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Mental Skills Training in Martial Arts

Abstract

The following case recounts the experiences of two entry-level consultants implementing a 6-week Mental Skills Training program with Brazilian Jiu Jitsu (BJJ) athletes. Both consultants identify with an Acceptance and Commitment (ACT) approach to mental skills training. Each consultant worked with a BJJ athlete for six weeks, integrating mental skills interventions into the athletes' existing training regimen. Overall, the interventions focused on cognitive defusion techniques, identifying and developing emotional intelligence, self-regulating arousal levels, and managing energy and attention. Consultants relied heavily on mindfulness exercises as well as biofeedback technology in order to identify, develop, and refine the psychological skills crucial for success in the world of martial artists and in life. Effectiveness of program interventions was evaluated by client feedback and consultant reflections. Consultant reflections illuminate the challenges entry-level consultants may encounter when working with individual clients.

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MENTAL SKILLS TRAINING IN MARTIAL ARTS

A Master's Project
presented to
the Graduate School of Professional Psychology
University of Denver

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Sport & Performance Psychology

by
MEGAN RINDERER
ADAM BERNERO
Dr. Mark Aoyagi, Master's Project Chair

MAY 2017

The undersigned, appointed by the Dean of the Graduate School of Professional Psychology,
have examined the Master's Project entitled

MENTAL SKILLS TRAINING IN MARTIAL ARTS

presented by Megan Rinderer and Adam Bernero

candidates for the degree of Master of Arts

and hereby certify that in their opinion it is worthy of acceptance.

Mark Aoyagi, Ph.D., Chair

Alexandra M. Ross, M.A., Committee Member

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Abstract

The following case recounts the experiences of two entry-level consultants implementing a 6-week Mental Skills Training program with Brazilian Jiu Jitsu (BJJ) athletes. Both consultants identify with an Acceptance and Commitment (ACT) approach to mental skills training. Each consultant worked with a BJJ athlete for six weeks, integrating mental skills interventions into the athletes' existing training regimen. Overall, the interventions focused on cognitive defusion techniques, identifying and developing emotional intelligence, self-regulating arousal levels, and managing energy and attention. Consultants relied heavily on mindfulness exercises as well as biofeedback technology in order to identify, develop, and refine the psychological skills crucial for success in the world of martial artists and in life. Effectiveness of program interventions was evaluated by client feedback and consultant reflections. Consultant reflections illuminate the challenges entry-level consultants may encounter when working with individual clients.

Keywords: *mindfulness, acceptance and commitment, biofeedback, energy management, arousal*

Mental Skills Training in Martial Arts

Few forms of competition include a greater propensity toward the use of mental skills than martial arts (Anshel & Payne, 2005). Martial arts can be defined as empty hand fighting or a form of fighting or defending oneself that uses punches, strikes, kicks, grappling, blocks and throws (Winkle & Ozmun, 2003). Skills such as, psychological preparation, concentration, anticipation, flow, emotional control, self-control, confidence and competitiveness are essential to success in this ancient form of combat (Anshel & Payne, 2005).

While some research offers insight into the competitive experience of fighters (e.g., Chen & Cheesman, 2004; Jensen et al., 2013) few studies present practical applications for sport psychology principles and interventions in martial arts. Blumenstein, Lidor and Tenenbaum (2005) presented a case in which periodization and planning of psychological skills was integrated into the preparation, competition, and transition training phases in the sport of judo. While this case provides valuable insight into a periodized approach to mental skills training, it only offers a cognitive behavioral perspective. Historically, a majority of psychological skills training is conducted from a cognitive behavioral perspective (Gardner & Moore, 2012). The present case illustrates how an Acceptance and Commitment lens can be used in mental skills training programs.

Interestingly, there is a plethora of research documenting ways in which martial arts inherently harvests the development of certain psychological skills. For instance, one study discussed the ways in which combat sports develops emotional intelligence (Szabo & Urban, 2014). Another study captured the experiences of elite mixed-martial arts competitors highlighting their need for arousal control and self-regulation (Massey, Meyer, & Naylor, 2013). While it has been established that the mental side of martial arts is one of critical importance and

that the sport, by nature can cultivate these skills, few studies illustrate specific ways in which martial arts athletes use their existing psychological skillset. Further, few attempts have been made to provide an in depth look into the application and integration of a mental skills program within competitive martial artists. The present case study offers an inclusive, integrative look into the application of an ACT approach to mental skills training with BJJ athletes through the work of two different consultants with the same theoretical orientation but different consulting styles. The present case is unique in that on the one hand, it elucidates the ways in which theory can guide a consultant's work; yet on the other hand, it highlights the individuality of two different consulting styles. Therefore, the design of the present case serves to offer more extensive transferability for those interested in working with combat sport athletes and who identify with an ACT approach to mental skills training.

Context

At the time of the case, both consultants were M.A. candidates in sport and performance psychology at the University of Denver. As students in the program, the consultants were also employees of the Center for Performance Excellence (CPEX). Therefore, the participants for the present case were subject to a contract through CPEX, agreeing to participate in a six week, free mental skills training program. Consultants received informed consent from participants to be a part of the case study. Additionally, consultants informed the clients if they wanted to continue receiving mental skills training through CPEX after the 6-week program, they could renegotiate the contract and agree upon a fee for continuing services.

In addition, both consultants trained Jiu Jitsu at the site of consultation. This creates a number of issues that needed to be mediated. The main challenge presented was the concern of dual relationships. Since both consultants trained BJJ at the location of consultation, it was

important for the consultants to recognize potential issues that could arise from dual relationships and biases; each consultant sought individual supervision to manage and mediate these threats. Essentially, consultants avoided the issue of dual relationships by only working with martial artist with whom they did not directly train (Brent & Kraska, 2013). In addition, potential biases from consultants' involvement in the sport were arbitrated through individual supervision.

While there were challenges, there were also significant advantages. For instance, the consultants were already a part of the community. Therefore, credibility, mutual respect, and trust were already established. In addition, the consultants were able to readily empathize with the athletes since they also participated in martial arts. Moreover, the authors decided to approach the present case from an angle of a conceptual framework known as systematic combining. According to Dubois and Gadde (2002), systematic combining is an abductive approach to case research and can be defined as “a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously” (p. 554). Historically, case studies have been criticized for a lack of scientific generalizability and researcher biases (Yin, 1994). However more recently, case studies have been recognized as an opportunity to gain a conceptual and contextual understanding of the interaction between phenomena (Dubois & Gadde, 2002). Contrary to standardized research styles in which theory and the experiential evidence is linear, systematic combining allows for a more dynamic perspective, highlighting the interrelatedness of various elements and approaches to the research process (Dubois & Gadde, 2002). Therefore, the purpose of this case is two-fold. First, the case explores whether an integrated, ACT approach towards mental skills training can benefit BJJ athletes. Second, the case recounts the experiences of two different consultants implementing a mental skills training plan from an ACT perspective – juxtaposing their different styles and highlighting how their

theoretical orientation guides their work as consultants. The authors hope the present case will provide insight into the application of an ACT approach toward mental skills training in martial arts and serve as a transferrable tool for consultants who aspire to work with combat sport athletes.

Consultant Philosophies

Consultant One

I feel it is important for mental skills consultants to remember we are entering a subculture that has historically done very well without a mental skills consultant (Ravizza, 1988). Especially in the world of martial arts – a domain that demands a high degree of mental fortitude – it is important for consultants to remain open and aware of existing psychological predispositions and strategies athletes may already use (Anshel & Payne, 2005). In this regard, I rely heavily on the use of interviews and observations in order to get a complete, comprehensive understanding of the athlete and the context in which they operate. Additionally, I place substantial emphasis on integrating a variety of based on the client's individual needs. As such, I associate with the Assimilative Integrative Approach with Acceptance and Commitment Therapy (ACT) as my primary methodology (Seligman & Reichenberg, 2014). In addition to ACT, I incorporate elements of person-centered and systems therapy utilizing mindfulness as a valuable therapeutic tool (Seligman & Reichenberg, 2014).

I also believe the combination of approaches can help clients increase awareness of thought processes and develop more effective coping strategies. Often performance breakdowns revolve around an inability to focus on the task at hand. Haberl (2012) argues, “It is the mind of the athlete that enables and facilitates performance, and it is the mind of the athlete that disables and debilitates performance” (p. 57). In order for an athlete to execute a well-learned skill, free

of analytical processing, they must be where they need to be and when they need to be there (Ravizza, 2012). Focusing on the task at hand facilitates the automatic execution of learned skills (Henschen, 2012).

In martial arts, competitors must be able to anticipate their opponents' actions and strategies, perceive incoming stimuli quickly, engage in rapid planning and decision-making, and respond automatically, in the virtual absence of thinking (Anshel & Payne, 2005). According to Gardner and Moore (2004), the development of mindfulness bears similarity to Csikszentmihalyi's concept of flow; both concepts stress being in the present moment and experiencing complete concentration on the task at hand. It has also been shown that the combination of ACT with biofeedback and heart rate variability (HRV) training is a powerful tool for treating anxiety and stress disorders (Gevirtz, 2015). For the present case, I will use a periodized, integrative approach to mental skills training by incorporating mindfulness, biofeedback/HRV and ACT with my client.

Consultant Two

My approach to consulting is individualistic in nature; I rely heavily on establishing a relationship founded on mutual respect and trust. I see the individual first, the athlete second and strive for positive, humanistic interactions to consulting. For these reasons, my first interactions with a new client tend to draw from a humanistic therapy orientation. I seek to approach my clients without judgment while using open-ended questions to let the client explore their thoughts, emotions, and feelings (Mchugh). Initial conversations that are based around the human element help me formulate an idea as to how I can work best with the client.

When it is clear that a working relationship will proceed, I use acceptance and commitment therapy (ACT) as the primary lens in which I consult from. Based on ACT's

foundation of psychological flexibility (Bond et al.), I seek to understand the client's values and how they align with their current habits and behaviors. I believe that using the resonance model to further understand why a client wants to achieve the goals they have set forth, allows me to establish a structure for our work together.

As a consultant in training, I frequently reference ACT's hexaflex to make sure that when I introduce mental skills, they are grounded in theory and not intuition. The six key components to the hexaflex are values, acceptance, present moment awareness, defusion, self as context, and committed action (Mchugh). I believe that between these six components of psychological flexibility, the client and I can find a workable path towards the goals they want to achieve.

Methods

Participants

The participants for the present case consisted of two male BJJ athletes. Consultant one worked with a beginner (operationally defined as a white belt with less than six months of experience). Consultant two worked with an experienced Jiu Jitsu competitor (operationally defined as a brown belt with more than seven years of experience). Participants were recruited from a mixed martial arts facility in the Denver metro area. With permission from the facility's owner, the authors of the current case displayed a flyer advertising a six week mental skills training program. The flyer generated a significant amount of interest, resulting in a variety of potential participants. Taking into account ethical concerns such as dual relationships (as previously discussed) and logistics, such as availability, each consultant was paired with an athlete. Athletes, who inquired about the program but were not selected for the present case study, were referred to other consultants from the Center for Performance Excellence (CPEX) at the University of Denver.

Design and Procedure

Each consultant aimed to meet with a BJJ athlete for a total of seven weeks – the first week allocated for an initial consultation (intake and needs assessment). The consultants intended to create a six-week mental skills training program from an ACT orientation (see Appendix A). Since traditional psychological skills training is often viewed from a cognitive behavioral perspective, the authors of the present study decided to view the five cardinal mental skills through an ACT lens, allocating one week per mental skill. The intake session would be used to determine the most appropriate interventions for the clients' needs. After the initial consultation, the consultants would focus on a cardinal mental skill each week (i.e. goal setting, energy management, attention control, confidence, and imagery). However, the authors of the present case quickly recognized six weeks was not nearly enough time to adequately address each mental skill. In addition, such a rigid structure would prevent them from attending to the athlete's individual needs. Therefore, both consultants used their theoretical orientation to adapt their program structure in order to best fit their clients' needs (see Appendix A). Ultimately, the consultants hoped the mental skills training program would help their clients develop an increased understanding of their mental game, while also providing them with tangible mental skills they can use to achieve success on and off the mat.

All sessions lasted one hour and took place in the Professional Psychology clinic at the University of Denver. Consultants implemented various mental skills interventions based on their theoretical orientations. Due to circumstances, which will be discussed later, consultant two was unable to complete all seven sessions. While both consultants identify with an ACT approach to human behavior, they have differing theoretical orientations of performance

excellence. The present case aims to illustrate two different approaches toward psychological skills training using an ACT orientation to human behavior.

Data Collection and Analysis

The effectiveness of interventions was measured by client feedback and individual consultant reflections. Client feedback was collected through verbal evaluation regarding applicability of interventions. In addition, consultants wrote DAP notes, describing sessions and selected interventions. DAP notes and reflections were sent to each consultant's individual supervisor. Further, consultant one incorporated the use of biofeedback technology and Heart Rate Variability (HRV) training. A plethora of research attributes increases in HRV to mindfulness-based practices (Ford, Wyckoff, & Sherlin, 2016). Increased HRV is associated with a variety of positive performance outcomes including but not limited to energy management, attentional control, self-regulation, and emotional regulation (Ford et. al, 2016). As such, consultant one referred to the client's biofeedback results in order to assess program effectiveness, specifically in regards to mindfulness interventions

The authors of the present case describe each session in detail in order to demonstrate how the chosen interventions fit their clients' needs while also describing the ways in which these interventions align with their theoretical orientation. Reflections recounted each consultant's experience implementing mental skills interventions with BJJ athletes from an ACT orientation. Reflections were analyzed using Johns' Model of Reflection (1994). The model includes five questions and breaks down the experience so one can reflect on all facets of the consulting process (see Appendix B). After each session, both consultants reflected upon the experiences using this model. Using this model encouraged both consultants to think critically

about their experience and make informed decisions moving forward. After the final session, consultants used their previous reflections to reflect upon the experience as a whole.

Therefore, the case is broken down into two sections – one for each consultant. The consultants describe their sessions in detail aiming to elucidate the ways in which they used theory to inform their practice. Consultant reflections aim to address program effectiveness in addition to lessons learned as entry-level consultants working with Jiu Jitsu athletes from an ACT orientation. Common themes that emerge between the two consultants reflections are addressed in the discussion section.

The Case

Session Descriptions

Consultant One. *Presenting Problem(s)*. The client reported a desire to achieve “mental peace in life”. When asked to elaborate, he said he hopes to become “mentally and emotionally stable.” The client said he sometimes gets so overwhelmed with life’s stressors and he has difficulty concentrating on the task at hand. He has been training Jiu Jitsu for approximately 2 months and feels Jiu Jitsu is an outlet to deal with life’s stressors. The client expressed a desire to work on life skills in order to try and achieve “mental peace”.

The client mentioned he meditates daily; however, when the consultant inquired about how he meditates, the client said he simply sits in silence for 20 minutes. Based on the information gathered during the intake, I felt the client might benefit from mindfulness based interventions and attentional control strategies. Therefore, the chosen interventions aimed to increase the client’s overall psychological flexibility through non-judgmental present moment awareness, acceptance of one’s internal experiences, attentional focus on task relevant cues, and values driven commitment to action (Gardner & Moore, 2012).

Interventions. Intake session. During the initial consultation, I used the Performance Interview Guide (Aoyagi, Poczwardowski, Statler, Shapiro, & Cohen, 2016) to direct the intake. I adopted a motivational interviewing approach, listening for the client's strengths and exploring any ambivalence (Miller & Rollnick, 2013). After the intake, I conducted a biofeedback stress assessment with the client using Hearth Math's emwave 2 biofeedback technology and a stress assessment adapted from *The Biofeedback and Mindfulness Manual* (Khazan, 2013).

Mindfulness and biofeedback fit together seamlessly. Mindfulness promotes present moment awareness – a core component of ACT. Present moment awareness enhances one's ability to become aware of physiological sensations. As such the use of mindfulness in conjunction with biofeedback aimed to increase the client's overall awareness while also bringing to light issues that might get in the way of biofeedback success, such as attempts to resist, control or change (Khazan, 2013).

After conducting the initial stress assessment, I showed the client his results and educated him on HRV. Since the client was unfamiliar with diaphragmatic breathing, we spent the final portion of the session practicing this breathing technique. I encouraged him to try and incorporate diaphragmatic breathing into his morning meditation. The client said he enjoyed the biofeedback stress assessment; he thought it was different and he expressed a desire to continue HRV training. Therefore, I encouraged him to keep a meditation log. I asked him to note when he meditated and how his body felt before, during and after the meditation. In addition, I encouraged him to practice diaphragmatic breathing during his meditation. Physiological awareness is a key component of biofeedback training (Khazan, 2013). Ultimately, I hoped the client would start to become more aware of the physiological sensations he experiences while meditating.

I realized immediately after the intake I would need to deviate from the intended program structure. Based on my client's needs and my theoretical framework, I had to reassess my approach. My client expressed a desire to become more aware and present. Therefore, instead of teaching a specific cardinal skill each week, I focused heavily on present moment awareness and attentional control strategies.

After the intake, all subsequent sessions began with a mindfulness activity followed by 10 minutes of biofeedback training. I went into each session with specific topics and interventions in mind (see Appendix A). However, I had to constantly remind myself that my client was the one steering the ship. Therefore, I found it extremely important to gain a holistic understanding of my client and the environment in which he operates in order to provide him with the most appropriate interventions. After each session, I asked the client how he could use what he learned in his daily life. At the beginning of subsequent sessions, I asked him for examples of how he used what he learned during the previous session. These questions enabled me to gain valuable client feedback while also allowing me to assess the effectiveness of proposed interventions.

Session one This session with a three-minute mindfulness meditation script. I read the script aloud to the client. The client reported never having experienced that kind of meditation before. We had a discussion about different types of meditations and mindfulness exercises and their psychological as well as physiological benefits. Since the client already engaged in a morning routine, he felt confident in his ability to incorporate mindfulness meditation into his existing routine.

In accordance with ACT, I introduced the concept of values and goals. Values driven action is an important component of ACT and must be distinguished from goals. According to

ACT values are the direction of ongoing patterns of behavior, while goals are concrete achievements or events that can be accomplished or finished (Luoma, Hayes, & Walser, 2007). As such, I encouraged the client to complete a worksheet created by Dr. Peter Haberl (See Appendix C). The worksheet allowed the client to think about his values and motivations; it encouraged him to think about what he has now, what he needs and what might get in the way of him achieving his desired outcome. I felt this worksheet was a good visual representation of how values guide one towards committed action; it was something we could revisit in future sessions.

At the end of the session, the client practiced diaphragmatic breathing. The client reported feeling as though he runs out of air on his exhale. Therefore, I suggested he try and exhale as though he is blowing through a straw. According to Khazan (2013), the use of a visual while breathing prevents one from trying too hard. I hoped this visual might help him to better control his exhale so he does not initially release too much air (Khazan, 2013).

Session two. This session was dedicated toward finding the client's Resonant Frequency (RF). Resonance Frequency is defined as the frequency at which one breathes that maximizes HRV (Khazan, 2013). Without knowing one's RF, efforts at HRV training are futile. In order to determine his resonant frequency, I used a breathing pacer on the biofeedback device. The average human breathes at a rate of 6 breaths per minute (Khazan, 2013). The pacer was set to six breaths per minute with a four second inhale and a six second exhale. The client tried a variety of RF's and still found the 6 breaths per minute as the most comfortable. Once we determined his RF, we were able to continue using the biofeedback in future HRV training sessions.

Session three. This session began the session with a five-minute mindfulness exercise using *Headspace*. The client reported feeling more easily distracted with the guided meditation.

He said he prefers to use his breath to guide his meditation, but he also acknowledged the guided meditation helped him become more aware of his body (i.e., muscle tension). After the guided meditation, I facilitated 10 minutes of biofeedback training with the client - working specifically with the client's RF established the previous week (four second inhale; six second exhale). The client first practiced using the breathing pacer; then he practiced without it. It was clear the client had been practicing his diaphragmatic breathing based on his frequent meditation logs and biofeedback results. Without using the coherence coach, the client was able to increase his HRV, keeping a consistent RF. Even when presented with various auditory distractions, the client was able to maintain his HRV for the duration of the biofeedback session.

Session four. During the needs assessment, the client said he struggles with distracting thoughts. He said his mind runs a mile a minute and he can't seem to slow it down. Therefore, the purpose of this session was to address the client's relationship with his thoughts. He reported the presence of distracting and un-productive thoughts. He talked about how his thoughts distract him from focusing on the task at hand, which in turn, prevents him from being productive. Therefore, in accordance with ACT I introduced the concept of defusion with the client using the "milk exercise" (Luoma, et al., 2007). I attempted to explain the concept of defusion using ACT metaphors directed at demonstrating how one can experience various thoughts without acting upon them. The metaphors addressed how one's thoughts do not have to define who they are or what they do – instead, one can be an impartial witness to their own experiences thus, giving them the room/energy necessary to act in accordance with one's values (Kabat-Zinn, 2013).

The client possessed a high degree of self-awareness. As such, he felt he was readily able to notice his thoughts. However, he did not report knowing how to handle those thoughts when

they begin to distract him. As such, the consultant decided to introduce the concept of defusion as a possible technique toward unproductive/distracting thoughts. The client struggled to comprehend the concept of defusion. He attempted to try and figure out when defusion techniques might be helpful; however, he said he would much rather utilize his breathe as a refocusing technique. The client further reported self-critical tendencies, but he also stated he does not necessarily “fuse” with those thoughts. Rather, he feels his thoughts pull his attention away from the task at hand. He said he is able to notice when his thoughts stray and he uses his breath to bring himself back to center. While the technique of defusion did not resonate with the client, I believe it was important to present him with a variety of options in order to enhance his autonomy in the consulting relationship (Luoma, et al., 2007). As a consultant, it was important for me to listen to the client; he felt confident that he could use his breath to re-center himself when he was experiencing distracting thoughts.

Session five. During the intake, the client said he had never used or experienced imagery. However, he expressed interest in learning more about it. Therefore, the purpose of this session was to introduce the concept of imagery. The consultant and client discussed different types of imagery (anticipatory and mastery) as well as ways in which the client might be able to use imagery in his life as well as in Jiu Jitsu. I educated the client on components of imagery and some of the research surrounding why it works - PETTLEP and functional equivalence hypothesis (Holmes & Collins, 2001). Next, I read a 3 min imagery script to the client. The script required the client to manipulate different objects in his mind and to place the objects in different environments. After the script, we discussed his experience with the script. The client said at first he was able to stay focused on the different objects. For instance, he said the triangle he pictured was made of wire. However, as the script progressed he found his mind begin to drift to all of the

things he had to accomplish for the day. I attempted to normalize the client's sentiments by informing him that it is extremely common for one's mind to drift. I told him the fact that he was able to notice exactly when it drifted demonstrates a certain level of awareness. In addition, I emphasized the fact that imagery is a skill and takes much practice to master. The client said he was able to use his breath as a refocusing tool. In addition, the client was very interested by the PETTLEP imagery model. He said he would use that model when practicing imagery with his Jiu Jitsu techniques. In hindsight, I realize one session was not nearly enough to cover the topic of imagery. My sentiments were reiterated during the consolidation session when my clients said imagery was the skill he used the least. This further shows that one session is not enough time to adequately address a mental skill.

Session six. This was the consolidation session in the 6-week mental skills training program. Together, we reviewed topics addressed in previous sessions. The client discussed freely the ways in which the 6-week mental skills training have benefited his life as well as his sport (BJJ). He recalled which techniques he has been able to use/apply in life as well as in Jiu Jitsu. He reported diaphragmatic breathing as "without a doubt" the most beneficial technique. He felt the visual of "breathing through a straw" has helped him learn how to better control his breathing throughout the day as well as during Jiu Jitsu training sessions. Next, I asked the client how the topics/techniques addressed in previous sessions have translated into his day-to-day life. The client said he focuses on his breath during the day when he begins to feel overwhelmed or when he feels his thoughts have drifted away from the task at hand. In addition, the client said he feels incorporating mindfulness into his morning routine has helped his overall awareness.

Finally, the consultant performed the same biofeedback stress assessment conducted during the initial consultation. After the assessment, the consultant showed the client the

assessment results; overall, the client's HRV increased and he was able to recover more quickly in the event of various stressors (See Appendix D). The client was thoroughly impressed with his progress. When asked what he thought about the incorporation of biofeedback into mental skills training programs, he stated, "I think it is great. I am able to see tangible evidence of my progress and I think that is invaluable." Overall, the client said his experience with the training program was exceptionally positive. He said he feels he can translate the techniques/skills into his daily life as well as his Jiu Jitsu pursuits. Concluding the final session, I gave the client additional recourses (book recommendations, videos, TED talks, etc.). I also referred him to CPEX where he could reach out if he wants additional mental skills training.

Consultant Two

Presenting Problem(s). During the initial consultation, the client discussed a strong desire to win national and world competitions in BJJ. However, the client reported feeling some performance barriers when preparing for his upcoming competitions. His most prominent concern was how he mentally approaches his opponents. The client expressed a desire to approach each opponent, no matter the skill level, with the same amount of focus and confidence. The client stated he feels a tendency to approach opponents whom he perceives as less skilled, with less focus. Conversely, he feels he approaches opponents he perceives as equally skilled with more focus. He said he intentionally drives further to train at a location with opponents he perceives as equally skilled because he feels he will train better.

Interventions. Intake session. The purpose of this session was to conduct an intake with the client. I approached the intake from a humanistic theoretical foundation. I sought to find who the client was as a person first and athlete second. I wanted to know where the client was in his training and how aspects of his life outside of training could help us find a path to achieving the

goals he was looking for. Staying true to my style, the intake was conversational in nature. I hoped this format would foster a positive therapeutic alliance between the client and me. During this session, I also discussed confidentiality and the client's expectations of the program. The client shared his performance background and I shared my performance background as well. I decided to self disclose in order to develop trust and establish the foundation for our working relationship. Once a comfortable rapport was built, the client and I discussed details of how we can work together most effectively. He had a very busy schedule and I expressed my ability to be available for him when he had the time to meet. He reported being eager to start the training because of his desire to learn skills prior to his upcoming national and world tournament competitions. The client had an idea what mental skills were based on his feeling of being "mentally drained" after workouts. However, he did not have a real idea on how to apply certain skills he was looking for or when to apply them. While he was anxious to receive mental skills immediately he also stated that he trusted the process we were embarking on.

It seemed appropriate based on our conversation that I could apply a resonance activity to help stimulate our conversation for the next week, which would be based on values. The client mentioned trouble with having the same focus and confidence with perceived lesser skilled opponents. We decided on writing a mission statement that related to his why. We agreed that this would be a positive statement to look at when he approached tournaments that were important to him. I asked him to write two paragraphs about what he wants out of his bjj training the day after our meeting. On the next day, I asked him to condense the two paragraphs down to one paragraph. On the third day, he had to condense it to one sentence, which would serve as his mission statement.

Session one. The client responded positively to the resonance exercise we implemented the week before. He mentioned how just thinking about his “why” was motivating him to train that day. Also, the client claimed he liked the correlation I drew with the gym and opponent perception. He said that he used his why to help him focus on his training between our first and second session. Much of our session was spent talking about his thoughts surrounding the resonance activity and how it could help us shape our upcoming weeks of training. We both felt like it was a good opportunity to transition more into skills based sessions and the preconceived plan of discussing values in relation to his path in life and bjj.

Based on information gathered during the performance intake, the ACT lens in which I see through, and the tentative program schedule my partner and I initially planned on implementing, we decided to end the second session with a conversation about the client’s values. I wanted to follow up our resonance discussion with another way to establish a solid framework in which to shape the next five weeks of training.

The client stated strong feelings that related to ACT principles such as acceptance, values based living, and awareness. He desired mental skills training that were relevant to ACT as well as mindfulness training. He mentioned wanting to understand mindfulness better and how he could use that in his training. Our session was well past the one hour we had planned at this point. I wanted to give him something to work on until the next session so based on his familiarity with mindfulness; I suggested that he download the headspace app. I told him this would be a good app to try in preparation for our next session that would be based on breathing and imagery.

Session two. The purpose of this session was to discuss breathing techniques and PETTLEP visualization (Holmes & Collins, 2001). I introduced diaphragmatic breathing in the

beginning of our session to set up the rest of our meeting. He found the breathing to be relaxing when he used the proportion of 4 seconds of inhaling through his nose and 6 seconds with an exhale out of his mouth. The client understood how to implement the breathing quickly and he asked when and how he could use it. We asked him when he thought the breathing would be most affective. He said that before a competition would be the most useful.

To create a situation that might feel similar to pre-competition anxiety I decided to use the mousetrap exercise. I used the mousetrap to create a visual stress response with the client. I left the traps on the table next to the client during initial conversation. Then, I led the client through ten minutes of the diaphragmatic breathing we had worked on earlier in the session. I encouraged the client to notice when his mind wandered and to bring his attention back to his breath. Then, the client held the live trap in one hand and continued his relaxing breath cycle. The client then used his other hand to clamp down on the mousetrap. I instructed him on how to release the trap and then we processed the exercise. He felt a direct correlation from the anxiety of holding a live mousetrap and preparing to compete. He said that when he concentrated on his breathing, his anxiety towards the trap dissipated and he was able to feel his body relax. The client was excited about this feeling and seemed like he wanted to learn more. I thought that introducing PETTLEP imagery would be a skill he could work on in between sessions.

I went through a PETTLEP imagery script with the client as he used his diaphragmatic breathing. The client liked both sets of exercises and reported feeling more calm. The client also reported that the PETTLEP script felt “real” and that he could use this in the future when preparing for a competition. The client said he would commit to using imagery on a daily basis in preparation for his national tournament that was only two weeks away.

Session 3-6. In the weeks following our second session there was an interruption in

my ability to continue the 6-week training program. As a consultant in training I overlooked a valuable aspect of how a client-consultant relationship should be run more professionally. Notes that describe, assess, and plan for the client are required after every session with a client. I overlooked the importance of this requirement and ultimately my notes did not fit the standards needed to continue a consulting relationship.

To be clear, my suspension of services to the client had nothing to do with the actual quality of consultant work but everything to do with the technical aspect of turning in quality notes. I revised all of my notes 5 weeks before the required due date in order to see my clients again. After 5 weeks of reviewing my notes I was given the choice to contact my clients again. However, after such a long period of time not being able to contact my client, he had already completed all of his tournaments. He was seeking services to help prepare for these tournaments and because those were completed it felt like there was no need to continue seeing me after I tried contacting him again.

Results

Consultant One

Reflections. *Describe the experience and what were the significant factors?* Program effectiveness was assessed through the client's ongoing verbal feedback regarding the applicability of proposed interventions. In addition, results from the second biofeedback stress assessment conducted during the sixth session, demonstrated the client's increased ability to self regulate in the presence of various stressors. After each session, I documented specific details of the session and reflected upon the experience. All interventions presented to the client were selected based on existing literature regarding intervention efficacy.

I believe the six-week training program would not have been as effective without the client's dedication. He was extremely intrinsically motivated and made a concerted effort to apply material from sessions to his life. As an entry-level consultant, I am grateful for the opportunity to have worked with such an individual. Often, I felt nervous and overwhelmed prior to sessions. I struggled to find an appropriate balance between preparation and flexibility. Graduate school had afforded me a wealth of knowledge – and I wanted to share it all. However, I quickly realized: the more I made the experience about me, the less it was about the client. In that regard, I strove to shift my focus away from myself so I could completely attend to my client's needs.

What was the goal and what were the consequences? The goal of the six-week mental skills training program was to work with an individual BJJ athlete, implementing mental skills interventions from an ACT perspective. Going into the consulting relationship, I planned to focus on a different cardinal mental skill each week (i.e. goal setting, energy management, arousal control, confidence and imagery). However, after the initial intake, I quickly realized this approach was too rigid – adhering to such a structure limited my ability to be completely present with my client and listen to his needs. According to Jim Taylor, “an important factor that may contribute to the effectiveness of consultants is their ability to take this general information and the commonly used techniques and apply them to the specific needs of athletes and the particular demands of sport” (1995, p. 341). In addition, six weeks is not nearly enough time to adequately address the five cardinal mental skills. In the following week, I adapted and began to conceptualize the person, rather than the program. I created a more flexible program that enabled me to attend to my client's needs.

Ultimately, my goal for the program was to provide the client with mental skills/techniques he could use in life as well as Jiu Jitsu. Based on the client's presenting problems, I felt he might benefit from a program geared toward psychological flexibility. In his intake, the client reported enjoying mindfulness and meditation; therefore, in accordance with my theoretical orientation, I decided to implement interventions that focused on present moment awareness, self-regulation, and values oriented action. The client reported feeling he could easily translate the techniques from our sessions to work and Jiu Jitsu.

What things like internal/external knowledge affected my decision-making? As discussed previously, I identify with an Assimilative Integrative Approach with ACT as my primary methodology. Therefore, program interventions were geared toward helping the client obtain psychological flexibility (Luoma et al., 2007). All of the sessions described above illustrate how my ACT theoretical orientation influenced my decision-making. Aside from my theoretical orientation, I found it useful to incorporate techniques such as motivational interviewing; this technique proved helpful especially during the session in which the client clarified his values. Motivational interviewing also helped me to see the client's strengths rather than weaknesses.

Additionally, as a student in the graduate program at University of Denver, I received weekly small group supervision. The combination of professional supervision and peer feedback, gave me clarity and confidence. As an entry-level consultant, supervision is invaluable; not only did my supervisor help me plan for future sessions, but he also reminded me that I was not alone. I feel having that kind of support and mentorship in the early stages of consulting is essential.

What other choices did I have and what were those consequences? In hindsight, there are a few things I could have done differently. For the intake session, I could have tried to use

more objective assessments such as psychometric tests. However, I was hesitant to give the client any objective assessments because I did not feel competent enough in that realm. Instead, I opted to adopt a motivational interviewing approach to the intake using the Performance Interview Guide to direct the interview.

I also feel I could have introduced imagery sooner. I introduced imagery during the fifth session. Had I introduced the concept earlier, the client might have been able to practice more and better translate it to his performance at work and in jiu jitsu.

What will change because of this experience and how did I feel about the experience?

The biggest lesson I learned as a consultant through this experience is: trust your training. Just like the athletes with whom we work, we must also trust our training. Analyzing your performance as a consultant in the middle of a session would be equivalent to a soccer player critiquing his form before taking a game winning free kick. Consultants must be present with their clients' in order to attend to their needs. Personal performance evaluations should occur after the fact.

I also learned it is easy to feel like an imposter. Before every session, I questioned my credibility and ability to be an effective consultant. However, I realized: a) I will feel like an imposter until I don't – I can still be an effective consultant while feeling like an imposter and b) my own self-consciousness was a distraction that prevented me from being in the present moment.

Overall, I was extremely pleased with the experience. The client's positive feedback during our consolidation session reaffirmed my feelings that the program was an overall success. In addition, the client's results from the biofeedback stress assessment serve as a tangible representation of the progress he made throughout the program.

Consultant Two

Reflections. *Describe the experience and what were the significant factors?* Our project consisted of advertising for a 6-week mental skills training program at a mixed martial arts gym nearby. I figured that we would gain some interest with the brochure that we used, but I was happily surprised by the amount of people who wanted to sign up for the training program. Immediately, I had three potential clients that wanted to go through our program. The thought of having three clients on top of the clients I already served helped shift my outlook on the process. I needed to be organized with my time and how I would be able to implement mental skills most effectively to all of my clients.

On top of the amount of clientele, I had imagined that I would be getting athletes that fit my idea of who would sign up for this program. I assumed I might work with someone who competes full time, having few other obligations. However, the client with whom I worked was far from within my realm of expectations. The client presented in this case study was an African American male in his thirties. He has a job, also serves in the military, and competes professionally in Brazilian Jiu Jitsu. This reality that my client's world transcended past the realm of just Jiu Jitsu, quickly shifted my expectations and plans for the six-week program. I wanted to be aware of these facts when reflecting on how I would implement the training.

The fact that my client was an African American would not have been an issue for me previously except for the fact that I was currently in a multicultural class at the University of Denver. I wanted to honor what I was learning in class and make sure that what I was learning coincided with how I was consulting. Also, I felt like I needed to bring this aspect of our relationship into the conversation with my client because it was on the forefront of my mind.

After we talked about this the client was appreciative of the conversation and awareness I had towards the diversity but said he was completely comfortable with our relationship and how we could move forward effectively.

What was the goal and what were the consequences? My first thought when taking on this project was probably a little selfish in nature. The idea of working with a martial arts athlete was exciting because I thought I would gain inside knowledge of the sport I hadn't discovered yet. My passion for the sport may have clouded my vision in this regard, but it also drove my interest in pursuing this project as completely as possible.

Besides wanting to know more of an inside view of how mental skills work in martial arts I felt yet another selfish reason for wanting to do this project. I thought that a possible result of doing this training would help me have more contacts within the martial arts world and potentially even assist in getting more work with bjj athletes. While those thoughts were there in the beginning, they quickly went away because of the intense focus I felt in working with the client. I realized there was no room for any selfish motivations if I were to treat the client with full focus and intent. This was a valuable lesson in approaching the client with an open mind and understanding the client is first, always.

What things like internal/external knowledge affected my decision-making? The reality of how I was going to schedule and plan for this sort of diversity hit me hard. I no longer could just use a predetermined plan that I thought would be well suited for the population I expected. I needed to ask myself pertinent questions as to how I needed to approach my clients with the knowledge of grounded theory that I am learning in class. Do I need to change how I approach an African American man in this situation? Why do I think I need to change something? What does my multicultural class say about this situation?

What other choices did I have and what were those consequences?

Instead of using a straightforward plan that was premeditated, I had to adjust my thinking to being more open with using a variety of psychological skills training methods. This change happened because of the feeling of overscheduling and not enough time to prepare for each person. The way I was processing my sessions with each client wasn't sustainable because of the lack of organization in the way I kept notes and prepared for the sessions. I had to adjust to these thoughts and create different habits. One adjustment I made was writing my notes as soon as I could after a session. This allowed for me to reflect on a deeper level than what I was doing previously. Also, because I gave more room for reflection, I was able to think about how the next session might be planned better.

What will change because of this experience and how did I feel about the experience? Not having expectations and a predetermined "set list" of mental skills training was the biggest lesson from this process. Taylor said in his consulting experience, the use of a prescriptive, menu-driven program tends to be less effective (1995, p. 340). Why not treat this project with the same sort of openness that has led my life to this University and this project? Connections and relationships is what drives my work and I lost sight of that because I was so excited to make an impact on someone I hadn't even met. This experience will make it easier for me to realize that approaching new clients can be less stressful and more productive when I meet the client where they are instead of trying to dictate an outcome before it even starts.

Discussion

Overall, the present case aims to show the ways in which an ACT approach to mental skills training can be used in the martial arts realm. Session descriptions illustrate the execution of a variety of ACT interventions in the individual setting. In addition, consultant reflections aim to

offer unabashed lessons learned as entry-level mental skills consultants. While both consultants deviated from the intended program structure, they were able to use their theoretical orientations to adapt to their clients' needs. A significant component in their ability to adapt their program structure was their reflective practice. Through extensive reflection, the authors of the present case were able to make theoretically informed decisions. Ultimately, the consultants felt their reflective practice and theoretical framework enabled them to be flexible, meet the client where they were at, and overcome unexpected obstacles. The authors hope the results from the study will enable the reader to gain a greater understanding of how theory can guide practice, thus encouraging them utilize that information and apply it to their own practice.

Recommendations

While both consultants had very different consulting experiences, some common themes emerged in their reflections. These themes may prove useful to other entry-level consultants working with individual clients.

Patience with logistics

Oftentimes, clients need to reschedule. Sometimes, they do not reschedule. Sometimes a client simply loses interest. As a consultant, patience is key. Consultant two experienced this first hand when his client was unresponsive toward rescheduling for a third session. As such, Consultant two self reflected on the elements of the situation he could and could not control. Unfortunately, he could not control whether or not his client regained interest. However, he can control how he moves forward with future clients. Consultant two ascertained that asking for client feedback more frequently might be helpful. If his client did indeed lose interest in the program, it might have been helpful to ask why he was losing interest. The consultant could use that information to adjust the training program to better fit the clients' needs.

Another element of consideration is whether or not the consulting relationship was a good fit. In these instances, it is important for the consultant to terminate the relationship in a positive manner. The consultant can provide the client with resources should the client wish to continue receiving services from a different consultant.

Practice what we preach

As consultants, we too are performers. Therefore, the same skills we teach to our clients should be applied to us. Since both consultants of the present study identify with an ACT orientation, they agree that present moment awareness during sessions is vital to being able to meet the client where they are (Ravizza, 2012). Often certain factors may prevent us from being completely present with our client. As entry-level consultants it is common to feel like an imposter. Feeling like an imposter may make one feel self-conscious and thus inhibit one's ability to be engaged in the present moment. In addition, we might feel a desire to evaluate our performance as consultants. However, evaluating our performance during a session also takes us out of the present moment. In both cases, we are doing our clients a major disservice. As consultants we must trust our training. Self-evaluation is important; however, during a session is not the time to evaluate our performance.

In addition, it is important that we do not ask our athletes to do anything we would not do ourselves.

Without theory, we are just shooting darts

As entry-level consultants, our minds are saturated with the abundance of knowledge we spent years accumulating – our natural reflex is to share that knowledge and offer practical solutions to other's problems. The challenge is to be able to assess clients' needs and pull the most relevant information and interventions for the person, for the sport, and for the context in

which they exist. Theory is what prevents us from relying solely on intuition and personal biases.

It is important for consultants to understand their client and make theoretically informed decisions that best fit their clients' needs.

References

- Anshel, M. H. and Payne, J. M. (2006). Application of sport psychology for optimal performance in martial arts. In Joaquin Dosil (Eds.), *The Sports Psychologist's Handbook: A Guide for Sport Specific Performance Enhancement* (353-374). West Sussex, England: John Wiley & Sons Ltd.
- Aoyagi, M.W., Poczwadowski, A., Statler, T., Shapiro, J.L. & Cohen, A. (2016). The Performance Interview Guide: Recommendations for initial consultations in sport & performance psychology.
- Blumenstein, B., Lidor, R., & Tenenbaum, G. (2005). Periodization and planning of psychological preparation in elite combat sport programs: The case of judo. *International Journal of Sport and Exercise Psychology*, 3(1), 7-25.
- Chen, M. A., and Cheesman, D. J. (2013). Mental toughness of mixed martial arts athletes at different levels of competition. *Perceptual and Motor Skills*, 116(3), 905-917.
- Dubois, A., & Gadde, L.E. (2002). Systematic combining: An abductive approach to case research. *Journal of Business Research*, 55, 553-560.
- Ford, N.L., Wyckoff, S.N., & Sherlin, L.H. (2016) Neurofeedback and mindfulness in peak performance training among athletes. *Biofeedback*. 44(3).
- Gevirtz, R. (2015) Integrating heart rate variability biofeedback into mindfulness based therapies. *Biofeedback*, 43(3), 129-132.
- Haberl, P. (2012). Dr. Peter Haberl. In M. W. Aoyagi, & A. Poczwadowski (Eds.), *Expert approaches to sport psychology: Applied theories of performance excellence* (pp.51-69). Morgantown, WV: Fitness Information Technology.
- Henschen, K. (2012). Dr. Keith Henschen. In M. W. Aoyagi, & A. Poczwadowski (Eds.),

- Expert approaches to sport psychology: Applied theories of performance excellence* (pp.91-105). Morgantown, WV: Fitness Information Technology.
- Holmes, P.S, & Collins, D.J. (2001). The PETTLEP approach to motor imagery: A functional equivalence model for sport psychologists. *Journal of Applied Sport Psychology, 13*(1).
- Jensen, P., Roman, J., Shaft, B., & Wrisberg, C. (2013). In the Cage: MMA fighters' experience of competition. *Human Kinetics, 27*, 1-12.
- Kabat-Zinn, J. (2013). *Full catastrophe living : using the wisdom of your body and mind to face stress, pain, and illness*. New York: Bantam Books.
- Khazan, I. Z. (2013). *The clinical handbook of biofeedback: A step-by-step guide for training and practicing with mindfulness*. West Sussex, UK: John Wiley & Sons, Ltd.
- Luoma, J.B., Hayes, S.C., & Walser, R.D. (2007). *Learning ACT: An Acceptance & Commitment Therapy Skills-Training Manual for Therapists*. Oakland , CA: New Harbinger Publications, Inc.
- Massey, W. V., Meyer, B. B., and Naylor, A. H. (2013). Toward a grounded theory of self-regulation in mixed martial arts. *Psychology of Sport and Exercise 14*(1), 12-20.
- Ravizza, K. (1988). Gaining entry with athletic personnel for season-long consulting. *The Sport Psychologist, 2*, 243-254.
- Ravizza, K. (2012). Dr. Kenneth Ravizza. In M. W. Aoyagi, & A. Poczwadowski (Eds.), *Expert approaches to sport psychology: Applied theories of performance excellence* (pp. 201-215). Morgantown, WV: Fitness Information Technology.
- Seligman, L., & Reichenberg, L.W. (2014) *Theories of counseling and psychotherapy: Systems,*

strategies, and skills. New York, NY: Pearson.

Szabo, A., & Urban, F. (2014). Do combat sports develop emotional intelligence?

Kinesiology, 46(1), 53-60.

Taylor, J. (1995). A conceptual model for integrating athlete's needs and sport demands in the

development of mental preparation strategies. *The Sport Psychologist*, 9, 339-357.

Winkle, J. M. & Ozmun, J. C. (2003). Martial arts: An exciting addition to the physical

education curriculum. *Journal of Physical Education, Recreation, and Dance*, 74, 29

38.

Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks: Sage Publications.

Appendix A

Program Overview

Intended Program Structure

Week One	Session 0	Intake/Needs Assessment
Week Two	Session 1	Goal Setting
Week Three	Session 2	Energy Management
Week Four	Session 3	Attention Control
Week Five	Session 4	Confidence
Week Six	Session 5	Imagery
Week Seven	Session 6	Consolidation

Consultant One's Adapted Program

Week 1	Session 0	Intake/Needs Assessment/Biofeedback Stress Assessment
Week 2	Session 1	Values & Committed Action
Week 3	Session 2	Self Regulation – Diaphragmatic Breathing Determine RF, HRV/Biofeedback Training
Week 4	Session 3	Attention Control - Mindfulness Meditation
Week 5	Session 4	Attention Control – Relationship with Thoughts
Week 6	Session 5	Imagery using PETTLEP Model
Week 7	Session 6	Consolidation

Consultant Two's Adapted Program

Week 1	Session 0	Intake/Needs Assessment
Week 2	Session 1	Values & Resonance
Week 3	Session 2	Revisit Resonance, Motivation, and Mindfulness
Week 4	Session 3	Imagery using PETTLEP Model

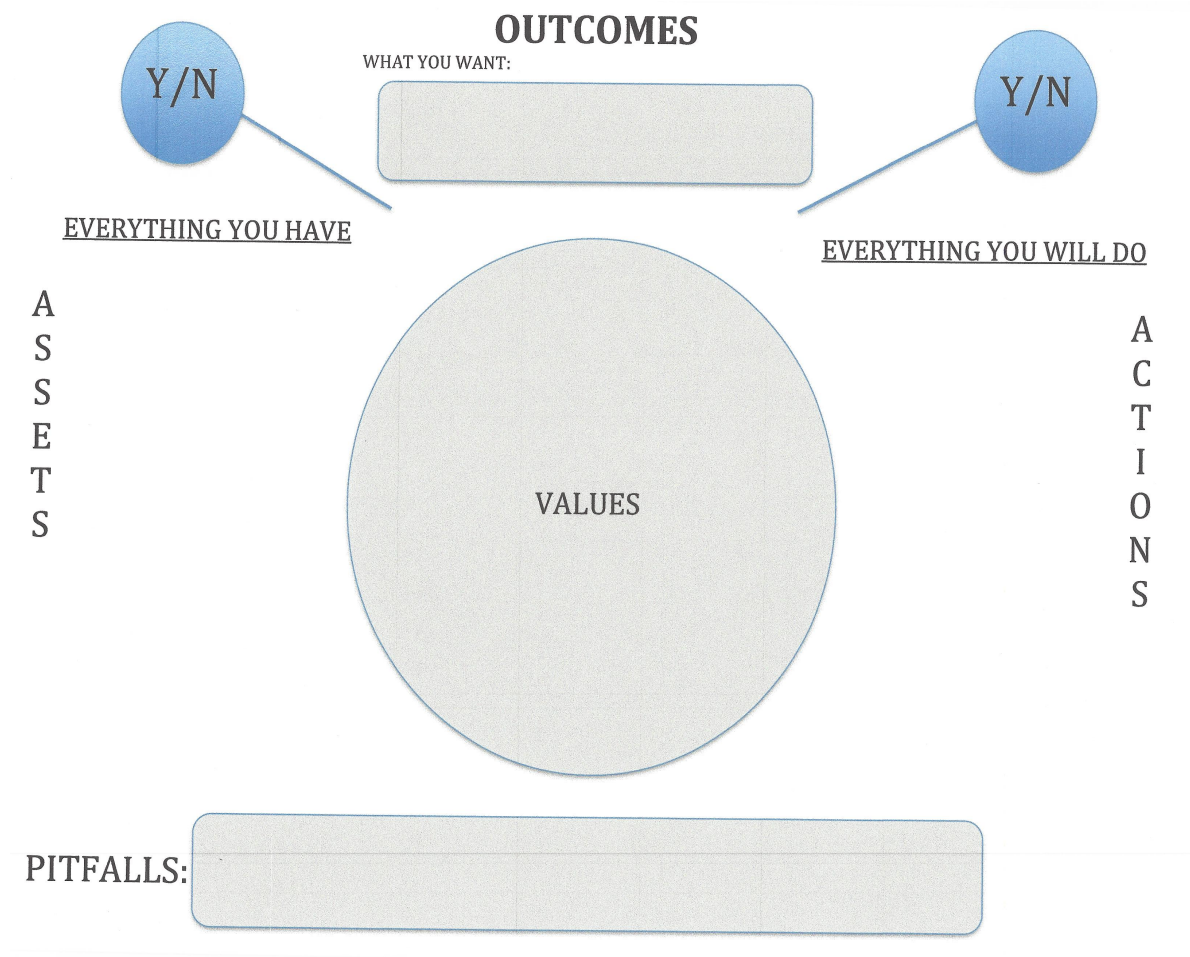
Appendix B

John's Model of Reflection

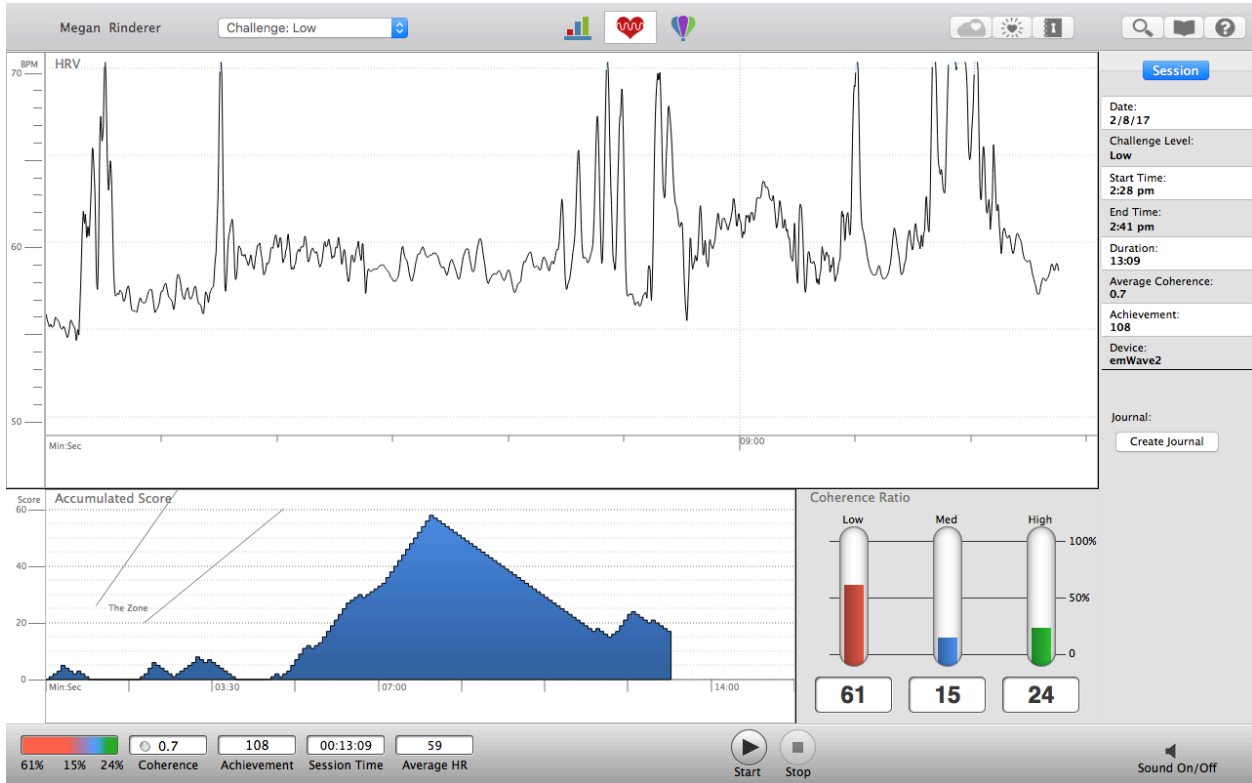
1. Describe the experience and what were the significant factors?
2. What was the goal and what were the consequences?
3. What things like internal and external knowledge affected my decision-making?
4. What other choices did I have and what were those consequences?
5. What will change because of this experience and how did I feel about the experience?

Appendix C

Values and Motivation Worksheet



Appendix D Biofeedback Results



Megan Rinderer Challenge: Low

HRV

90 BPM
80
70
60
50

Min:Sec 06:00 12:00

Session

Date: 4/5/17
Challenge Level: Low
Start Time: 2:03 pm
End Time: 2:14 pm
Duration: 11:14
Average Coherence: 2.3
Achievement: 311
Device: emWave2

Journal: Create Journal

Accumulated Score

Score 160
120
80
40
0

Min:Sec 03:00 06:00 12:00

Coherence Ratio

Low Med High 100%
50%
0

23 14 63

23% 14% 63% Coherence 2.3 Achievement 311 Session Time 00:11:14 Average HR 73

Start Stop Sound On/Off