or touching the grass. These routines create a sense of familiarity, helping athletes maintain a calm state and approach important competitions with confidence.

⑤ Cognitive Restructuring

'Cognitive Restructuring' refers to identifying negative thoughts and replacing them with positive ones. Nervousness can intensify when athletes lack self-confidence or doubt themselves. Puentes explains that by replacing self-doubt with positive beliefs and repeating constructive thoughts, athletes can develop stronger mental resilience.

⑥ Performance Imagery Scripts

'Performance Imagery Scripts' allow athletes to mentally rehearse successful performances by visualizing detailed and vivid scenarios. This strategy, similar to 'Positive Visualization,' involves creating a mental scene that includes every aspect, from entering the competition arena to executing specific skills, observing the crowd's reactions, and ultimately achieving success. These imagery scripts strengthen athletes' positive attitudes, boost their confidence, and help them achieve desired outcomes in actual competitions.

⑦ Seeking Professional Support

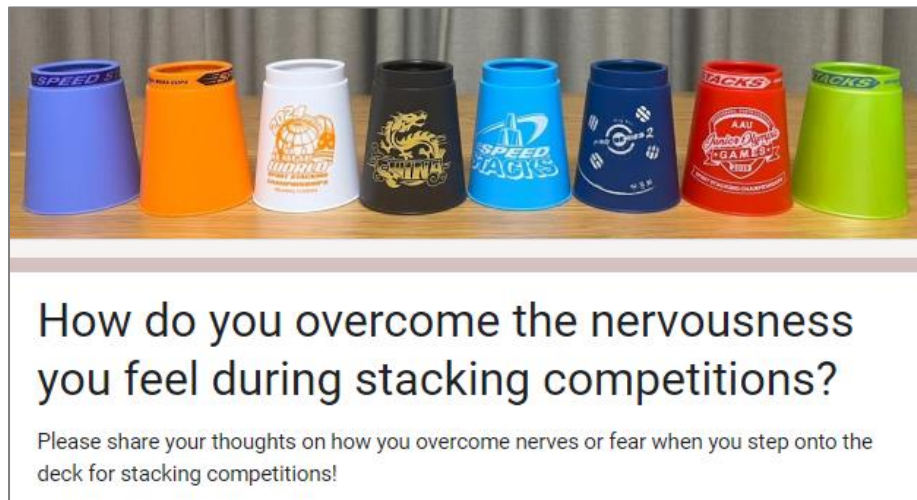
The final strategy is 'Seeking Professional Support.' Many athletes work closely with sports psychologists or mental health professionals to maintain psychological stability through personal counseling, one-on-one focused sessions, and customized training. With the help and advice of these professionals, athletes can develop psychological strategies suited to their environments and conditions, leading to effective performance outcomes.

Having reviewed the seven strategies proposed by the Center for Performance Psychology, the next section will explore how these strategies can be specifically applied to sport stacking athletes.

3. Research Methodology

This study was conducted using both surveys and interviews.

1) Survey



[Figure 1] Survey - Cover

The survey aimed to identify the strategies stackers use to overcome nervousness. It was made available in both Korean¹⁶ and English¹⁷ to allow participation from stackers worldwide. The survey questions were structured around three main topics:

① Stacking Experience

Please write down the year you started stacking using numbers only. (e.g., 2015) *

내 답변 _____

[Figure 2] Survey - Question on Stacking Start Year

This section of the survey focused on the stacking experience of the participants. Personal identifying information such as names, gender, age, and email addresses was intentionally excluded to maintain anonymity and encourage honest responses, as it was anticipated that more questions could lower participation rates. Stacking experience was considered a crucial factor, as it may have significant correlations with the stackers' psychological states and strategies for overcoming nervousness.

¹⁶

https://docs.google.com/forms/d/e/1FAIpQLScmmNFqH6TRgs1207G64wCdHb_pgC7rFcMRctIDL2chbSvuzA/viewform

¹⁷ https://docs.google.com/forms/d/e/1FAIpQLSdmuUQJ5r0gQ0MFeF2t0h8mfQZ1Vs31ypDj_S3-IHr_m7fwLg/viewform

② Most Confident and Least Confident Events

This section investigated the events in which the stackers felt most and least confident, based on the assumption that "greater confidence in a specific event would result in lower nervousness." The goal was to analyze the relationship between confidence in specific events and the level of nervousness experienced.

<p>Please select the event you are least confident in. *</p> <p><input type="radio"/> 3-3-3</p> <p><input type="radio"/> 3-6-3</p> <p><input type="radio"/> Cycle</p>	<p>Please select the event you are most confident in. *</p> <p><input type="radio"/> 3-3-3</p> <p><input type="radio"/> 3-6-3</p> <p><input type="radio"/> Cycle</p>
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[Figure 3] Survey - Question on Stacking Start Year

③ Nervousness Management Strategies

This part of the survey asked stackers about the methods they use to manage and overcome nervousness during competitions. The survey questions were based on the seven psychological strategies mentioned earlier by the Center for Performance Psychology, and participants were asked to select the methods they use. Additionally, they were provided the option to freely describe any unique techniques they personally use (multiple selections were allowed).

Please share the techniques you use to overcome nerves on the deck (multiple selections allowed). *

- ☐ Focus on the present moment and release tension in your body and mind. For example, taking deep breaths and slowly exhaling to calm yourself before stacking.
- ☐ Vividly imagine a successful scenario. For example, picturing the moment you break your record during a competition to boost your confidence.
- ☐ Set specific goals and view them positively. For example, changing the pressure of "I must achieve 5 seconds" to a more positive goal like "Let's try to calmly achieve 6 seconds."
- ☐ Repeat certain actions before the competition to calm your mind and boost confidence. For example, developing a routine of loosening your hands, arranging the cups, and taking deep breaths in the same order every time.
- ☐ Replace negative thoughts with positive ones. For example, changing "What if I make a mistake?" to "I can do this."
- ☐ Imagine specific scenarios and visualize successful performances. For example, visualizing yourself perfectly stacking the cups on the deck, then imagining the sound of the audience cheering and the cups stacking, to boost your confidence.
- ☐ Seek assistance from experts such as sports psychologists or mental coaches. For example, consulting with a sports psychologist to learn and practice techniques to reduce anxiety during competitions.

If your techniques are not listed above, please write them here.

[Figure 4] Survey - Question on Nerve Management Techniques

2) Interviews

This study conducted interviews under the assumption that top-tier stackers each have unique methods for overcoming nervousness. The interviewees included a total of 14 stackers, consisting of current world record holders in sport stacking and those selected based on their rankings in the 2023-2024 season as registered with the World Sport Stacking Association.¹⁸ The interviews were conducted both in person and virtually. All participants were informed beforehand that the interviews might be uploaded to YouTube, and their consent was obtained before proceeding.

Participant Name	Interview Date	Method	Interview Location
William Orrell	2024-07-26	In-person	Greensboro, North Carolina, USA, 2024 AAU Junior Olympics
Peter Ford			
Andrew Dale			
William Polly			
Dalton Nichols			
William Allen			
Sarah Quinn			
Kaitlyn Quinn			
Trey Griffith			
Seamus Stoker			
Tyler Hollis			
Chan Keng Ian	2024-08-04	Virtual	Zoom
Woo Xin Yi			
Si Eun Kim	2024-08-10	In-person	2024 Asia Championship Qualifiers (Daejeon, South Korea)

[Table 1] Information on Stackers Participating in the Interview

In-person interviews were conducted with 12 stackers: 11 from the USA who participated in the 2024 Junior Olympics, and one from Korea, Si Eun Kim, who competed in the 2024 Asia Championship Qualifiers. The interviews with Chan Keng Ian and Woo Xin Yi from Malaysia were conducted via Zoom, allowing for a more relaxed atmosphere in which they could share

¹⁸ WSSA. *Rankings: 2023-2024*. [Website] https://www.thewssa.com/sport-stackers/rank/season_2023-2024/

their insights. The interview questions were designed to delve deeply into the emotions experienced during competitions, based on the results of the surveys.

4. Results

1) Survey Results

① Analysis of Promotion Channels and Participants

Promotion Channel	Posting Period (KST)	Subscribers (Followers)	Estimated Survey Participants
YouTube ‘Jinwan Lee’ Channel ¹⁹	2024.07.03 - Present	Approx. 5,600	29 (12 in Korean survey / 17 in English survey)
Facebook ‘Sports Stacking’ Group ²⁰	2024.07.04 - Present	Approx. 5,000	
Instagram ‘Stack Fleet’ ²¹	2024.07.05 - 7.6	Approx. 12,000	45

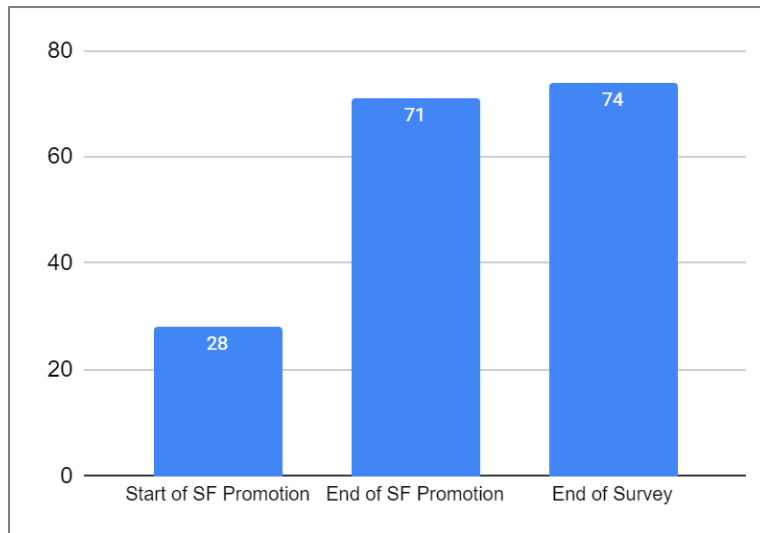
[Table 2] Survey Promotion Channels and Number of Participants

To gather survey participants, this study actively utilized various social media channels, including YouTube, Facebook, and Instagram. First, a video outlining the purpose and content of the research was posted on the YouTube channel ‘Jinwan Lee,’ encouraging subscribers to participate in the survey. Additionally, the survey was introduced and participation was requested in the Facebook group ‘Sport Stacking,’ where over 5,000 stackers from around the world are active. Initially, participation was lower than expected. However, after receiving additional support from the Instagram account ‘Stack Fleet (SF),’ which specializes in sport stacking news, the number of participants rapidly increased. Ultimately, 74 individuals participated in the survey, with 12 responding to the Korean survey and 62 responding to the English survey.

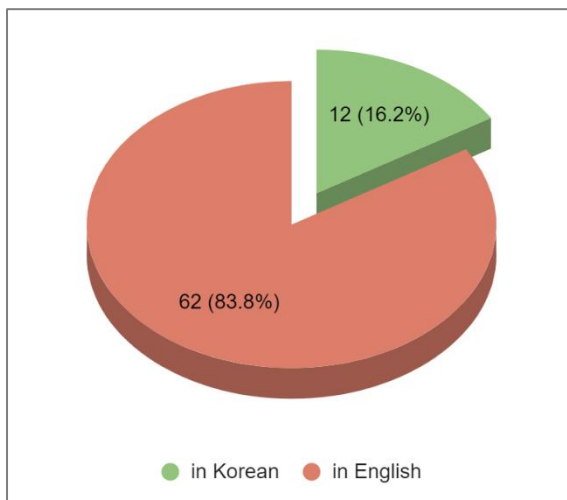
¹⁹ Jinwan Lee. (2024.07.03.). *Please join the survey*. [Youtube]
<https://www.youtube.com/watch?v=1sB8EGWVC2c>

²⁰ Sport Stacking. [Group Page] <https://www.facebook.com/share/gb3toj3m9ZwZeg4S/>

²¹ Stack Fleet. [Instagram] <https://www.instagram.com/stackfleet/>



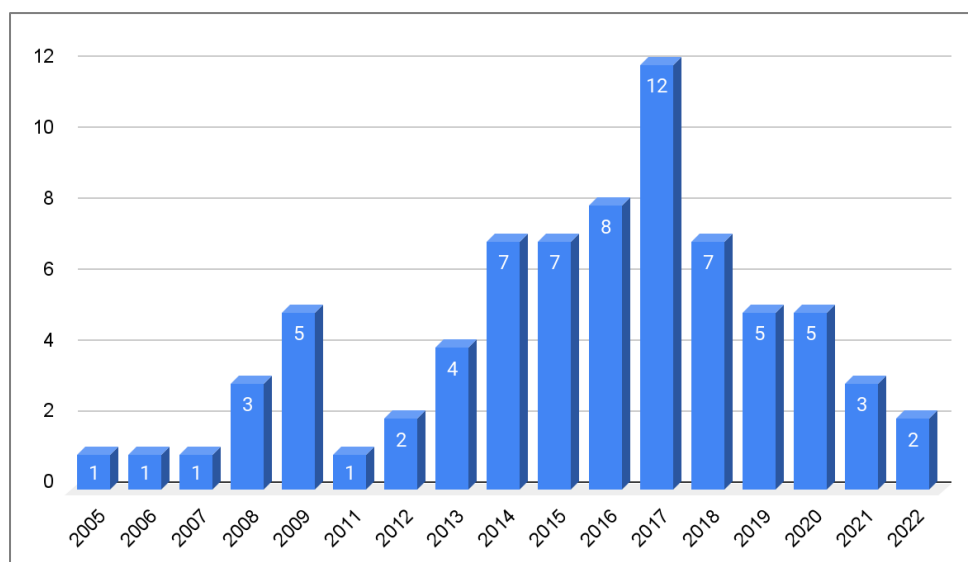
[Figure 5] Increase in Survey Participation
After Instagram Stack Fleet Promotion (Cumulative)



[Figure 6] Number of Respondents for Korean and English

Additionally, it should be noted that the 12 respondents to the Korean survey do not necessarily represent the total number of Korean stackers who participated. The Korean and English surveys were introduced simultaneously on the YouTube channel and Facebook group. However, since the SF Instagram account, which attracted many participants, only promoted the English survey, there is a possibility that some Korean stackers responded to the English survey. Consequently, the analysis was conducted by combining the results from both the Korean and English surveys. Nonetheless, an interesting observation regarding the most and least confident events from the Korean survey will be discussed separately.

② Analysis of Stacking Start Years



[Figure 7] Distribution of Responses Regarding the Year Participants Started Stacking

According to the survey results, the year with the highest number of respondents who began stacking was 2017, with 16.2% of the total respondents indicating they started in that year. Looking at a broader timeframe, more than half of the respondents began stacking between 2014 and 2018. The decrease in the number of stackers starting after 2020 can likely be attributed to the impact of COVID-19.

a. 2005 - 2013

During this period, a relatively small number of respondents started stacking, with 18 participants (24.3%) representing a lower proportion. Considering that most stackers typically start between the ages of 6 and 10, it is estimated that the majority of these respondents are now over 20 years old. Given that sport stacking is primarily an amateur sport, it is likely that many of these individuals ceased stacking after entering college or the workforce. However, those who started stacking during this period are regarded as the "first generation" of stackers and play a significant role in the stacking community.

b. 2014 - 2018

Stackers who began during this period make up 55.4% of the total respondents, representing the largest group. This period coincides with the rise of prominent Korean stackers like Choi Hyun-jong and Kim Si-eun, who began setting world records during this time. Additionally, this was when videos of star stackers such as William Orrell and William Polly began gaining widespread attention on YouTube. Those who started stacking during this time are now in their late teens and are among the most active participants in the sport. However, like the previous

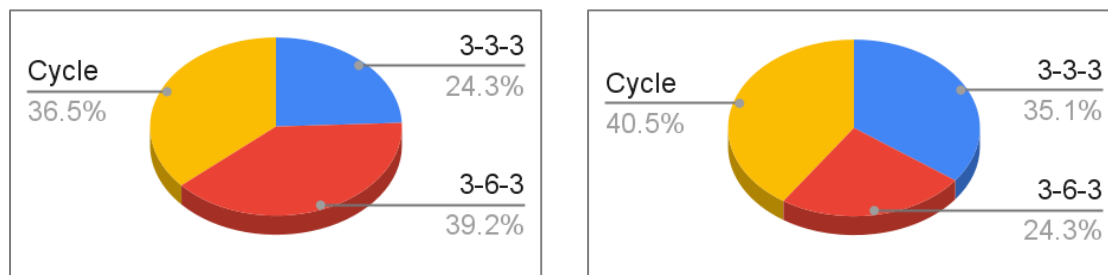
generation, they may also reduce or cease their stacking activities upon entering college or starting their careers.

c. 2019 - 2022

Only 15 respondents (20.2%) began stacking after 2019, a significant decrease compared to previous periods. Several factors may have contributed to this decline. Respondents who started stacking during this time are generally in their early teens and may have had limited access to survey platforms or stacking communities on Instagram, YouTube, and Facebook. Furthermore, the cancellation of competitions for two years due to COVID-19 likely led to a decrease in new stacker participation and caused existing stackers to halt their activities. However, as COVID-19 stabilizes and stacking competitions resume globally, an increase in new stackers is anticipated.

① Analysis of Confident and Least Confident Events

This survey item was designed to analyze the relationship between confidence and nervousness, based on the assumption that "the more confident a stacker is in an event, the less nervous they will feel." The results of the survey regarding the events in which stackers felt most and least confident are as follows:



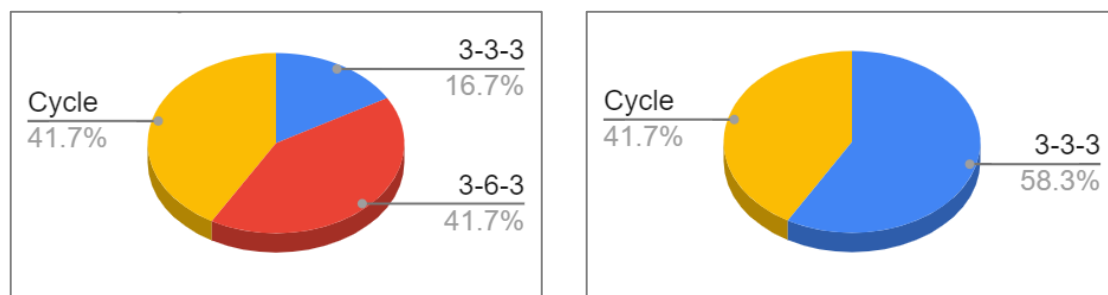
[Figure 8] Consolidated Survey Results for Most Confident Event (Left) and Least Confident Event (Right)

The event that the majority of stackers identified as the one they felt most confident in was the 3-6-3, with 39.2% of respondents choosing this event. This event also had the lowest percentage of being chosen as the event in which they felt least confident, aligning with general expectations. On the other hand, the 3-3-3 event was selected the least as the most confident event but was the second most chosen as the least confident event, logically supporting the assumption.

However, the cycle event showed a somewhat different trend. While 36.5% of respondents selected the cycle as their most confident event, it was also the most chosen as the least confident event, with 40.5% of respondents indicating this. This result contradicts the general logic that "an event a stacker is confident in should be less likely to be chosen as the least

confident event." This could be because the cycle event is perceived as highly important by stackers, leading them to build confidence through extensive practice, but its complexity and difficulty also cause significant psychological pressure.

Although the small number of respondents makes it difficult to assess the reliability of the survey, the responses from the 12 stackers who answered the Korean survey yielded interesting results. In this group, the 3-6-3 was most frequently chosen as the event they were most confident in, with no one selecting it as the event they felt least confident in. In contrast, the 3-3-3 was rarely chosen as the most confident event but overwhelmingly chosen as the least confident. Similar to the combined survey results, the cycle event was selected as both the most and least confident event.

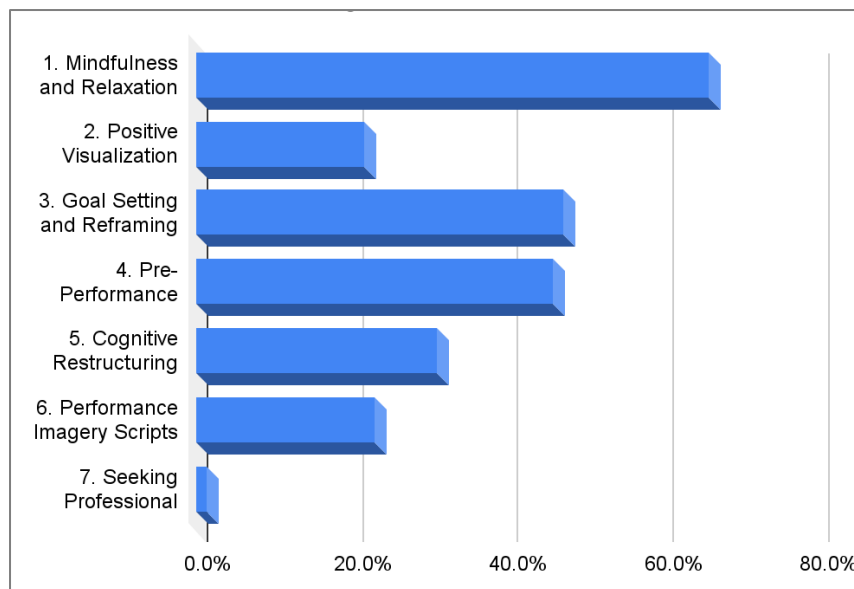


[Figure 9] Korean Survey Results for Most Confident Event (Left) and Least Confident Event (Right)

In conclusion, stackers tend to feel relatively less confident in the 3-3-3 event, while they have greater confidence in the 3-6-3 event. The cycle event appears to give stackers both confidence and a sense of burden simultaneously. Therefore, it is likely that stackers experience more nervousness in the 3-3-3 and cycle events.

② Analysis of Methods for Managing Nervousness

This study asked stackers about the methods they use to alleviate and overcome nervousness during competitions. The survey presented the seven psychological strategies from the Performance Psychology Center as options, allowing stackers to select the methods they commonly use (multiple selections were allowed).



[Figure 10] Survey Results on Techniques for Managing Nervousness

The most frequently chosen method was "Mindfulness and Relaxation Techniques," with over 60% of respondents indicating that they use this strategy. The next most common methods were "Goal Setting and Reframing" and "Pre-Performance Routines." This suggests that many stackers rely on techniques such as deep breathing and meditation to maintain psychological stability or use goal-setting and routines to prepare for competitions. The popularity of these three methods may be attributed to their ease of implementation in daily life.

On the other hand, the least chosen method was "Seeking Professional Support." There could be three reasons for the low preference for this strategy. First, it may be due to the order of the survey items. This item was placed last, and some participants might not have read it thoroughly. If the survey items had been randomized, responses to this item might have been different. Second, the historical context of sport stacking may play a role. Compared to more established sports like soccer or basketball, sport stacking has a shorter history and a smaller scale, meaning stackers may have fewer mentors or professionals to turn to for advice. Third, the amateur nature of sport stacking might contribute. Since sport stacking is often viewed as a hobbyist activity, stackers might feel embarrassed about seeking professional help or may not perceive it as necessary.

It's important to note that these results are based on a survey of 74 stackers and may not represent all stackers worldwide. Future research should be cautious about generalizing these findings and should consider comparing them with results from other studies or exploring whether similar patterns appear in sports other than sport stacking.

⑤ Analysis of Stackers' Unique Nervousness-Relief Techniques

In addition to the seven strategies for overcoming nervousness presented in the survey, participants were also asked to freely describe their own unique methods for relieving nervousness. As a result, 19 out of the 74 survey respondents shared their own creative techniques. Below are their responses presented in their original form.:

- ✓ I just zone out until I feel relaxed, and once I'm calm, I start.
- ✓ If you're overwhelmingly better than others, you won't feel nervous.
- ✓ At the competition table, it's important to clear your mind and also not be too aware of your surroundings. It's also important to not pay attention to how other competitors are performing. It is important to not set goals for a competition, because if you are unable to meet your goals, it will end with you being disappointed. The most important thing is to have fun.
- ✓ Empty your mind and let your hand flow.
- ✓ focus hardest on attempt 1, get a successful try so that I can feel more confident on attempt 2 and 3
- ✓ I also use Bach flower dragees to try to calm me down (they are used by many people in other different sports). What also seemed to help was not wearing a T-Shirt (but a tighter sports jacket). Less arm movement means more stable stacking.
- ✓ I am in my own bubble when I am at the table. No other competitors, judges, or spectators are even on my mind. It is only me and the cups. By completely focusing on the cups, I eliminate the outside distractions.
- ✓ I like to imagine I'm just practicing at home as well.
- ✓ I put effort into training weeks before competing so I'm not as nervous and have less doubts in myself. I feel like there isn't a lot you can do in the current moment to calm yourself down unless you train enough before to prepare for the moments that matter. Taking deep breaths and telling yourself positive things before attempts help but they don't reduce anxiety as much as putting the work in before and being confident in how you trained. At the end of every practice, I attempt to get 5 or more clean competition trainings all in a row and they have to be times I would be satisfied with in tournament. I would do this because I felt like it created the same pressure of not messing up in a tournament. Before doing this, I was disappointed in how I did in 2 tournaments in 2022 and 2023. Once I started doing this, I was able to win Juniors last year and get 2nd at Worlds. I feel much more comfortable stacking in tournament because I've been able to get a better feel of the cups and I feel better about myself through this method.
- ✓ I simply think about nothing. The only thing on my mind is getting through my attempts carefully. I was lucky enough to have a strong start in competing, so I remind myself I can do it by not overthinking. When you know you can do it, there's nothing else you need to think about other than what is directly in front of you.
- ✓ I tend to stack in public because it helps me calm my nerves. I've done it quite a lot in the past, from amusement parks to VidCon.
- ✓ I try my best to keep a smile on my face when I'm up at the competition table, as it helps me feel in control and excited for what I can do.
- ✓ Just trying to have as much fun as possible, and simply smiling at the competition table no matter what. That always seems to relieve my worries a ton and takes a lot of pressure off of myself, even if I don't end up doing as well as I want.
- ✓ many competition trainings and just imagining that i am there while doing them while im at home
- ✓ Meditation
- ✓ Prayer
- ✓ Purposely not watching the person who stacks before me. Also, I do not time myself on deck to focus on good technique instead of time.

✓	This is more so adding on to one of the techniques already listed, but I've recently found that deep breathing on a pattern of inhaling for 4 seconds and exhaling for 6 seconds (not holding my breath in between) helps me calm down just enough so my hands are less shaky when I start my attempts.
✓	When you deal with shaky hands, stiffen and tense up your stacking so the cups can be more aggressively placed to reduce cups being misplaced and fumbles.

[Table 3] Survey Results on Techniques for Managing Nervousness

The responses from these stackers have been categorized into three main types for more detailed analysis. These categories are not mutually exclusive, and stackers may combine various methods depending on the situation and their needs. Furthermore, these approaches can be applied not only to sport stacking but also to other sports, potentially enhancing athletes' performance across different environments.

a. Overcoming Nervousness by Enjoying the Competition

Stackers in this category manage their nervousness by finding joy in the competition itself. As the saying goes, "No one who strives can surpass someone who enjoys what they do." These stackers focus on maximizing their enjoyment during the competition. For example, one stacker mentioned, "I try to keep a smile on my face during the competition, as it helps me feel in control and excited about what I can do." This approach helps to alleviate nervousness and can ultimately lead to better performance.

b. Focusing Through Confidence in Abilities

Stackers in this category overcome nervousness by relying on a strong belief in their abilities. Some stackers noted, "If you're overwhelmingly better than others, you won't feel nervous," highlighting that superior skills can significantly reduce nervousness. These individuals immerse themselves in the competition with confidence in their abilities, often focusing more on their own performance than on competing with others. This approach helps stackers reduce anxiety and maintain focus on their goals.

c. Utilizing Unique Personal Methods

This group of stackers develops and employs unique methods to relieve nervousness. For instance, one stacker mentioned, "I tend to stack in public places often to get used to being watched by an audience." Another stacker shared, "I focus on intense training for several weeks before the competition to prepare for critical moments, building confidence in the process." These approaches show that some stackers create personalized strategies to overcome the pressure of being observed or to build confidence. By developing methods tailored to their needs, these stackers effectively manage the nervousness they experience during competitions.

2) Interview Results

Unlike the anonymous survey, the interviews allowed for a deeper understanding by enabling the participants to freely share their experiences, emotions, and thoughts, and for the researchers to ask follow-up questions. A total of 14 world-class stackers participated in these interviews, with 12 conducted in person and 2 conducted virtually. The study categorized the stackers' responses by type, and the responses from those who have had signature cups²² made in their name will be analyzed separately.²³

① Analysis of Stacking Start Year

Stacking Start Year		
2007	Tyler Hollis	William Orrell
2008	Peter Ford	
2009	William Polly	
2010	Dalton Nichols	
2011	Andrew Dale	Trey Griffith
2012	Chan Keng Ian	
2013		
2014	Seamus Stoker	Si Eun Kim
2015	William Allen	
2016	Kaitlyn Quinn	Sarah Quinn
2017		
2018	Woo Xin Yi	

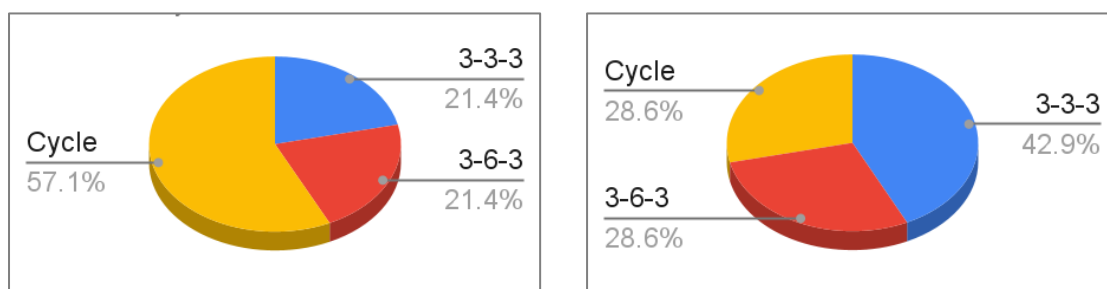
[Table 4] Sport Stacking Start Years of World-Class Stackers

Tyler Hollis and William Orrell are the most experienced athletes among the interview participants. Despite having started stacking 17 years ago, William Orrell continues to showcase exceptional skill and consistency, still holding the world record in the 3-3-3 event. On the other hand, the least experienced participant is Woo Xin Yi, who, despite starting stacking more recently, has quickly risen to the top tier of the sport and is a remarkable athlete to watch.

²² Speed Stacks, the official sponsor and equipment manufacturer for sport stacking, creates special signature cups named after players who have made a monumental impact in the sport. To date, a total of 10 different signature cups have been dedicated to 6 stackers. These stackers include *Emily Fox* (2 cups: black and clear, 2009), *William Polly* (2 cups: clear in 2013, black in 2014), *William Orrell* (1 cup, 2015), *Si Eun Kim* (1 cup, 2017), *Hyeon Jong Choi* (1 cup, 2018), and *Chan Keng Ian* (3 cups: blue, purple, yellow, all in 2019).

²³ You can watch the full version of the interview at <https://www.youtube.com/watch?v=oEt9371f3WA>

② Analysis of Most and Least Confident Events



[Figure 11] Survey Results on for Most Confident Event (Left) and Least Confident Event (Right) of World-Class Stackers

Among the 14 stackers interviewed, 8 identified Cycle as the event they felt most confident in. Conversely, the 3-3-3 event was chosen by the majority as the one they felt least confident in. While Cycle is a complex and challenging event, many stackers feel confident in it due to the extensive experience and skills they have developed over time. On the other hand, the 3-3-3 event is considered more difficult to gain confidence in because it progresses so quickly, leaving little room to correct mistakes.

③ Analysis of Response Types

After analyzing the responses from the interviewed stackers, five distinct types of strategies were identified:

a. Focusing on Oneself

William Polly maintains a deep focus during competitions, which he refers to as being in an "Avatar State," allowing him to concentrate solely on himself, undisturbed by external factors. Peter Ford also mentioned that he minimizes communication with others and focuses entirely on himself during the competition. Seamus Stoker imagines the on-deck area as his room or a place where he's surrounded by friends, which helps him calm down and enhance his focus. Chan Keng Ian creates an environment to focus by using a unique method—yelling into a towel to release tension and center his attention.

b. Extensive Practice

William Allen mentioned that consistent practice builds his confidence and helps him manage nerves during competitions. Si Eun Kim considers relentless practice crucial to overcoming nerves, striving for stable performance. Andrew Dale emphasized that continuous practice and preparation play a vital role in overcoming nervousness. Dalton Nichols invests a significant amount of time practicing with the G5 timer, developing skills he's confident in.

Trey Griffith also stated that daily, consistent practice is key to reducing nervousness during competitions.

c. Establishing Routines

Dalton Nichols talked about maintaining confidence and controlling pace during competitions through a well-planned warm-up routine. Kaitlyn Quinn mentioned that her routine of shuffling cups and maintaining the right feel before the competition helps her reduce nervousness. These routines are essential for athletes to stabilize themselves before competitions and effectively reduce their anxiety.

d. Breathing and Meditation

William Orrell emphasized using breathing exercises to calm his mind and maintain composure. Woo Xin Yi also tries to keep a calm mind through deep breathing during competitions to reduce nerves. Sarah Quinn calms herself through deep breathing to relieve anxiety during competitions. Andrew Dale uses breathing techniques to stabilize his mind and reduce nervousness.

e. Connecting with Nature or Social Interaction

William Orrell stated that spending time with friends helps him relieve stress and reduce nerves before competitions. Tyler Hollis finds relaxation through nature walks, which helps him prepare physically and mentally before competitions. These methods of interacting with the environment and others are vital in managing nerves and enhancing performance.

④ Key Stackers' Interviews

As mentioned earlier, the interviews with the four active stackers who have had Signature Cups produced in their honor are considered valuable. Thus, the analysis of these interviews has been detailed below.

a. William Polly

William Polly's Signature Pro Series 2 Cups gained immense popularity, selling out almost immediately upon release. Currently ranked 4th in the all-time world rankings, Polly shared his unique methods for alleviating nervousness during competitions.

When asked about his most confident event, Polly chose the Cycle. He explained that the Cycle requires a significant amount of practice and demands intense concentration during the competition, making it the event where he feels the most confident. Although he did not achieve the results he had hoped for in the Cycle event this season, Polly still considers it his strongest event due to the extensive preparation and effort he has invested. Conversely, Polly identified Doubles as his least confident event.²⁴ He explained that because Doubles involves two people working together, one person's mistake can affect the partner, leading to heightened nervousness. Additionally, he noted that Doubles requires considerable practice and a bit of luck, which can contribute to his anxiety.

Polly candidly admitted, "Even with all my experience in stacking competitions, I still get very nervous." This may seem surprising given his consistent performance, but Polly emphasized that even top stackers like himself feel nervous when stepping on deck. However, he approaches competitions with the mindset that "nervousness is not something only I experience," and while it can sometimes cloud his mind, he relies on his potential and enters the competition with confidence.

Polly particularly mentioned that when he steps on deck, he transitions into what he calls an "Avatar State." This state is a form of deep focus, akin to meditation, where he blocks out external noise and distractions, allowing him to immerse himself fully in the competition. This strategy is a key factor in helping him overcome nervousness and perform at his best during competitions.

b. William Orrell

William Orrell is regarded as a legend in the sport stacking community, having greatly influenced countless stackers. Now in his mid-20s, he continues to hold the top position in the world rankings. When asked if he still gets nervous during competitions, Orrell openly admitted, "Yes, I do get nervous." To maintain composure in the competition arena, Orrell has developed specific strategies.

First, Orrell mentioned that he has a habit of visualizing the record he aims to achieve before entering the competition. He added that even if he doesn't reach his set goal, he takes pride in having given his best effort. Second, Orrell focuses on his stacking form during his regular practice sessions. He explained that by checking and concentrating on his form every time he steps up to the practice table, he is able to achieve consistent results. The third strategy is proper breathing exercises. During moments of tension, Orrell calms his mind with deep breathing, which helps him maintain composure and prevent the nervousness from escalating. Additionally, Orrell emphasized the importance of spending time with friends at the

²⁴ During the interview review process, Polly, who initially identified 'Doubles' as his least confident event, was asked again to specify the individual event he felt least confident in. In response, Polly indicated that the 3-6-3 event was the one he was least confident about. He explained that "it's my least favorite event to practice, and I'm usually the most inconsistent at the 3-6-3 upstack over any other part of the cycle."

competition venue, allowing himself to momentarily set aside stress and nervousness to enjoy the event.

Through these strategies, Orrell has been able to consistently perform at the highest level, and it is evident that his attitude and approach have been key factors in maintaining his long-standing dominance in the sport stacking world.

c. Si Eun Kim

Si Eun Kim, who has maintained the number one ranking in the women's division for ten years, shared a simple yet effective method for overcoming nerves. She explained that rather than trying to eliminate nervousness completely, she embraces it naturally and focuses on consistent practice to achieve stable results in competitions.

While her approach may seem straightforward, considering Kim's outstanding performances at every tournament, one can appreciate the depth of her dedication and the extent of her training efforts.

d. Chan Keng Ian

Chan Keng Ian is currently the world's top-ranked stacker, breaking records in nearly every competition he enters. When asked during the interview which event he feels most confident in, he surprised everyone by stating, "I'm confident in all events." However, if he had to choose one, he mentioned that the 3-6-3 was the event he felt most confident in. On the other hand, he identified the Cycle as the event he was least confident in, explaining that its length compared to other events and the variability of results depending on his condition on the day made it more challenging.

As the world's number one stacker, Ian has a unique method for overcoming nervousness. While he doesn't usually feel nervous in most competitions, he admitted that he still gets nervous during important events. For instance, during the 2024 USA World Championship preliminaries, he felt so nervous that his hands were shaking, but he managed to relieve his tension by shouting into a towel. This is the first time he has revealed this method publicly. Ian explained that by releasing his nervousness through shouting, he feels lighter mentally and finds it easier to breathe.

One of the most striking aspects of Ian's interview was his belief that "no matter how much you try, it's impossible to completely eliminate nervousness." Instead of trying to forcibly remove it, he emphasized the importance of accepting it as something he must handle.

The top-tier stackers who participated in the interviews each had their own unique methods for overcoming nervousness, reflecting a wide range of approaches based on their individual personalities, experiences, and psychological traits. These findings suggest that overcoming nervousness in sport stacking is not solely determined by technical skill but is also closely linked to psychological factors.

5. Conclusion

1) Summary of the Study

This study aimed to contribute to the improvement of sport stacking athletes' performance by analyzing the psychological strategies they use to alleviate and overcome nervousness during competitions. The research was based on the study "7 Strategies for Overcoming Sports Performance Anxiety," proposed by the Center for Performance Psychology in the United States in 2023. To achieve this, both surveys and interviews were conducted. The survey responses were collected from 74 participants using various social media channels such as YouTube, Facebook, and Instagram. Additionally, interviews were conducted with athletes who participated in the 2024 AAU Junior Olympics and the national team trials in South Korea, with two athletes being interviewed virtually.

The findings from the surveys and interviews are as follows: The survey results showed that the event stackers were most confident in was the 3-6-3, with 39.2% of respondents selecting this event. The cycle was chosen as both the most and least confident event by many participants, indicating that the more critical the event, the more confidence and psychological pressure the stackers experience. The most frequently chosen method for alleviating nervousness among stackers was 'Mindfulness and Relaxation Techniques,' while the least chosen was 'Seeking Professional Support.'

The interviews revealed that even world-class stackers experience nervousness during competitions and have developed various strategies to manage it effectively. The most commonly mentioned strategies were 'Approaching the Competition with Positive Thoughts' and 'Keeping Calm.' These findings highlight the significant role psychological factors play in managing nervousness in sport stacking.

However, it is important to note that the presence of common strategies does not imply a single correct answer for reducing nervousness on deck. Each stacker has discovered their most suitable method for alleviating nervousness based on their experiences and personality, and these methods do not necessarily align with their level of technical skill. This conclusion emphasizes the importance of developing and applying individualized strategies not only in sport stacking but also in other sports.

2) Practical Suggestions

The stackers who participated in this study represent only a portion of the entire sport stacking community, and their responses may not fully represent the views of all stackers. However, their experiences and strategies for overcoming nervousness can offer valuable insights to many in the community. Based on our extensive experience in competitions and the methods we have developed to manage nervousness, we would like to offer several suggestions that may help stackers effectively manage nervousness during competitions:

① Nervousness Should Be Adapted to, Not Overcome.

Instead of trying to eliminate nervousness entirely, it may be more realistic and effective to become accustomed to environments that induce nervousness. To achieve this, it is important to continue training under conditions similar to actual competitions to adapt to the feeling of nervousness. For example, when practicing individual events, simulating a real competition by allowing only two practice attempts followed by three official attempts, recording the times, and finishing the event without stopping even if the results are unsatisfactory can be beneficial. Since the number of attempts is fixed during competitions, practicing according to competition rules will be invaluable during the actual event. Such training helps stackers become more familiar with the competitive environment and reduces the pressure they feel.

② Avoid Downtime During Competitions and Complete Your Events Quickly.

Everyone experiences nervousness during competitions, but spending too much time on an event or idling can exacerbate nervousness. It may be effective to focus on completing the event as quickly as possible, leaving no room for nervousness to take hold. In particular, paying attention to the reactions or gazes of other stackers can increase pressure and anxiety, so it is important to focus on your performance and minimize external distractions.

3) Reflection and Closing Remarks

Through this study, we have confirmed that even world-class stackers experience nervousness on deck, offering comfort in knowing that we all share similar experiences. Yes, everyone gets nervous. There is no need to feel discouraged by nervousness. Instead, it is essential to use this experience to discover and develop your own methods for overcoming it.

Sport stacking is a challenging sport that requires not only skillful hand movements but also strong mental fortitude and focus. We hope this study provides stackers with the opportunity to find their own strategies and, in doing so, achieve even better performance in competition.

Finally, we sincerely hope that this research can make a small but meaningful contribution to the stacking community.

Appendix

Full Version of Interviews with 14 World-Class Stackers



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