International Journal of
Disabilities Sports and Health Sciences
e-ISSN: 2645-9094

RESEARCH ARTICLE

Athletes with Disability: Does Emotional Regulation Affect Mental Toughness?

Miftakhul JANNAH[1*], Rachman WİDOHARDHONO[2], Nabila RACHMAN[3], Muhammad Aufa Al Farisi Ann Haba SAUDA[4] and Farida HARAHAP[5]

[1,4]Universitas Negeri Surabaya, Faculty of Education, Department of Psychology, Surabaya / Indonesia
[2]Universitas Negeri Surabaya, Faculty of Vocational, Department of Sport Coaching, Surabaya / Indonesia
[3]Universitas Islam Negeri Maulana Malik Ibrahim, Faculty of Psychology, Department of Psychology, Malang / Indonesia
[5]Universitas Negeri Yogyakarta, Faculty of Education, Departement of Psychology, Yogyakarta / Indonesia
*Corresponding author: miftakhuljannah@unesa.ac.id

Abstract
This study aims to determine the contribution of emotional regulation to mental toughness among athletes with disabilities. The approach used in this research is quantitative. The sampling technique used in this study is saturated sampling. All members of the population became participants in this study. A total of 69 athletes with disabilities who are members of the East Java National Paralympic Committee in Indonesia took part in the XVI National Paralympic Week. Participants aged 14–56 years (mean 29.855; SD 12.008) were grouped into three research based disabilities categoriies based on IPC (International Paralympic Committee) namely physical impairment, intellectual impairment, and vision impairment. The instruments used were the IERQ4S (Indonesian Emotion Regulation Questionnaires for Sport) and the Mental Toughness Scale. JASP (Jeffyes's Amazing Statistic Program) software was used to analyze the data using linear regression. The results of the study show that emotional regulation contributes 57.6% to the mental toughness of athletes with disabilities in Indonesia with $p < .001$ and r 0.759. Through the emotional regulation mechanism, athletes with disabilities are able to have mental toughness during training and competition. This study has highlighted the contribution that emotional regulation to mental toughness in athletes with disabilities. This study suggests that athletes with disabilities should be aware of the importance of emotional regulation if they want to be mentally tough. As a conclusion, in addition to physical exercise, sports mental training programs in the field of emotional regulation must be designed.

Keywords
Paralympic, Disability athlete, Emotional regulation, Mental toughness, IERQ4S

INTRODUCTION

Sports for people with disabilities are seen as a place to hone their abilities and potential to achieve an achievement or as a recreational facility. In addition, sports can directly help people with disabilities to achieve the process of self-actualization (Townsend & Cushion, 2017). Bondár (2019) argue that sports for people with disabilities are good renewal in the world of sports because it can minimize discrimination against people with disabilities.

Persons with disabilities are divided into several categories, namely according to the type of disability and its severity. Persons with disabilities in Law Number 8 of 2016 are defined as "people who experience physical, intellectual, mental and/or sensory limitations for a long time, and when interacting with the environment can experience obstacles and difficulties to participate fully and effectively with other citizens based on equal rights (Hawthorne & Loveall, 2021). According to Wijayanti et al. **(**2016**),** health is the most basic human right and must be obtained by

Received: 04 October 2023 ; Revised ;13 December 2023 ; **Accepted:** 19 December 2023; **Published:** 25 February 2024

How to cite this article: Jannah, M., Widohardhono, R., Rachman, N., Sauda, M.A.A.F.A.H. and Harahap, F. (2024). Athletes with Disability: Does Emotional Regulation Affect Mental Toughness?. *Int J Disabil Sports Health Sci*;7(Special Issue 1):37-45. https://doi.org/10.33438/ijdshs.1371348

every Indonesian citizen, including persons with disabilities, so it is necessary to hold various integrated and comprehensive activities to increase the level of understanding, awareness, desire and, ability to live a healthy life. Therefore, in living a normal life, persons with disabilities practice independence and maximize the functioning of other body parts.

Discrimination and prejudice against people with physical, mental, or intellectual disabilities have long been replaced by a growing attitude of tolerance and support for those with disabilities. Every four years, a paralympic event is held which is a step to normalize the condition of physical disability (Hogg & Vaughan, 2018). Likewise in Indonesia, a series of structured activities have been carried out to support and encourage persons with disabilities to obtain equal rights and opportunities in all aspects of life. One of them is in the field of sports, namely by facilitating people with disabilities who have interests and abilities as athletes. The government and related institutions work together to optimize the potential of athletes with disabilities such as the procurement of the paralympic, the formation of the NPCI (National Paralympic Committee Indonesia), the preparation of laws, and so on.

The failure or success of an athlete is multifactorial, depending on a combination of several factors such as physical factors, technical factors, tactical factors, and the most decisive factor, namely psychological factors **(**Liew et al., 2019). Sports psychology plays an important role in paralympic sports (Bundon et al., 2018). Sports psychology helps in understanding every psychological symptom in athletes, identifying problems that result in decreased athlete achievement, and formulating strategies and coaching for athletes (Azim, Rahayuni, & Widiawati, 2023). One aspect that can determine the success of athletes in competitions is Mental Toughness (Falaahudin et al., 2021). Indonesian athletes with disabilities need strong mental toughness. This is because the presence of mental toughness in athletes with disabilities will make athletes feel calm during matches even though they get a lot of pressure (**Crust & Azadi, 2010**). In line with the opinion of **Fagher et al.** (2016) athletes with disabilities show a high degree of mental toughness and have the ability to optimize their functioning, even though they are often faced with situations that trigger psychological stress, functional limitations, risky behavior and excessive exercise.

Physical, mental, and intellectual imperfections often cause difficulties for people with disabilities, and emotional instability will have an impact on their social functions and roles. Research conducted by Ahmed et al. (2019) about self-image of people with disabilities shows that not all people with disabilities have negative thoughts about the conditions they experience, even feelings of satisfaction and gratitude arise for what God has given compared to hoping to live with more perfect conditions. Improved emotional regulation in sports in athletes with disabilities can also help them participate longer and achieve better results (Yavorovskaya et al., 2021).

Emotional regulation is the ability to manage, extinguish and regulate emotions at a high degree to bring up the expertise to organize feelings, thought patterns, physiological actions, and emotional responses starting with the selection of situations in the form of actions to avoid certain objects and in special conditions with a target to reduce or even increase feelings of emotion (Estévez et al, 2017). In this case, the individual will behave according to the expected situation. It can then result in desired or unwanted emotions (Rogier et al., 2019) Emotional regulation in athletes with disabilities develops along with the sport they are involved in (Jenkins, 2022). Emotional regulation is defined as the use of strategies in behavior and cognitive changes in the intensity of the individual experience (Richards & Gross, 2000; Yavorovskaya et al., 2021). Emotional regulation is concerned with the state of the heart and broadly refers to the processes that affect the emotions one has, when to have them, and how to experience and express emotions. (Gross, 1998; Tamminen et al., 2021). Ramos (2020) divides emotional regulation into two components, namely cognitive reappraisal and expressive suppression. Cognitive reappraisal (reassessment), has the meaning of a cognitive change that can neutralize the negative effects of emotions or explain aspects of events that release positive emotions. Suppression (pressure), is a form of modulation response that inhibits behavior that is continuous with emotional suppression (Mendoza, 2023).

Psychological changes can occur during training and matches. Mistretta (2017) explained that increasing the athlete's ability to deal with

pressure, having mental toughness, and high concentration will place athletes more capable and strong in facing tougher situations. Athletes with disabilities are required to have a high level of confidence before the match to encourage athletes to reach their peak performance (Zienius et al., 2018). Emotional regulation is an important predictor in influencing a person's behavior. Emotion regulation is believed to increase mental toughness (Calantonea et al., 2002). Athletes with disabilities need the ability to regulate emotions in order to their mental toughness in good condition.

Mental toughness is a psychological aspect that includes integration, aggregation ,and resources over time based on a person's experience with stress (Gucciardi et al., 2017). Mental toughness has been conceptualized as the possession that enables the developed and inherited psychological resources (i.e., values, emotions, cognitions, attitudes, and behaviors) that facilitate achievement and promote mental health in a positive direction (Kawabata et al., 2021; Mutz et al., 2017; Perry et al., 2021). Mental toughness refers to a complex psychological concept of how a person's capacity to provide the best performance in line with the existing situational demands (Gucciardi et al., 2016). Mentally strong individuals tend to be sociable and open; because theycano remain calm and relaxed, they are competitive in many situations and have lower levels of anxiety than others. With a high level of self-confidence and an unshakable belief that they are in control of their own destiny, these individuals can remain relatively unaffected by competition or adversity (Crust & Clough, 2011; Fagher et al., 2016).

Many athletes deal with a variety of stressful tasks on a regular basis. Athletes are prone to negative emotions, fear of failure, disordered thinking, and competitive anxiety because they participate in demanding and competitive activities (Birrer, et al, 2019), It is believed that an athlete's capacity to react to unpleasant emotions in an adaptive way affects how well they perform in the sport. According to Tamminen et al. (2021), emotional control is a critical skill for athletes to succeed.

One measure of an individual's emotional health and capacity for healthy functioning is their capacity to regulate the emotions they encounter. Anxiety disorders, eating disorders, and other mental health issues are associated with symptoms in people who are unable to appropriately manage their emotions. In contrast to having adequate psychological functioning, poor emotional regulation is also associated to high levels of stress and the potential for psychopathological symptoms as a result of these activities' demands. Thus, in order to support their success, athletes need to be taught how to use psychological techniques. Prominent paralympic athletes use psychological tactics to control their emotions and psychological reactions, according to research by Dieffenbach and Statler

Several previous studies have focused on emotion regulation and mental toughness. Research by Calantonea et al. (2002) shows the fact that there is a significant relationship between emotion regulation and mental toughness. Other research by Mohebi et al. (2017) was also conducted to determine the relationship between emotional regulation and mental toughness in taekwondo athletes where the results obtained indicate that there is a significant relationship between the two variables. Several previous studies have examined the relationship between emotion regulation and mental toughness, but not many have revealed whether emotion regulation makes a significant contribution to the mental toughness of athletes with disabilities.

Scientific data and in-depth studies are needed regarding the contribution of emotional regulation to the mental toughness of athletes with disabilities during matches. Based on what has been descrifbed, the formulation of the problem in this study is whether there is a contribution to emotional regulation on mental toughness in athletes with disabilities? The implications of this research are for athletes with disabilities to pay more attention to aspects of emotional regulation in order to have mental toughness during competition. Apart from that, it can be used as a reference for creating mental training programs for athletes with disabilities so that they have a mental toughness.

MATERIALS AND METHODS

Participant and Process

This type of research is a non-experimental quantitative research. The non-experimental quantitative method is a research method that is carried out by collecting research data and analyzing data in the form of numbers that can

only be applied to research that describes something to reveal correlations between research variables, or to carry out dissimilarity tests. between two or more groups of objects to be studied (Jannah, 2018).

The research was conducted at the East Java provincial training center located in the city of Surabaya, ahead of the national paralympic week in Indonesia. Data collection was carried out after the participants did technical training, for 7 consecutive days. Data was collected through a paper-based instrument and filled in directly or face to face by the participants. Data collection is done through the approval of the coach. In addition, participants filled out their willingness to become participants.

In this study the population of athletes with disabilities came from ten sports, namely athletics, boccia, badminton, chess, blind judo, shooting, archery, swimming, soccer cerebral palsy, and table tennis. Based on International Paragames Committee (IPC) they are grouped into three research-based disability categories, namely Athletes with physical impairment, intellectual disability, and vision impairment.

The participating athlete with disability was informed about the study protocol, their rights, and the associated risks of participation before providing written informed consent. Ethical approval was obtained from the Ethics Committee before starting the study Research Ethics of the Universitas Negeri Surabaya (date: 17.07.2021; Decision number: 2021/07-137). After obtaining ethical approval, we obtained institutional permission. The entire study was carried out in a determined adherence to the principles contained in the Declaration of Helsinki. Additional precautions were taken by the investigator(s) to protect the volunteers in this study.

They are currently involved in a regional training camp for the province of East Java ahead of the 2021 national paralympic week. A total of 69 athletes. The sampling technique used is a saturated sample, namely all members of the population become a research participant. This is done because all members of the population are willing to become participants. This study involved 69 athletes with disabilities who took part in the regional training camp in East Java province ahead of the National Paralympic Week, consisting of 56 males (18.8%) and 13 females (18.8%) with an age range of 14-56 years (29,855±12,008).

Data Collection Tools

Indonesian Emotion Regulation Questionnaire for Sport (IERQ4S)

The variables in this study are emotional regulation and mental toughness. Emotion regulation is the independent variable, while the dependent variable is mental toughness. Emotion regulation has 2 dimensions, namely cognitive reappraisal and expressive suppression. Mental toughness has four dimensions, namely thrive through challenge, sport awareness, tough attitude, and desire for success.

The instrument used in this study was IERQ4S (Indonesian Emotion Regulation Questionnaire for Sport) with a reliability coefficient of 0.824. Dimension of cognitive reappraisal consist of 6 aitem namely 1,3,5,7,8, and 10. Dimensions of expressive suppression consist of 4 aitems namely 2,4,6, and 9.

The instruments were divided into three categories: high, medium, and low, depending on the quantity of items and available answers. 30 or more is considered high level, 20–29 is considered medium level, and 10–19 is considered low level. In the cognitive reappraisal dimension, the score category of 18 and above is at a high level. 12–17 is considered medium level, and 6–11 is considered low level. In the expressive suppression dimension, the score category of 12 and above is at a high level. 8–11 is considered medium level, and 4–7 is considered low level.

Mental Toughness Questionnaire (MTQ)

The second instrument is the Mental Toughness Questionnaire with a reliability coefficient of 0.776. Dimension of trhrive tough challenge consist of 4 aitems, namely 1,2,3, and 4. Dimension of sport awareness consist of 4 aitems, namely 5, 6, 7, and 8. Dimension of tough attitude consist of 3 aitems namely 9,10, and 11. Dimension of desire for success consist of 3 aitems namely 12, 13, and 14.

The Mental Toughness Questionnaires were divided into three categories: high, medium, and low, depending on the quantity of items and available answers. 43 or more is considered high level, 28–42 is considered medium level, and 14–27 is considered low level. In the thrive through challenge dimension and sport awareness, the score category of 13 and above is at a high level. 9–12 is considered medium level, and 4–8 is considered low level. In the tough attitude dimension and desire to succeed, the score

category of 9 and above is at a high level. 6–8 is considered medium level, and 3–6 is considered low level.

The Analyses of the Data

The data analysis technique used is linear regression with JASP (Jeffreys's Amazing Statistics Program) version 0.14.1.0 for windows.

RESULT

The study involved 69 athletes and all of the data was suitable for use as research. Description of research participants as follows:

Table 1. Description Based on Sexe

Sexe	Amount	Percentage (%)
Male	56	81.2
Female	13	12.8
TOTAL	69	100

Based on table 1 above, it shows that the majority of participants were male, namely 81.2 percent.

Table 2. Participants According Types of Disabilities

Categories of Disabilities	Amount	Percentage (%)
Physical Impairment	38	55.1
Vision Impairment	26	37.7
Intellectual Impairment	5	07.2
TOTAL	69	100

Table 2 above shows that the majority of participants belong to the physical disability category of 55.1 percent.

Further description regarding the descriptive statistics of each research variables, as follows:

Table 3. Descriptive Statistic

	Emotional Regulation	Mental Toughness
Valid	69	69
Missing	0	0
Mean	20.971	32.754
Standart Deviation	3.276	4.918
Minimum	11	16
Maximum	31	46

Referring to table 3, it shows that on the emotional regulation variable and mental toughness, all data can be processed, namely 69 without missing. The standard deviation of emotional regulation is 3.276 and mental toughness is 4.918,. The minimum score for emotional regulation is smaller than the minimum score for mental toughness.

Table 4. Frequency of Emotion Regulation, Reappraisal Dimension, Suppression Dimension Based on Categorization

Categorization	High	%	Medium	%	Low	%	Total	%
Regulation Emotion	1	1.4%	49	71%	19	27.4%	69	100%
Reappraisal	0	0%	56	81.1%	41	18.8%	69	100%
Suppression	1	1.4%	41	59.4%	27	39%	69	100%

It can be seen from the table 4 above, the majority of respondents are at the medium level for emotional regulation score, namely 49 athletes or 71%. In the cognitive reappraisal dimension, the medium level is dominated by 56 athletes or 81.1%. In the suppression dimension, the majority of athletes are in the medium category with 41 athletes or 59.4%.

Table 5. Frequency of Mental Toughness, Thrive Through Challange Dimension, Sport Awareness Deimension, Tough Attitude Dimension, Desire to Success Dimension Based on Categorization

Categorization	High	%	Medium	%	Low	%	Total	%
Mental Toughness	3	4.3%	61	88.4%	5	7.2%	69	100%
Thrive Tough Challange	7	10.1%	48	69.6%	14	20.3%	69	100%
Sport Awareness	14	20.3%	45	65.2%	10	14.5%	69	100%
Tough Attitude	4	5.8%	38	55.1%	27	39.1%	69	100%
Desire to Success	4	5.8%	30	43.5%	35	50.7%	69	100%

Referring to table 5 above, the majority of respondents were at the medium level on mental toughness scores with 61 athletes or 88.4%. In the dimensions of thrive through challenge, the medium level is dominated by 48 athletes or 69.6%. In the dimension sport awareness, the majority of athletes are in the medium level with 45 athletes or 65.2%. In the tough attitude dimension, most of the athletes are at the medium level, with 38 athletes or 55.1%. In the desire to succeed dimension, it appears that the majority of athletes are at the low level, with 35 athletes equal

to 50.7%. Based on data analysis through statistical data using the JASP application version 0.14.1.0 for windows, the results are as follows:

Table 6. Statistical Result Linear Regression Model Summary-ER

Model	R	R^2	Adjusted	R^2RMSE
H_o	0.000	0.000	0.000	4.852
H_1	0.759	0.576	0.570	3.182

The results of statistical tests using a significance level of 95% show that the correlation coefficient is 0.759. these results indicate that there is a relationship between emotional regulation and mental toughness in athletes with disabilities. While the R^2 value is 0.576 which means that emotional regulation contributes 57.6% to mental toughness.

Table 7. Comparison of Cognitive Reappraisal and Expressive Suppression Predictions of Mental Toughness

Model	R^2 Reappraisal	R^2 Suppression
Mental Toughness	0.785	0.553

Based on table 7 above, it shows that the prediction of the rcognitive eappraisal dimension for mental toughness is higher than the expressive suppression dimension (78.5% > 55.3%).

Table 8. Comparison of emotional regulation on dimensions of mental toughness

Model	R^2 Thrive Through Challenge	R^2 , Sport Awareness	R^2 Tough Attitude	R^2 Desire to Success
Emotional Regulation	0.459	0.636	0.287	0.253

Referring to table 8 above, it shows that the prediction of emotional regulation for the 4 dimensions of mental toughness is greatest in the sport awareness dimension, namely 63.6%. the lowest prediction of emotional regulation for the desire to success dimension, namely 25.3%.

Table 9. Cognitive Reappraisal Comparison of Mental Toughness Dimensions

Model	R^2 Thrive Through Challenge	R^2 , Sport Awareness	R^2 Tough Attitude	R^2 Desire to Success
Reappraisal	0.462	0.624	0.223	0.182

Based on table 9 above, it shows that the prediction of the cognitive reappraisal dimension of emotional regulation for the 4 dimensions of mental toughness is highest in the sport awareness dimension, namely 62.4%. The lowest prediction for the cognitive reappraisal dimension is the desire to succeed dimension.

Table 10. Comparison of Expressive Suppression on Dimensions of Mental Toughness

Model	R2 Thrive Through Challenge	R2 , Sport Awareness	R2 Tough Attitude	R2 Desire to Success
Suppresion	0.233	0.221	0.211	0.204

Referring to table 10 above, the prediction of the expressive suppression dimension of emotional regulation for the 4 mental toughness dimensions is greatest in the thrive through challenge dimension. The lowest prediction from the suppression dimension is shown in the desire to succeed dimension.

DISCUSSION

Referring to the results of this study, it is proven that emotional regulation and mental toughness in athletes with disabilities obtain significant results. Emotion regulation plays an important role in the performance of athletes with disabilities. Most athletes with disabilities show emotion regulation in the good category, this means that athletes with disabilities are able to increase, maintain, and even reduce the positive-negative emotions that are being felt in their own way to increase their mental toughness.

According to research conducted by Balzarotti et al. (2010) Individuals with good emotional regulation skills will reassess emotions and exercise self-control.

Emotion regulation occurs by the existence of two processes, namely intrinsic or how the individual steps in managing the emotions that

arise in him and extrinsic or how individual steps can affect the emotions of other individuals. Based on the instrument used, namely ERQ's Gross and John (2003), There are two emotion regulation strategies, namely cognitive reappraisal and expressive suppression. Based on the research results, it shows that cognitive reappraisal predictions are greater than expressive suppression of mental toughness in athletes with disabilities. Athletes with disabilities have a tendency to do cognitive reappraisal where they change their way of thinking in a positive direction about situations that have the potential to trigger emotions with the aim of changing the emotional impact. Mental toughness is a key factor in the cognitive reapraisal process that allows athletes to have psychological skills to cope with various demands, exercise self-control, stay focused and full of confidence (Crawford et al., 2021).

Gucciardi et al. (2009) explained that there are four dimensions in mental toughness, namely, thrive through challenge (able to develop through challenges), sport awareness (have the awareness to exercise), though attitude (have a tough attitude), desire success (have the desire to succeed). Based on the results obtained, the prediction of emotional regulation and the reappraisal dimension were highest in the sport awareness dimension. This shows that disabled athletes' awareness of sport is influenced by their emotional regulation abilities. Likewise, this dimension is in line with research that shows that doing sports requires positive emotions and enjoyment. Persistence in sports can be managed through emotional regulation skills. Through the mechanism of internal factors or those originating from the athlete's self, the individual's ability to regulate emotions can help all forms of feelings and physiological and behavioral responses to events that take place become more proportional (Gross, 2013). Athletes with good emotional regulation will also have high achievement motivation and sport awareness, so that the responsibility for the tasks and training programs that have been given by the coach will be carried out seriously.

The results show that the expressive suppression dimension is most predictive of the thrive through challenge dimension. The ability of athletes to use expressive suppression has an impact on their ability to develop through challenges. Some of the difficulties that occur during emotion regulation are caused by: 1) identification of needs in emotion regulation; 2) selection process from available regulatory options; 3) implementation of selected regulatory strategies; and 4) monitoring of emotion regulation strategies (Sheppes et al., 2015; Mutz et al., 2017).

Based on the research results, it shows that cognitive reappraisal predictions are greater than expressive suppression of mental toughness in athletes with disabilities. Athletes, through cognitive reappraisal mechanisms, criticize the impact of social situations and life experiences to create effective and efficient emotion regulation strategies (Crawford et al., 2021). Emotion regulation is related to mood; the concept is broad, including behavior, psychological consciousness, unconsciousness, and cognitive processes (Jannah et al., 2023). It is important to remember that when individuals regulate emotions, it is important to pay attention to the function of components that can effectively change emotional states (Samadi et al., 2022).

The results of this research are strengthened by previous research by Mohebi et al. (2017), who obtained results showing that emotional regulation strategies can be applied to implement intervention practices and create programs to increase mental toughness in taekwondo athletes.

Based on the results obtained, it can be inferred that cognitive reappraisal in emotional regulation contributes to the mental toughness of athletes with disabilities. Athletes with disabilities who are able to control their emotions and behavior well can help increase awareness of psychological pressures that arise and affect performance and indirectly increase mental toughness when competing. Positive emotions tend to be expressed more often, and vice versa. If athletes with disabilities are unable to regulate their emotions, they will tend to show negative emotions and take actions beyond their awareness.

Conclusion

This study highlights the contribution of emotion regulation to the mental toughness of athletes with disabilities. The limitation of this research is that the data collection process cannot be carried out simultaneously. This allows for bias effects because athletes who fill out the instrument last get information from athletes who fill out the instrument earlier. This research suggests that athletes with disabilities realize the importance of emotional regulation if they want to be mentally

tough. For sports coaches, it is important to pay attention to the important role of emotional regulation. Therefore, in addition to physical training, mental sports training programs in the field of emotional regulation should also be designed. Experimental research is interesting to carry out as mental training to increase mental toughness. Apart from that, the data collection process should be carried out simultaneously so that data bias can be eliminated.

Author Contributions

Study Design, MJ, RW and FH; Data Collection, NR and MJ; Statistical Analysis, RW, MS; Data Interpretation, MJ and FH; Manuscript Preparation, MJ, MS and NR; Literature Search, MS, RW, FH and FH. All authors have read and agreed to the published version of the manuscript.

Conflict of interest

The authors declare no conflict of interest. No financial support was received.

Ethics Statement

Ethical approval was obtained from the Ethics Committee before starting the study Research Ethics of the Universitas Negeri Surabaya (date: 17.07.2021; Decision number: 2021/07-137)

REFERENCES

Ahmed, O. H., Slater, M., Barker, J. B., & Blake, T. (2019). Concussion in athletes with disabilities. *Psychological Aspects of Sport-Related Concussions*, 111–126. https://doi.org/10.4324/9781351200516-8

Azim, M. G., Rahayuni, K., & Widiawati, P. (2023). Psychological skills of Malang State University athletes who participate in POMPROV 2022. *Indonesian Journal of Research in Physical Education, Sport, and Health (IJRPESH)*, *1*(1), 44–51. [CrossRef]

Balzarotti, S., John, O. P., & Gross, J. J. (2010). An Italian adaptation of the emotion regulation questionnaire. *European Journal of Psychological Assessment*, *26*(1), 61–67. [CrossRef]

Bondár, R. Z., Fronso, S., Bortoli, L., Robazza, C., Metsios, G. S., & Bertollo, M. (2019). The effects of physical activity or sport- based interventions on psychological factors in adults with intellectual disabilities: a systematic review. *Journal of Intellectual Disability Research*, *64*(2), 69–92. [PubMed]

Bundon, A., Ashfield, A., Smith, B., & Goosey-Tolfrey, V. L. (2018). Struggling to stay and struggling to leave: The experiences of elite para-athletes at the end of their sport careers. *Psychology of Sport and Exercise*, *37*(August 2017), 296–305. [CrossRef]

Calantonea, R. J., Cavusgila, S. T., & Zhaob, Y. (2002). Machine Translated by Google Machine Translated by Google. *Articulo De Investigación Científica*, *31*(1), 515–524.

Crawford, A., Tripp, D. A., Gierc, M., & Scott, S. (2021). The influence of mental toughness and self-regulation on post-season perceptions in varsity athletes. *Journal of American College Health*, *0*(0), 1–9. [CrossRef]

Crust, L., & Azadi, K. (2010). Mental toughness and athletes' use of psychological strategies. *European Journal of Sport Science*, *10*(1), 43–51. [CrossRef]

Crust, L., & Clough, P. J. (2011). Developing mental toughness: From research to practice. *Journal of Sport Psychology in Action*, *2*(1), 21–32. [CrossRef]

Fagher, K., Forsberg, A., Jacobsson, J., Timpka, T., Dahlström, Ö., & Lexell, J. (2016). Paralympic athletes' perceptions of their experiences of sports-related injuries, risk factors and preventive possibilities. *European Journal of Sport Science*, *16*(8), 1240–1249. [PubMed]

Falaahudin, A., Iwandana, D. T., Rengganis, D. R. P., MDNadzalan, A., & Zolkaf, A. (2021). Analysis of the Mental Training , Competitive Anxiety , Mental Toughness and Social Pressure Survey on the Gold Medal Target Burden. *Ijcrr*, *12*(11).

Gross, J. J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology*, *74*(1), 224–237. [PubMed]

Gross, J. J., & John, O. P. (2003). Individual Differences in Two Emotion Regulation Processes: Implications for Affect, Relationships, and Well-Being. *Journal of Personality and Social Psychology*, *85*(2), 348–362. [PubMed]

Gucciardi, D. F., Gordon, S., & Dimmock, J. A. (2009). Development and preliminary validation of a mental toughness inventory for Australian football. *Psychology of Sport and Exercise*, *10*(1), 201–209. [CrossRef]

Gucciardi, Daniel F., Hanton, S., & Fleming, S. (2017). Are mental toughness and mental health contradictory concepts in elite sport? A narrative review of theory and evidence. *Journal of Science and Medicine in Sport*, *20*(3), 307–311. [PubMed]

Gucciardi, Daniel F., Peeling, P., Ducker, K. J., & Dawson, B. (2016). When the going gets tough: Mental toughness and its relationship with behavioural perseverance. *Journal of Science and Medicine in Sport*, *19*(1), 81–86. [PubMed]

Hawthorne, K., & Loveall, S. J. (2021). Interpretation of ambiguous pronouns in adults with intellectual disabilities. *Journal of Intellectual Disability;65(2): 125-132.* [CrossRef]

Hogg, M. A., & Vaughan, G. M. (2018). Social psychology. In *Pearson Education* (8th ed.).

Jannah, M. (2018). *Metodologi Penelitian Kuantitatif Untuk Psikologi*. Unesa University Press.

Jannah, M., Widohardhono, R., Makiko, N. R., Sholichah, I. F., & Hidayah, R. (2023). The Role of Optimism in the Emotion Regulation of Athletes with Disabilities. *International Journal of Human Movement and Sports Sciences*, *11*(3), 527–532. [CrossRef]

Jenkins, J. (2022). *The Motivation of an Paralympic Athlete*

with Autism and Challenges Associated with Competing Professionally by Joshua Jenkins The present thesis is submitted as Partial Fulfillment. 1–51.

Kawabata, M., Pavey, T. G., & Coulter, T. J. (2021). Evolving the validity of a mental toughness measure: Refined versions of the Mental Toughness Questionnaire-48. *Stress and Health*, *37*(2), 378–391. [PubMed]

Liew, G. C., Kuan, G., Chin, N. S., & Hashim, H. A. (2019). Mental toughness in sport: Systematic review and future. *German Journal of Exercise and Sport Research*, *49*(4), 381–394. [CrossRef]

Mendoza, D. (2023). Coping Strategies of Students in the Online Teaching and Learning of Physical Education. *Physical Education and Sports: Studies and Research*, *2*(1), 10-25. [CrossRef]

Mistretta, E. G., Glass, C. R., Spears, C. A., Perskaudas, R., Kaufman, K. A., & Hoyer, D. (2017). Collegiate athletes' expectations and experiences with mindful sport performance enhancement. *Journal of Clinical Sport Psychology*, *11*(3), 201–221. [PubMed]

Mohebi, M., Zarei, S., & Sohbatiha, M. (2017). The relationship between Emotion regulation strategies and mental toughness in elite taekwondo athletes. *Sport Psychology Studies*, *6*(21), 29–42. [CrossRef]

Mutz, J., Clough, P., & Papageorgiou, K. A. (2017). Do individual differences in emotion regulation mediate the relationship between mental toughness and symptoms of depression? In *Journal of Individual Differences* (Vol. 38, Issue 2). [CrossRef]

Perry, J. L., Strycharczyk, D., Dagnall, N., Denovan, A., Papageorgiou, K. A., & Clough, P. J. (2021). Dimensionality of the Mental Toughness Questionnaire (MTQ48). *Frontiers in Psychology*, *12*(July), 1–7. [PubMed]

Ramos, V. H. D., Román, M. R., Triguero, D. M., Godoy, S. J. I., & Buñuel, P. S. L. (2020). Relation of training load with emotions and performance in formative basketball. *Retos*, *2041*(40), 164–173. [CrossRef]

Richards, J. M., & Gross, J. J. (2000). Emotion regulation and memory: The cognitive costs of keeping one's cool. *Journal of Personality and Social Psychology*, *79*(3), 410–424. [PubMed]

Rogier, G., Garofalo, C., & Velotti, P. (2019). Is Emotional Suppression Always Bad? A Matter of Flexibility and Gender Differences. *Current Psychology*, *38*(2), 411–420. [CrossRef]

Samadi, H., Moradi, J., & Karimi, H. (2022). Effectiveness of Sports Activities on Cognitive Emotion Regulation Strategies, Perceived Psychological Stress, and Psychological Hardiness of Veterans and the Disabled. *Iranian Journal of War and Public Health*, *14*(1), 43–49. https://doi.org/10.29252/ijwph.14.1.43

Tamminen, K. A., Kim, J., Danyluck, C., McEwen, C. E., Wagstaff, C. R. D., & Wolf, S. A. (2021). The effect of self- and interpersonal emotion regulation on athletes' anxiety and goal achievement in competition. *Psychology of Sport and Exercise*, *57*, 102034. [CrossRef]

Townsend, R., & Cushion, C. (2017). Athlete-centred coaching in disability sport. *Perspectives on Athlete-Centred Coaching*, 47–56. [CrossRef]

Wijayanti, D. G. S., Soegiyanto, & Nasuka. (2016). Sports development for people with disabilities at the National Paralympic Committee Salatiga. *Journal of Physical Education and Sport*, *5*(1), 17–23. http://journal.unnes.ac.id/sju/index.php/jpes

Yavorovskaya, A., Polikanova, I., Semenov, Y., Leonov, S., & Rasskazova, E. (2021). Emotional regulation as factor of commitment to paralympic sports. *European Psychiatry*, *64*(S1), S460–S461. [CrossRef]

Zienius, M., Skarbalius, A., Zuoza, A. K., & Pukėnas, K. (2018). Peculiarities of Pre-Competitive Psychological Factors, Sport Performance Indicators and Physiological Demands in Youth Golf. *Baltic Journal of Sport and Health Sciences*, *2*(93). [CrossRef]