



12-2021

The Desire to Train: A Motivational Profile of Brazilian Jiu Jitsu Players

Terrance Tarver

University of Tennessee, Knoxville, ttarver1@vols.utk.edu

Follow this and additional works at: https://trace.tennessee.edu/utk_gradthes



Part of the [Other Psychology Commons](#), and the [Sports Studies Commons](#)

Recommended Citation

Tarver, Terrance, "The Desire to Train: A Motivational Profile of Brazilian Jiu Jitsu Players. " Master's Thesis, University of Tennessee, 2021.

https://trace.tennessee.edu/utk_gradthes/6299

This Thesis is brought to you for free and open access by the Graduate School at TRACE: Tennessee Research and Creative Exchange. It has been accepted for inclusion in Masters Theses by an authorized administrator of TRACE: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

To the Graduate Council:

I am submitting herewith a thesis written by Terrance Tarver entitled "The Desire to Train: A Motivational Profile of Brazilian Jiu Jitsu Players." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Jacob Levy, Major Professor

We have read this thesis and recommend its acceptance:

Kirsten A. Gonzalez, Debora R. Baldwin

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

The Desire to Train: A Motivational Profile of Brazilian Jiu Jitsu Players

A Thesis Presented for the
Master of Arts
Degree
The University of Tennessee, Knoxville

Terrance L. Tarver
December 2021

Copyright © 2021 by Terrance L. Tarver
All rights reserved.

ACKNOWLEDGEMENTS

I would like to acknowledge my thesis committee for the consistent help and support that was provided throughout this process.

ABSTRACT

Combat sports, such as Brazilian Jiu Jitsu, require intense physical, mental, and emotional tasking within its training. With the degree of difficulty ingrained within the sport, as well as the performance-focused climate that this sport may be practiced within, many participants that once were intrigued by the sport may lose this interest and enjoyment if their goals are not met. This leads to much interest into what factors drive the motivation of those that continue to participate within Brazilian Jiu Jitsu. The purpose of this study is to develop a motivational profile of Brazilian Jiu Jitsu players. 216 participants from 25 varying in level of participation and years of experience within Brazilian Jiu Jitsu completed a survey to assess the factors that most influenced their Brazilian Jiu Jitsu participation. Data analyses found that participants valued the motivators of interest/enjoyment, competence, and fitness relatively higher than the motivators of social and appearance. Data analyses also found that that there is a significant effect of competence on years of experience and level of participation. Findings from this study could aid coaches, sport clinicians, and sport psychologists in working with Brazilian Jiu Jitsu players by focusing their training on the motivators that are most appealing to the player.

TABLE OF CONTENTS

Chapter One Introduction and General Information.....	1
General Information.....	1
Motivation.....	1
Brazilian Jiu Jitsu.....	3
Motivators of Participation in BJJ.....	4
Current Study.....	7
Chapter Two Materials and Methods.....	8
Participants.....	8
Procedures.....	9
Chapter Three Results and Discussion.....	12
Response Rates.....	12
Motivators Rating.....	12
Years of Experience on Motivators.....	13
Level of Participation on Motivators.....	13
Discussion.....	13
Chapter Four Conclusions and Recommendations.....	17
Practical Implications.....	17
Limitations.....	18
Conclusions.....	19
References.....	21
Vita.....	28

CHAPTER ONE

INTRODUCTION AND GENERAL INFORMATION

General Information

There is a plethora of athletes that participate in several mixed martial arts (MMA) and combat sports, including Brazilian Jiu Jitsu. However, due to environments that are heavily focused on performance instead of skill acquisition and mastery, the motivation to continue to participate can be lost (Le Bars et al., 2009). This can lead to participants leaving a sport that they once were intrigued by and potentially not realizing goals that they may have set for themselves within the sport. It may also lead to a future negative outlook on the sport. To aid in increasing retention rates of combat sport athletes, this research project sought to explore the motivating factors that aid these athletes in continuing their participation in their sport.

Motivation

Motivation is the force that drives people to initiate and sustain their effort toward their goals (Liu et al., 2015). It is instrumentally critical to sport participation in athletes because it is a pivotal element in determining the actions and efforts that they take within their sport (Ryan & Deci, 2000; Vink & Raudsepp, 2018; Rintaugu et al., 2014). Sport practitioners have found motivation to be one of the most difficult and misconstrued concepts to define within psychology (Williams & Krane, 2015). This is a result of many biological and environmental determinants that influence motivation for each athlete. Motivation is defined as “a combination of an individual’s desire to take action, also

known as their drive, and the direction in which these said actions are aimed” (Weinberg & Gould, 2007, p. 52). Researchers believe that motivation can partly be determined by the variation of an athlete’s behavioral patterns as well as the quantity and quality of their motivation (Duda, 2001; 2005). Athletes that are highly motivated and who possess a high quantity and quality of motivation tend to give their best effort, possess competence in their abilities, accept challenging opportunities and perform to their highest ability (Williams & Krane, 2015). This motivation within athletes is susceptible to change for various reasons.

Motivation can be impacted by several internal and external factors that an athlete may experience. The relation between the athlete and these factors is of vital importance for the well-being of athletes because of the impact it may have on the athlete’s motivation, which in turn influences an athlete’s ability to achieve the desired level of performance for their sport (Ryan & Deci, 2000). Research findings indicate that athletes experience more satisfaction and joy from their sport participation when it is perceived as intrinsic, or for the enjoyment of participation (Deci & Ryan, 2000). However, separable rewards such as athletic scholarships and professional sports careers have the potential to hinder this intrinsic motivation (Deci, 1971). While these derivatives of motivation have been analyzed through many theories, multiple researchers and sport practitioners have utilized self-determination theory to assess the motivation of athletes.

Self-determination theory (SDT) bases its origins off the seminal work of Edward Deci and Richard Ryan (Deci & Ryan, 1985). It is a macro theory of human motivation that differentiates between different types of motivation depending on the motives, goals,

and actions that influence the motivation (Deci & Ryan, 1985). SDT further categorizes these different reasons for an athlete's actions on a continuum of behavioral regulations with some having elements of both intrinsic and extrinsic motivation (Amorose, Anderson-Butcher, Newman, Fraina, & Iachini, 2016; Ryan & Deci, 2000). Intrinsic actions are considered those in which an athlete engages in an activity for the pleasure and satisfaction derived from the activity itself. Extrinsically motivated athletes engage in an activity to attain some separable outcome such as for a medal, fame, or financial reward. The extent to which extrinsic motivation is self-determined allows this motivation to be explained along a continuum (Taylor, 2015; Vansteenkiste, Niemiec, & Soenens, 2010). This continuum places these motivations from the most extrinsic (external regulation) to the most intrinsic (intrinsic regulation).

Brazilian Jiu Jitsu

Brazilian Jiu Jitsu (BJJ) is a grappling combat sport that mainly utilizes chokeholds and joint locks. Known as “the gentle art,” BJJ incorporates concepts and traditional philosophies such as flow and playfulness and has been attributed to bringing social and spiritual meaning to players (Pope, 2019). The sport is founded upon the strategy of maintaining advantageous positioning and leverage to aid a smaller player in defeating a larger player, both of which contribute to the sport being regarded as a game of human chess (Hogeveen, 2013). While philosophy underpinning BJJ varies between schools, the ideas of complete fighting strategies and specific positions is a key concept for all (Gracie & Danaher, 2003).

BJJ, like judo, traces its roots back to traditional jujutsu that originated in Japan. The sport was first introduced to Carlos and Helio Gracie (brothers who are considered the founding fathers of BJJ) by Master Esai Maeda in 1914 as Japanese Jiu Jitsu. After this encounter, the Gracie brothers would go on to open an academy to teach their modified version which would become today's BJJ. This new martial art would continue to gain traction and popularity and was introduced to the American eye through Helio's son, Rorion Gracie's creation of the Ultimate Fighting Championship (UFC) (Cheever, 2009). After the demonstration of BJJ's superiority over other martial arts at UFC 1, it is now viewed as the most effective martial art for UFC and mixed martial arts training and competition (Green & Svinth, 2010).

Motivators of Participation in BJJ

BJJ players are attracted to the sport for a plethora of reasons that are both intrinsic and extrinsic in nature. These athletes gravitate towards a sport that provides a myriad of benefits that many may believe are not salient and easily found in other sports. Motivations, such as interest, competence, and social, that are intrinsic, have been found to draw in numerous BJJ players in droves. There has been a great interest in BJJ as of late by many mixed martial arts practitioners. While BJJ is a prominent sport in Brazil, it has garnered attention and interest worldwide. (Andreato et al., 2017). This rise has been found in a multitude of countries such as the UK where the number of BJJ and MMA gyms has grown exponentially from 12 in 2009 to a staggering 320 in 2020 (Sugden, 2021). After the Gracie's dominant showing at UFC 1, BJJ became a staple of MMA

training and has accompanied MMA in its meteoric rise in interest and popularity over recent decades (Blue, 2013).

Many are also drawn to BJJ in hopes of gaining competence and knowledge in a new skill. The sport of BJJ relies heavily on positioning, leverage, and technique, and relies less on physical attributes such as size, strength, speed, and quickness (Gracie & Danaher, 2003). With the focus of the sport resting heavily on the acquisition of submission holds and positions, BJJ requires a keen level of competence to not only defeat an opponent, but to also elude an opponent that is aiming to place a player in an uncompromising position (Ovretveit et al., 2018). A mishap in applying a technique could create an unwelcoming experience for a non-competent BJJ player. While BJJ provides an opportunity for athletes to gain competence in a new sport, it also allows athletes to learn techniques to utilize in their everyday lives as well. BJJ has long been regarded as a great self-defense art that provides competence in using leverage to defend oneself (Jeon, 2020).

Although many BJJ athletes begin their training out of sheer interest in the sport, some continue to participate in part to the social connections that they make within their gym. BJJ athletes have noted that the social environment and connections made during their training have had a significant impact on their comfortability within their gym as well as providing many mental health benefits such as positive coping, resilience, and perseverance (Chinkov & Holt, 2016; Mickelsson, 2021; Reusing, 2014; Sugden, 2021). Research has also found that social connections to others deemed as vital to a BJJ athlete's gym is correlated with a higher probability of continued participation as well as

stronger feelings of connectedness to others (Rodrigues et al., 2019). These social connections and environment that BJJ players participate in foster a therapeutic, comforting, and encouraging environment to thrive (Willing et al., 2019).

BJJ athletes may also find encouragement to engage in their sport from extrinsic motivators as well, such as the physical appearance and fitness benefits that BJJ can provide. BJJ has been found to improve cardiovascular functioning, strength, bone mineral density, flexibility, and nutrition, as well as reduce blood pressure and body fat (Boguszewski, Adamczyk, Suchcicka, Słyk, & Białoszewski, 2014; Burke, Al-Adaw, Lee, & Audette, 2007; Kim, Seo, & Choi, 2014; Tsang, Kohn, Chow, & Singh, 2008). These benefits may also aid in enhancing BJJ athletes' physical appearance as well. Research has even shown that it is possible to experience these benefits with as little as two hours of BJJ training per week (Lorenco-Lima et al., 2020).

Motivation for BJJ players may also come from the achievement of belt progression. Within BJJ, players progress through a belt ranking consisting of the colors white, blue, purple, brown, and black, to designate their skill level within the sport. While this progression can provide motivation, it may also lead to higher dropout rates among players. For example, a blue belt within a gym, while still considered a novice within the sport, may have additional expectations bestowed upon them with their first belt promotion. Blue belts may feel that they must be better than all white belt practitioners while also being competitive against more advanced belts (Ovretveit et al., 2018). These expectations can lead to negative outcomes and behaviors such as performance-avoidance tendencies (Ovretveit, et al., 2018). With these heightened expectations, many blue belts

may feel that they can no longer perform at a desired level, which may lead to drop out. With the multitude of motivators that can draw athletes to BJJ, there is a dearth of research that investigates what motivators BJJ athletes value most.

Current Study

The purpose of this study is to create a motivational profile for Brazilian Jiu Jitsu players consisting of both intrinsic and extrinsic motivators. The researcher hypothesizes that participants will rate the intrinsic motivators of interest/enjoyment, competence, and social significantly higher than the extrinsic motivators of fitness and appearance. The physical and high cardio nature of BJJ creates a difficult environment for training and participation. Therefore, BJJ athletes could be more likely to find motivators that enhance motivation outside of receiving awards and praise. The researcher also hypothesizes that the number of years participants have trained in BJJ will significantly predict their ratings of the intrinsic motivators of interest/enjoyment, competence, and social but not for the extrinsic motivators of fitness and appearance. The researcher posits that those participants that have engaged in BJJ participation longer will latch on to more intrinsically motivating motivators than those who have participated for a significantly less amount of time. Finally, the researcher hypothesizes that there will be a main effect between the participants' level of participation within BJJ and their ratings of the motivators. Specifically, elite amateur and amateur athletes will rate the intrinsic motivators of interest/enjoyment, competence, and social higher than competitive hobbyists and hobbyists.

CHAPTER TWO

MATERIALS AND METHODS

Participants

Participants for this study included 216 Brazilian Jiu Jitsu players from 25 countries. The majority of participants resided within the United States with 155 (71.76%) followed by Canada with 11 (5.09%) and the United Kingdom with 10 (4.63%). Australia and Ireland both had six (2.78%). Germany had four (1.85%) followed by Sweden with three (1.39%). Three countries (Northern Iran, the United Arab Emirates, and Thailand) had two (0.93%) while 15 countries (Poland, Pakistan, Norway, Switzerland, Ukraine, Italy, South Africa, Luxembourg, Belgium, Singapore, New Zealand, Romania, France, Austria, and the Netherlands) had one (0.46%). United States participants resided within nine regions with the majority from the East South-Central region with 60 (38.71%) followed by the Pacific region with 23 (14.84%) the South Atlantic region with 15 (9.68%), and the East North-Central region with 13 (8.39%). Both the Mid-Atlantic region and the Mountain region had 12 (7.74%). The West South-Central region had seven participants (4.52%) followed by both the West North-Central and the New England regions with five (3.23%). Three participants (1.94) did not provide their region.

Participants were asked to disclose their race, sex, and age within the survey. Regarding race, the majority of participants identified as white with 172 (79.63%) followed by Asian with 18 (8.33%), Hispanic with 13 (6.02%) and Black with two

(0.93%). 11 participants (5.09%) identified as multiracial. Regarding sex, the majority of participants identified as male with 178 (82.41%) with 36 (16.67%) identifying as women and two (0.93%) identifying as other. Participants were asked to disclose their ages within set ranges. The majority of participants fell within the 25-34 age range with 83 (38.43%) followed by the 35-44 age range with 66 (30.70%), the 45-54 age range with 36 (16.67%), the 18-24 age range with 26 (12.04%) and the 55-64 age range with five (2.31%).

Procedures

The study was reviewed and approved for human subjects by the authors' Institution Review Board. This current study is based on a sub-set of data collected as part of larger investigation of combat sport athletes exercise behavior, mental health, and exercise motivation conducted by the investigator's doctoral advisor. Participants were recruited through social media groups such as Facebook and other combat sport web groups. Permission from administrators of these social media groups and websites was granted prior to research solicitation. The posts included a link to the secured survey within the Survey Monkey. The survey began with an informed consent statement, and participants indicated their consent to participate by checking the "I agree" button (this is the only required response needed in order to submit the survey). Next, participants were asked to respond to the questionnaires. Participation was voluntary and anonymous.

Instrumentation

The participants first filled out a demographic form as a part of the survey. The demographic asked for non-identifying demographic information such as the participants'

current age, sex, race, country of origin, and region (if country of origin was the US). This information from this demographic form was used as descriptive data for this study.

Level of Participation. Participants were asked to indicate their level of participation within BJJ within the survey. This information was garnered by having participants mark one of the following levels of participation: competitive hobbyists (i.e., train mostly for recreation and fitness, but occasionally compete in BJJ), hobbyists (i.e., train exclusively for recreation and fitness), amateur athletes (i.e., train for the purposes of regularly competing as an amateur BJJ player), elite amateur athletes (i.e., train to compete at highest level of amateur competition—for example, Olympic, national, and/or international competition); and professional combat sport athletes. Regarding level of participation, the majority of participants identified as Competition Hobbyist with 94 (43.52%). Hobbyists were next with 53 (24.54%) followed by Amateur with 47 (21.76%) and Elite Amateur with 16 (7.41%). Professional had the least participants with 5 (2.31%). One participant (0.46%) did not identify their level of participation.

Motivation. The Motives for Physical Activity Measure-Revised (MPAM-R; Ryan, Frederick, Lipes, Rubio, & Sheldon, 1997) was used to assess the strength of motives for participants participation in BJJ. The five motives measured are: (1) fitness-- being physically active out of the desire to be physically healthy and to be strong and energetic; (2) appearance-- being physically active in order to become more physically attractive, to have defined muscles, to look better, and to achieve or maintain a desired weight; (3) competence-- being physically active because of the desire just to improve at an activity, to meet a challenge, and to acquire new skills; (4) social-- being physically

active in order to be with friends and meet new people; and (5) interest/enjoyment--being physically active just because it is fun, makes you happy, and is interesting, stimulating, and enjoyable. The scale has been used to predict various behavioral outcomes, such as attendance, persistence, or maintained participation in some sport or exercise activity, or to predict mental health and well-being. This scale was created on the foundations of Self-Determination Theory and the basic psychological needs of competence, relatedness, and autonomy. The scales motives have been found to be associated with intrinsic and extrinsic motivation with the interest/enjoyment, social, and competence scales relating to intrinsic motivation while the appearance and fitness scales relating to extrinsic motivation. Internal consistency estimates for the current sample across the five scales were similar to those reported in the normative sample (Ryan et al., 1997) and indicative of good to very good reliability. Coefficient alphas for the current sample were as follows: fitness-- alpha = .86, appearance-- alpha = .91, competence-- alpha = .87, social-- alpha = .79, and interest/enjoyment—alpha = .83.

CHAPTER THREE

RESULTS AND DISCUSSION

Response Rates

The study was presented as a two-page survey via Survey Monkey (an online data collecting platform). The first page of the study consisted of demographic questions as well as level of participation of clients. All 216 participants (100%) responded to all questions regarding country of origin, gender, age, and race. 152 of 155 US participants (98.06%) responded to questions regarding their current region of living. The second page of the study consisted of the MPAM-R with all 216 participants (100%) responding to all questions on this measure.

Motivators Rating

A one-sample t-test was conducted to test the mean rating of motivators of participants against the average score of four for each motivator scale on the MPAM-R. The results found that the mean rating scores for all motivators were significantly higher than the average scale score at the .05 level: interest/enjoyment ($M = 6.42$; $SD = .71$) $t(215) = 49.93$; $p < .001$, competence ($M = 6.29$; $SD = .89$) $t(215) = 37.67$; $p < .001$, appearance ($M = 4.57$; $SD = 1.46$) $t(215) = 5.72$; $p < .001$, fitness ($M = 5.94$; $SD = 1.12$) $t(215) = 25.48$; $p < .001$, and social ($M = 4.45$; $SD = 1.27$) $t(215) = 5.24$; $p < .001$. Results also show that participants rated the motivators of interest/enjoyment, competence, and fitness relatively higher than the motivators of social and appearance.

Years of Experience on Motivators

Simple regression analyses were used to test if the number of years trained significantly predicted participants' ratings of the motivators of interest/enjoyment, competence, appearance, social, and fitness. The results of the regression indicated that years of experience explained a significant amount of the variance in competence ratings ($R^2 = .013$, $F(1, 214) = 3.88$, $p = .05$). However, years of experience did not explain a significant amount of the variance in interest/enjoyment, appearance, social, and fitness ratings.

Level of Participation on Motivators

A one-way between subjects ANOVA was conducted to compare the effect of participants level of participation on their ratings of interest/enjoyment, competence, appearance, fitness, and social. Results show a main effect of level of participation was found for competence, $F(4, 210) = 4.13$, $p = .003$. Post hoc analyses using the Tukey LSD post hoc criterion for significance indicated that Competition Hobbyists ($M = 6.45$) reported significantly higher competence ratings than Hobbyist ($M = 5.90$) $p < .001$. Post hoc analysis also indicated that Elite Amateurs ($M = 6.58$) reported significantly higher competence levels than Hobbyist ($M = 5.90$) $p = .007$. There was no main effect of level of participation found for interest/enjoyment, appearance, social, or fitness.

Discussion

To the best of the researcher's knowledge, this study is one of few that have attempted to formulate a motivational profile of Brazilian Jiu Jitsu athletes and the first to

utilize the MPAM-R to do so. The findings from this study suggest that BJJ athletes find both intrinsic and extrinsic motivation to participate at higher-than-average levels. However, these athletes seem to value the motivators of interest/enjoyment, competence, and fitness relatively more than appearance and social. Research supports the findings of interest/enjoyment with the recent boom of interest and popularity in BJJ and MMA by practitioners and spectators over the past few decades (Andreato et al., 2017; Blue, 2013). This meteoric rise in BJJ has continued to attract new members to the sport for various reasons. The findings also align with the fitness benefits that have been studied within BJJ practice such as reducing body fat and blood pressure as well as improvements in flexibility and cardiovascular functioning (Boguszewski, Adamczyk, Suchcicka, Słyk, & Białoszewski, 2014; Burke, Al-Adaw, Lee, & Audette, 2007; Kim, Seo, & Choi, 2014; Tsang, Kohn, Chow, & Singh, 2008), while also highlighting the benefits regarding competition. Lean mass within the upper quartile of an athlete's weight class has been positively correlated with the ability to perform technical actions within a performance (Franchini et al., 2007; Kim et al., 2011; Marinho et al., 2012). These fitness benefits in novel practice and competition bring light to what lead fitness motivation to be in high regards with BJJ players. While interest/enjoyment and fitness were rated relatively high on the MPAM-R, competence was the motivator that participants referred to on multiple occasions.

Competence as motivation for BJJ athletes can be viewed in many aspects of the sport including the objective of the sport. For a competitor to be victorious in a match, the competitor must either submit their opponent or be ahead in points, based on positional

dominance, at the end of the bout. Both avenues to victory create a need for BJJ players to be technically sound and possess a vast knowledge of submissions, passes, takedowns, and positions. BJJ players that fail to obtain and maintain competence in their technical ability will find it difficult to progress within the sport.

This coincides with the findings of this study in that competition hobbyists and elite amateurs rated competence higher than hobbyists. Both elite amateurs and competition hobbyists compete in BJJ in some capacity within their participation. These athletes must be competent in their skills and techniques to compete with others within their competitive field, which is usually based on belt rank within BJJ, which is also a measure of competence.

Results also found that there was a positive correlation between years of experience and competence ratings as well. Athletes that possess significant years of constant training usually have obtained a higher belt rank within their training (either blue, purple, brown, or black) as a symbol of skill (Ovretveit et al., 2018). To advance to a new belt, BJJ players must exemplify mastery and competence over various techniques and skills to ensure that they are qualified for belt promotion. This could create a shift in motivation to competence as years of experience increases.

The results of this study also coincide with the basic psychological needs of competence and relatedness. Participants found competence to be a relatively high motivator which can also influence other perceived aspects of their sport. For example, high perceived competence within athletes increases expectations for success, intrinsic motivation, persistence to face and overcome adversity, exerted efforts, such as

engagement, effort to master skills, persistence in the face of difficulty, and choice of challenging tasks (Roberts, Treasure, & Conroy, 2007). Relatedness was expressed through the significantly high ratings that participants had for the social motivator. Participants seemed to value connectedness to others within their training environment. This relatedness has been shown to predict indices of self-determination and intrinsic motivation for both sport participation and exercise behavior (Stults-Kolehmainen, Gilson, & Abolt, 2013).

While the third basic psychological need of autonomy was not concretely assessed by the MPAM-R, there is mixed evidence that supports this need. One may believe that the individual nature of competition within BJJ could foster higher value in autonomy by BJJ players. However, current research does not support this claim. Research also finds that martial artists value more autonomous motivation than combat sport athletes, which allows mixed martial artists to possess greater control of aggression and ethical sensitivity (Kostorz & Sas-Nowosielski, 2021).

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

Practical Implications

BJJ players, instructors, and sport clinicians and sport psychologists could benefit from taking the findings from this study into account in their practice. BJJ players may use these findings to reshape their approach to their training. With competence within the sport viewed by some in BJJ as a key to successful participation within the sport, BJJ players may bring their focus of training from other motivators, and direct more towards competence. This, in hand, could foster training that is more conducive to enhancing competence in technique and skill.

The findings of this study could aid BJJ instructors in their training techniques for their students. BJJ instructors may take the notion of competence as a motivator and revise their training to emphasize the acquisition and mastery of skills and techniques, instead of emphasizing the progression of belt rank. This type of training can keep BJJ players engaged with their training for a more intrinsic motivator, which could maintain and/or increase participation, even if belt progression is not occurring at the frequency that the BJJ player would hope for.

Sport clinicians and sport psychologists can benefit from the findings of this within their own work with BJJ players. Sport psychologists may find that tailoring their interventions to focus more on the competence that the BJJ player has within their sport could foster more dialogue and a deeper therapeutic relationship between the sport psychologist and the BJJ player. For example, an intervention centered around the BJJ player's purpose for participation regarding competence could open avenues to further

discuss concerns that the BJJ player may have in this area such as self-doubt, performance anxiety, and issues with focusing.

Counseling psychologists may also use these results within the realm of vocational psychology. Many clients may find a loss of motivation in their current career path due to a lack of expected progression. These clients may begin to harbor negative emotions and cognitions about their current career path as well as possess thoughts of making a mistake in choosing a career. Counseling psychologists can aid these clients by implementing interventions that aid clients focus on the competence and acquisition of skills that can be obtained within their career field instead of more extrinsic motivators such as career progression and salary.

Limitations

There are a few limitations to this study, starting with the diversity in the participant pool. The majority of participants in this study were white men from the United States. This pool does not do justice to the many racial, sexual, geographical, and cultural differences within the population of BJJ players. Researchers that aim to create a similar study should include a more diverse research pool to bring light to these multicultural differences.

A second limitation to this study is the lack of qualitative data. While quantitative data provides a large dataset of numerical data, studies of this nature do a poor job of understanding the “why” behind participants’ responses. With a topic such as motivation, it is important to hear from participants, in their own words, their purpose and motivation to participate in their sport. An inclusion of some qualitative measure should be added to

dive deeper into the personal beliefs and reasonings behind athletes' motivations to participate in their sport.

While the concerns of blue belts within BJJ was previously addressed, the researcher did not ask participants to identify their belt rank within this study. This is a limitation because it misses on an opportunity to address the potential varying differences in motivation between belt levels. Future studies would greatly benefit from gathering this information to further study the influence of motivation within blue belts and other belt ranks within BJJ.

The final limitation of this study would be the timing in which data collection was completed. During the current Covid-19 pandemic, many BJJ gyms were forced to close due to health regulations provided by multiple outlets. This, in turn, prevented BJJ players from competitions and practice of their sport. These closures may also have had an influence on the mental health of many BJJ players that may use the sport as a form of therapy. With these tumultuous times upon us, participants may have provided responses to the questionnaire that could be different from responses that they may have given pre-pandemic. Follow up studies after the pandemic could be useful to gauge any changes in participants' motivation levels.

Conclusions

Motivation is a key foundation to the actions and behaviors that an athlete partakes in within their sport. This drive and direction of motivation can be influenced by a multitude of elements that an athlete faces in their daily lives. The athlete's motivation lies upon a spectrum between extrinsic and intrinsic motivation, depending upon the

motivators driving them. BJJ players have been found to have a multitude of motivators that drive their motivation, however, there have been few studies that have provided a motivational profile for these athletes. The results of this study found that while BJJ players value both extrinsic and intrinsic motivators, there is a relative difference among motivators with competence being a driving motivator overall and with an increase in both experience and level of competition/participation. From a practical perspective, these findings may aid practitioners, instructors, and clinicians in their approach to training and interventions within BJJ.

REFERENCES

- Aires, H., Pacheco, C. C. K., Gonçalves, G. H. T., Klering, R. T., & Balbinotti, C. A. A. (2020). Motivação para prática do Jiu Jitsu. *Saúde (Santa Maria)*, 46(1).
doi:10.5902/2236583439967
- Amorose, A. J., Anderson-Butcher, D., Newman, T. J., Fraina, M., & Iachini, A. (2016). High school athletes' self-determined motivation: The independent and interactive effects of coach, father, and mother autonomy support. *Psychology of Sport & Exercise*, 261-8.
- Andreato, L.V., Lara, F.J.D., Andrade, A., & Branco, B.H.M. (2017). Physical and physiological profiles of Brazilian Jiu-Jitsu athletes: A systematic review. *Sports Med Open* 3(9). <https://doi.org/10.1186/s40798-016-0069-5>
- Blue, S. (2013). Ongoing change in the rhythms of mixed martial arts practice. *The International Journal of Sport and Society: Annual Review*, 3(3), 161–170.
<https://doi.org/10.18848/2152-7857/cgp/v03i03/53911>
- Boguszewski, D., Adamczyk, J., Suchcicka, B., Słyk, E., & Białoszewski, D. (2014). The estimation of health-related behaviours of men practising aikido and capoeira. *Ido Movement for Culture*, 14(2), 41-46. doi: 10.14589/ido.14.2.6
- Burke, D., Al-Adawi, S., Lee, Y., & Audette, J. (2007). Martial arts as sport and therapy. *The Journal of Sports Medicine and Physical Fitness*, 47(1), 96–102.
- Cheever, N. (2009). The uses and gratifications of viewing mixed martial arts. *Journal of Sports Media*, 4, 25-53. doi:10.1353/jsm.0.0028
- Chinkov, A., & Holt, N. (2015). Implicit transfer of life skills through participation in

- Brazilian Jiu-Jitsu. *Journal of Applied Sport Psychology*. 00-00.
10.1080/10413200.2015.1086447.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18(1), 105–115.
Doi:10.1037/h0030644
- Deci, E. L., & Ryan, R. M. (1985) Intrinsic motivation and self-determination in human behavior. New York, NY: Plenum. Doi:10.1007/978-1-4899-2271-7
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
Doi:10.1207/S15327965PLI1104_01
- Duda, J. L. (2001). Goal perspective research in sport: Pushing the boundaries and clarifying some misunderstandings. In G. C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 129–182). Champaign, IL: Human Kinetics.
- Duda, J. L. (2005). Motivation in sport: The relevance of competence and achievement goals. In J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 318–335).
- Franchini, E., & Nunes, A., Moraes, J., & Del Vecchio, F. (2007). Physical Fitness and anthropometrical profile of the Brazilian male judo team. *Journal of Physiological Anthropology*. 26. 59-67. 10.2114/jpa2.26.59.
- Gracie, R., & Danaher, J. (2003). *Mastering jujitsu*. Champaign, IL: Human Kinetics.
- Green, T., & Svinth, J. (2010). *Martial arts of the world: An encyclopedia of history and innovation*. Santa Barbara, CA: ABC-CLIO.

- Hogeveen, B. (2013). It is about your body recognizing the move and automatically doing it: Merleau-Ponty, habit and Brazilian jiu-jitsu. *Fighting Scholars: Ethnographies of Habitus in Martial Arts and Combat Sports*, Anthem Press: London, New York, and Delhi.
- Jeon, S. (2020). Education methods of Brazilian jiu-jitsu with biomechanics. *Studi Sulla Formazione*, 23(1), 281-288. doi:<http://dx.doi.org/10.13128/ssf-11478>
- Kim, J., Cho, H. C., Jung, H. S., & Yoon, J. D. (2011). Influence of performance level on anaerobic power and body composition in elite male judoists. *Journal of Strength and Conditioning Research*, 25(5), 1346–1354.
<https://doi.org/10.1519/JSC.0b013e3181d6d97c>
- Kim, D. Y., Seo, B. D., & Choi, P. A. (2014). Influence of taekwondo as security martial arts training on anaerobic threshold, cardiorespiratory fitness, and blood lactate recovery. *Journal of Physical Therapy Science*, 26, 471-474.
doi:10.1589/jpts.26.471
- Kostorz, K., & Sas-Nowosielski, K. (2021). Martial arts, combat sports, and self-determined motivation as predictors of aggressive tendencies. *Journal of Physical Education & Sport*, 21(1), 122–129.
- Le Bars, H., Gernigon, C., & Ninot, G. (2009). Personal and contextual determinants of elite young athletes' persistence or dropping out over time. *Scandinavian Journal of Medicine & Science in Sports*, 19(2), 274–285.
- Liu, J., Xiang, P., McBride, R. E., Su, X., & Juzaily, N. (2015). Changes in at-risk boys'

- intrinsic motivation toward physical activity: a three-year longitudinal study. *Measurement in Physical Education & Exercise Science*, 19(4), 200-207.
- Lorenco-Lima, L., Souza-Junior, T., Okuyama, A., McAnulty, S., Utter, A., Monteiro, T., Barquilha, G., Bortolon, J., Geraldo, T., & Hirabara, S. (2020). Characterization of brazilian jiu-jitsu training effects on the physical Fitness of men and women. *Journal of Physical Education and Sport*, 20(5), 2990-2995. doi:10.7752/jpes.2020.s5406
- Marinho, B., Del Vecchio, F., & Franchini, E. (2012). Condición física y perfil antropométrico de atletas de artes marciales mixtas. *Revista de Artes Marciales Asiáticas*. 6. 10.18002/rama.v6i2.4.
- Mickelsson, T. (2021). Brazilian jiu-jitsu as social and psychological therapy: a systematic review. *Journal of Physical Education and Sport*. 21. 1544-1552. 10.7752/jpes.2021.03196.
- Ovretveit, K., Sæther, S., & Mehus, I. (2018). Achievement goal profiles, and perceptions of motivational climate and physical ability in male Brazilian jiu-jitsu practitioners. *Archives of Budo*, 14.
- Pope, M. (2019). Flow with the go: Brazilian Jiu Jitsu as embodied spirituality. *Practical Theology*, 12(3), 301–309. doi:10.1080/1756073x.2019.1595319
- Reusing, H. (2014). The language of martial arts: The transformative potential of Brazilian jiu-jitsu through the lens of depth psychology. *Pacifica Graduate Institute. Doctoral dissertation*
- Rodrigues, A., Evans, M., & Galatti, L. (2019). Social identity and personal connections

- on the mat: Social network analysis within Brazilian jiu-jitsu. *Psychology of Sport and Exercise*, 40, 127–134. doi:10.1016/j.psychsport.2018.10.006
- Rintaugu, E. G., Kamande, I. M., Litaba, S. A., Toriola, A. L., & Amusa, L. O. (2014). Correlates of motivational orientation among Kenyan university athletes. *African Journal for Physical, Health Education, Recreation & Dance*, 20(3.1), 1049-1064.
- Roberts, G. C., Treasure, D. C., & Conroy, D. E. (2007). Understanding the dynamics of motivation in sport and physical activity: An achievement goal interpretation. In G. Tenenbaum & R. Eklund (Eds.), *Handbook of sport psychology* (3rd ed., pp. 3–30). New York: Wiley.
- Rodrigues, A., Evans, M., & Galatti, L. (2019). Social identity and personal connections on the mat: Social network analysis within Brazilian Jiu-Jitsu. *Psychology of Sport and Exercise*, 40, 127–134. doi:10.1016/j.psychsport.2018.10.006
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. doi:10.1037//0003-066x.55.1.68
- Stults-Kolehmainen, M. A., Gilson, T. A., & Abolt, C. J. (2013). Feelings of acceptance and intimacy among teammates predict motivation in intercollegiate sport. *Journal of Sport Behavior*, 36(3), 306-327.
- Sugden, J. T. (2021). Jiu-jitsu and society: Male mental health on the mats. *Sociology of Sport Journal*, 1(aop), 1–13.
- Taylor, I. (2015). The five self-determination mini-theories applied to sport. In S. D.

- Mellalieu, S. Hanton, S. D. Mellalieu, S. Hanton (Eds.), *Contemporary advances in sport psychology: A review* (pp. 68-90). New York, NY, US: Routledge/Taylor & Francis Group.
- Tsang, T., Kohn, M., Chow, C., & Singh, M. (2008). Health benefits of Kung Fu: A systematic review. *Journal of Sports Sciences*, 26, 1249-1267. doi: 10.1080/02640410802155146
- Vansteenkiste, M., Niemiec, C., & Soenens, B. (2010). The development of the five mini-theories of self-determination theory: An historical overview, emerging trends, and future directions. In T. Urdan & S. Karabenick (Eds.), *Advances in motivation and achievement. The decade ahead* (Vol. 16, pp. 105-166). UK: Emerald Publishing
- Vink, K., & Raudsepp, L. (2018). Perfectionistic strivings, motivation, and engagement in sport-specific activities among adolescent team athletes. *Perceptual & Motor Skills*, 125(3), 596-611.
- Weinberg, R.S. and Gould, D. (2007) *Foundations of Sport and Exercise Psychology*. 4th edition. Leeds: Human Kinetics.
- Williams, J. M. & Krane, V. (2015). *Applied sport psychology: personal growth to peak performance*. Seventh edition. New York: McGraw-Hill Education.
- Willing, A., Girling, S., Deichert, R., Wood-Deichert, R., Gonzalez, J., Hernandez, D., Foran, E., Sanberg, P., & Kip, K. (2019). Brazilian jiu jitsu training for us service members and veterans with symptoms of PTSD. *Military Medicine*, 184(11–12), e626–e631. <https://doi.org/10.1093/milmed/usz074>

VITA

Terrance Lamar Tarver graduated with a Bachelor of Science in Psychology from Columbus State University in 2016. In 2017, Tarver enrolled into the Sport and Exercise Psychology master's program at Georgia Southern University, which he is concurrently completing. In 2019, he joined Dr. Jacob Levy's lab at the University of Tennessee and in December 2021, he received a Master of Arts in Psychology.