Trends in Medicine

Research Article ISSN: 1594-2848

The effectiveness of positive thinking training on vitality and sport participation motivation in men with haemophilia

Moghadam MK[1], Tayebi M[2] and Keramati Moghadam M[3]*

[1]PhD in Sports Management, Azad University, Boroujerd Branch, Iran

[2]PhD in Sports Management, University of Isfahan, Iran

[3]PhD student in Communication Sciences, Azad University, Isfahan Branch, Iran

Abstract

Introduction: Having hemophilia is a stressful situation for a person who may cause a variety of psychological problems in the person. The aim of this study was to investigate the effectiveness of positive thinking training on motivation for sports participation and vitality in men with hemophilia in Isfahan province.

Methods: The design of the present study was a quasi-experimental pretest-posttest and follow-up with a control group. The statistical population included all men members of the Hemophilia Association of Isfahan province in the number of 148 people in the second half of 1400. According to the Georgian and Morgan table, 30 people were randomly selected as a statistical sample and randomly divided into two experimental groups. And control (15 people in each group) was assigned. The research instruments were Gale et al. and Ryan and Frederick vitality questionnaire. Descriptive statistics were analyzed for demographic data and inferential statistical methods such as Kolmogorov-Smirnov test and analysis of covariance were analyzed by SPSS software version 21.

Results: Data analysis showed that positive thinking training had an effect on the motivation to participate in sports and vitality in men with hemophilia and there was a significant difference in the post-test scores of the experimental and control groups ($p < 0.001$).

Conclusion: According to the results, positive thinking training can be used in counseling centers and associations of hemophilia to improve the psychological status of patients.

Introduction

Hemophilia is a sex-linked congenital hemorrhagic disease that occurs due to abnormal production of coagulation factors 8 and 9 because of mutations in factor-related genes [1]. Women who have a gene for hemophilia are called carriers. A woman with hemophilia has the gene on one of her X chromosomes and is 50% likely to pass on the defective gene to her sons [2]. In terms of symptoms, patients with hemophilia are prone to joint bleeding (especially knee, ankle, and elbow joints), soft tissue hematomas, bruises, intracranial hemorrhage, and postoperative bleeding [3].

Understanding people's motivations for engaging in physical activity clarifies the process of individuals deciding to engage in physical activity and sports. Adolescents 'perceptions of their participation in sports are influenced by their parents' engagements. Positive attitude of parents provides positive feedback for their sports activities [4]. Findings reveal age differences in sports participation. Adolescent boys show a great desire to participate in sports [5]. Many young people participate in sports programs during their spare time to improve their health [6]. The benefits of sports participation include self-belief, promoting virtues, controlling and managing stimulation in sports, and reducing health problems [7].

The positive concept of vitality and energy refers to something more than mere activity, stimulation, or even calorie storage, but we believe it refers to a specific psychological experience of having passion and spirit, referred to as vitality. We have individuals change their experiences of vitality as function, not only as the physical effects of experiences, such as fatigue and illness, but also as psychological factors, such as effectiveness, love [8,9]. Vitality or energy available to the self is an impressive and essentially significant indicator of health and motivation. Vitality is distinguished from passive positive states such as happiness, satisfaction, and contentment [10]. A person who is alive is an active, hard-working, and effective person, changes his personal life and is purposeful in his progress [11]. Vitality is associated with a growing interest in positive psychology and well-being research and is associated with other concepts of well-being such as life satisfaction and mental happiness [10,11].

Positive psychology was introduced by Seligman in the late 1990s and early 21st century. One of the main goals of this approach is to focus on the positive aspects of human personality instead of the morbid and pathological aspects [12]. Instead of focusing too much on human weaknesses, positivist psychology focuses on human abilities such as living happily, enjoying pleasure, problem-solving power, and optimism. The purpose of this approach is to discover ways in which people can feel more joy and happiness, express their altruism and play

***Correspondence to:** Majid Keramati Moghadam, PhD in Sports Management, Azad University, Boroujerd Branch, Iran, E-mail: majid.keramatimoghadam@gmail.com

Keywords: *motivation to participate in sports; vitality; positive thinking; hemophilia*

Received: February 20, 2022; **Accepted:** March 03, 2022; **Published:** March 07, 2022

Table 1. Summary of Positive Thinking Training Sessions.

Meeting	Subject and objectives of the meeting
First	Introduction, initial communication, providing the necessary information about the training course, stating the goals and regulations of the group and emphasizing the need Active participation in homework, defining positive thinking.
	Introduction, initial communication, providing the necessary information about the training course, stating the goals and regulations of the group and emphasizing the need Active participation in homework, defining positive thinking.
Second	Familiarity with how to think and attitude, familiarity with Adler push button technique.
Third	Familiarity with negative thoughts and ways to moderate it, familiarity with positive thinking and its effect on health and longevity.
Fourth	Learning to be positive through: Institutionalizing positive thinking strategies in life, continuing to practice positive thinking, opportunities for positive thinking by coping and adapting to problems we are unable to solve.
Fifth	Teaching to challenge negative thoughts, change mental images, use constructive language and revise beliefs.
Sixth	The test of living positively by building a positive relationship, establishing good relationships with others and loving from the heart, emphasizing health as a prerequisite for positivity.
Seventh	Teaching how to stop thinking, calm down, and change attitudes, including compulsion, restraint, and struggle.
Eighth	Bring laughter to life, build self-confidence, and develop a good exercise habit.

a more prominent role in creating family, work and social environments [13]. Experiencing positive emotions, which is emphasized by positive psychology, often creates a better ability to adapt and be more resilient to life's problems [14]. Positive education significantly reduces depression, anxiety and stress and significantly increases life satisfaction. In this regard, it can be noted that Zandukili et al. [15] in a study investigated the effect of positive thinking training on reducing depression, stress, and anxiety of juvenile delinquents. The results of their research showed that positive thinking training courses are effective in reducing depression and anxiety. Therefore, positive thinking training can be used to reduce adolescent depression and anxiety, even in a correctional center. Ismail Yadouki et al. [16] also evaluated the effectiveness of positive thinking training on anxiety, depression, and quality of life of mothers of children with leukemia. In their study, the mean scores of depressions and anxiety in the intervention group were significantly lower than the control group. In addition, there was a significant difference between the studied groups in terms of quality of life.

Vitality and motivation to participate in sports is an important factor in making a difference in a person's life. Participating in sports activities has a great effect on creating mood and vitality in the individual. People with hemophilia, the pain and suffering caused by the disease may affect their psyche. Therefore, the aim of this study was to evaluate the effectiveness of positive thinking training on motivation to participate in sports and vitality in men with hemophilia.

Method

The design of the present study was a quasi-experimental type of pre-test-post-test and follow-up with a control group. The statistical population included all men members of the Hemophilia Patients Association of Isfahan province in the number of 148 people in the second half of 1400. According to the Georgian and Morgan table, 30 people were randomly selected as a statistical sample and randomly divided into two groups. Experiments and controls (15 people in each group) were assigned. Inclusion criteria were resident of Isfahan province, no neurological disorders and exclusion criteria for psychiatric diseases, the occurrence of stressful events for the samples during the study and Absence was more than one treatment session. Before the intervention, the researcher, after obtaining the consent of individuals to participate in the study, consciously obtained a written consent form from them. To conduct the research in the same and simultaneous conditions, the pretest was conducted in the form of questionnaires of motivation for participation in sports and vitality from both experimental and control groups. Then the intervention was performed based on Patterson and Seligman [17] positive thinking training for 8 sessions of 2 hours and two sessions per week on the experimental group. At the end of the treatment sessions, post-test was performed from both experimental and control groups and the data were analyzed. In order to comply with ethical considerations, each control group who wished to receive treatment was given all the interventions presented to the experimental group.

One of the research tools was the questionnaire of motivation for sports participation of Gil et al. This questionnaire has 30 questions and is in 3-point Likert scale (very important, to some extent, unimportant). As a result, the score range is between 30 and 90. The validity of the present questionnaire was confirmed by the constructors and its reliability was assessed as appropriate [18]. The reliability of this questionnaire was calculated by Cronbach's alpha in the study of Hariri Mehrabani and Hosseinzadeh [19] as 0.87. The reliability of this questionnaire in the present study was calculated by Cronbach's alpha of 0.79. Another research tool was the Ryan and Frederick Vitality Questionnaire. This questionnaire has 7 items which are adjusted based on 3-point Likert. In the present questionnaire, the minimum score is 7 and the maximum is 21. Cronbach's alpha coefficient was calculated by the manufacturers to be 0.80 [20]. In the present study, Cronbach's alpha coefficient for this questionnaire was calculated to be 0.82. Data were analyzed by multivariate and univariate analysis of covariance in the form of SPSS software version 19.

Findings

In the present study, to analyze the collected data, first descriptive statistics were used to examine the demographic variables of the study including age, gender, employment status, degree and gender, the results of which are listed in Table 1 and Table 2.

Table 2. Demographic variables of statistical sample.

Demographic variables	Levels of variables	frequency percentage
Age	20-25	20.5
	26-30	31.4
	31-35	22.5
	36-40	16.4
	Up 40	9.2
Marital status	Single	56.3
	Married	43.7
Employment status	Jobless	27.7
	Employee	33.1
	Freelance	39.2
degree of education	Diploma	36.3
	Bachelor	41.2
	Masters and PhD	22.5
Gender	Man	59.1
	Woman	40.9

Table 3: Investigation of the assumption of normal distribution of scores.

Variables		The value of Kolmogorov-Smirnov test statistics	significant
sport participation	Post-test	0.50	0.96
	Follow up	0.54	0.92
vitality	Post-test	0.86	0.44
	Follow up	1.01	0.23

Table 4: Results related to the assumption of equality of variances.

Variables		F	Df1	Df2	significant
sport participation	Post-test	0.28	1	28	0.59
	Follow up	0.36	1	28	0.55
vitality	Post-test	0.02	1	28	0.87
	Follow up	0.06	1	28	0.79

Then, in order to investigate the normality of the distribution of two-variable scores, the Kolmogorov-Smirnov method was used, the results of which are presented in Table 3.

As can be seen in Table 3, the value of the obtained statistics is smaller than the critical value at the level of 0.95 (1.96) and it can be said that the distribution of scores is close to the normal distribution and There is no significant difference with it. Leven test was also calculated to investigate the assumption of equality of variances.

The results of Table 4 show that there is no significant difference between the variances of the two groups in post-test and follow-up in the sports participation variable and this assumption is confirmed (Leven test result for the sports participation variable: F = 0.65 and Pvalue = 0.42 for post-test and F = 0.39 and Pvalue = 53.5 for follow-up test) and for the vitality variable, the results show a significant difference between the two variances. The control and experimental groups that the results of this variable will be interpreted with caution (F = 10.92 and Pvalue = 0.01 in the post-test and F = 9.99 and Pvalue = 0.01 in the follow-up test). Then, the mean and standard deviation of the subjects in the studied variables were examined in order to descriptively examine the research hypothesis, the results of which are listed in Table 5.

Table 5 shows the mean and standard deviation of the subjects in the studied variables. According to this table, the average motivation of sports participation and vitality of the subjects in the post-test and follow-up stages has increased compared to the pre-test stage. Due to the nature of the research, to accurately calculate the effect of the pre-test variable (positive thinking training) on the dependent variables (post-test participation of sports and vitality), the appropriate statistical test of covariance was calculated. Before calculating the analysis of covariance, its hypotheses including homogeneity of regression slopes and homogeneity of variance were first examined. The results of the study of the homogeneity of regression slopes indicate no interaction between the group and pre-test scores in both runs (post-test and follow-up) and as a result this assumption is confirmed and it can be said that regression slopes Are homogeneous (sport participation variable: post-test: F = 0.89 and Pvalue = 0.45, follow-up: F = 0.16 and Pvalue = 0.71; vitality variable: post-test: F = 1.03 and 0.31 = Pvalue, follow-up: F = 0.14 and Pvalue = 0.70).

The results of covariance analysis Table 6 showed that the auxiliary random variable (pre-test) was significantly related to the dependent variables (post-test and follow-up variables) and after adjusting the pre-test scores, the effect was significant. There is a factor between the subjects of the group in the variable of sports participation (post-test F = 80.33 and follow-up F = 103.53) and vitality variable (post-test F = 238.42 and follow-up F = 280.95). Therefore, the obtained results indicate a significant difference between post-test scores and follow-up of both variables in the two groups and indicate that the rate of sports participation and vitality in the experimental group has increased after training in positive thinking.

Discussion

The aim of the present study was to evaluate the effectiveness of positive thinking training on motivation to participate in sports and vitality in men with hemophilia. The results showed that teaching positive thinking motivates sports participation in hemophilia men. This finding is consistent with the findings of Joseph and Linley [21], Gina and Magyar [22] and Romo-Gonzalez et al. [23]. In order to explain the result of the current research, it can be stated that teaching positive thinking techniques and skills to people strengthens and improves positive communication with themselves and others and increases happiness. On the other hand, while better recognizing oneself and receiving positive experiences, it increases psychological well-being, and this enables people to accept more responsibility for themselves, value themselves, and from a different perspective to a more complete understanding of themselves. Achieve and succeed in establishing better communication patterns [23]. As this process progresses, men with hemophilia increase their motivation for sports counseling. Another finding showed that teaching positive thinking increases vitality in men with hemophilia. This finding is consistent with the findings of Togad and Frederickson [24] and Cohen et al. [25]. Explaining this finding, it can be said that teaching positive thinking to people is effective for positive communication with oneself and others and having a good feeling towards oneself, and causes valuable and positive communication with others, and for controlling many emotions and feelings. In general, positive thinking and avoiding negative thoughts improve people's information processing strategies and promote the overall psychological well-being of human beings [24]. This approach will help people to experience countless positive emotions as well as recover faster after experiencing negative emotions.

Table 5: Results for descriptive indices of variables.

Variables		Groups	Number	Average	S.D
sport participation	Pre-test	Experimental	15	45.60	7.73
		control	15	43.76	7.14
	Post-test	Experimental	15	60.33	6.84
		control	15	45.07	7.87
	Post-test	Experimental	15	58.59	6.95
		control	15	45.72	7.07
vitality	Pre-test	Experimental	15	9.96	2.65
		control	15	10.39	2.82
	Post-test	Experimental	15	15.81	3.68
		control	15	10.84	2.77
	Post-test	Experimental	15	14.82	3.62
		control	15	10.53	2.74

Table 6: Results of analysis of covariance related to sports participation and vitality.

Variables	Sources of change	The sum of the squares	df	Average of squares	F	Sig	Eta
sport participation	Post-test	1235.12	1	1235.12	3.80	0.01	0.74
	group	155.68	1	155.68	10.12	0.01	0.18
	Follow up	1267.09	1	12.67	103.59	0.01	o.79
	group	74.25	1	74.25	63.07	0.01	0.27
vitality	Post-test	2922.75	1	2922.75	238.42	0.01	0.89
	group	389.90	1	389.90	31.80	0.01	0.54
	Follow up	2887.93	1	2887.93	280.95	0.01	0.91
	group	243.63	1	243.63	23.70	0.01	0.46

In addition to having physical benefits, positive thinking can create a "broad and flexible perceptual set along with the ability to integrate different information." The effect of this work is associated with raising the level of dopamine in the brain (which plays an important role in creating a sense of pleasure and reward), as a result of which concentration, creativity and the ability to learn in humans is improved, which increases vitality in people's lives.

Conclusion

The results of the present study showed that positive thinking training increases athletic motivation and vitality in men with hemophilia. Therefore, specialists in the field of patients with hemophilia can be advised to use programs based on teaching positive thinking and positivity to promote increased athletic motivation and vitality of these patients. The present study was performed only on patients with hemophilia in Isfahan, so we should be careful in generalizing the results to other patients with hemophilia in other cities of the country. It is suggested that the current study be conducted with the statistical community and other geographical areas to increase the external validity of the results.

References

1. Mondorf W, Eichler H, Fischer R, Holstein K, Klamroth R, et al. (2019) Smart Medication ™, an electronic diary for surveillance of haemophilia home care and optimization of resource distribution. *Hamostaseologie* 39: 339-346. [Crossref]
2. Roussel NA (2018) Gaining insight into the complexity of pain in patients with haemophilia: state-of--the-art review on pain processing. *Haemophilia* 24: 3-8. [Crossref]
3. Salviato R, Belvini D, Radossi P, Tagariello G (2019) High resolution melting for F9 gene mutation analysis in patients with haemophilia B. *Blood Transfus* 17: 72-82. [Crossref]
4. Oyagi K, Ishi K, Shiba A, Arai H, Fukamachi H, et al. (2020) A qualitative investigation of the factors perceivedto influence student motivation for school-based extracurricular sports participation in Japan. *Int J Adolesc Youth* 25: 624-637.
5. Kumar A, Venugopal R, Srivastava P (2011) Sport participation: motivation, family socialization and gender, LAP Lambert Acad, USA.
6. Zahariadis, Greece T, Biddle J (2000) Goal orientations and participation motives in physical education and sport: their relationships in English schoolchildren. *The Online J Sport Psychol* 2: 1-12.
7. Pastor Y, Balaguer I, Pons D, Garcia-Merita M (2003) Testing direct and indirect effects of sports participation on perceived health in Spanish adolescents between 15 and 18 years of age. *J Adolesc* 26: 717–730. [Crossref]
8. Boldt G (2020) Theorizing Vitality in the Literacy Classroom. Reading Research Quarterly 19: 307.
9. Yang Z, Pan Y (2020) Are cities losing their vitality? Exploring human capital in Chinese cities. *Habit Int* 96: 65-74.
10. Conner T, Fletcher B, Pullar J, Spencer E, Mainvil L, et al. (2020) KiwiC for Vitality: Results of a Randomized Placebo-Controlled Trial Testing the Effects of Kiwifruit or Vitamin C Tablets on Vitality in Adults with Low Vitamin C Levels. *Nutrients* 12: 2898. [Crossref]
11. Oksman V, Jarvela-Reijonen E, Puttonen M, Pennanen K (2016) Vitalty as a lifestyle trend in blogs: A netnographic approach. In C. Bernadas, & D. Minchella (Eds), EC SM2016-Proceedings of the 3rd European conference on social media.UK: Academic conferences and publishing international limited. pp: 258-259.
12. Ciarrochi J, Atkins P, Hayes L, Sahdra B, Parker P (2016) Contextual positive psychology: Policy recommendations for implementing positive psychology into schools. *Front Psychol* 7: 1561. [Crossref]
13. Donaldson S, Dollwet M, Rao M (2015) Happiness, excellence, and optimal human functioning revisited: Examining the peer-reviewed literature linked to positive psychology. *J Positive Psychol* 10: 185-195.
14. International Positive Education Network (2017) The state of positive education: A review of history, policy, practice, and research. Report for the 2017 World Government Summit, Dubai, UAE.
15. Zandvakili M, Jalilvand M, Nikmanesh Z (2014) The Effect of Positive Thinking Training on Reduction of Depression, Stress and Anxiety of Juvenile Delinquents. *Int J Med Toxicol Forens Med* 4: 55-62.
16. Esmaeili Douki H, Elyasi F, Hasanzadeh R (2019) Effectiveness of positive thinking training on anxiety, depression and quality of life of mothers of children with leukemia. *J Nurs Midwifery Sci* 6: 21-26.
17. Peterson C, Seligman M (2006) Character Strengths and Virtues: A Handbook and Classification. A.P.A, Oxford University Press.
18. Gill D, Dzewaltowski H (1983) Competitive orientations among intercollegiate athletes: Is winning the only thing? *The Sport Psychologist* 2: 212-221.
19. Hariri Mehrabani Sh, Hossienzadeh T (2017) Relationship between sports participation motivation and participation of female students at Urmia University in recreational sports activities. 8th International Conference on Physical Education and Sports Science.
20. Ryan R, Frederick C (1997) On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *J Pers* 65: 529-565. [Crossref]
21. Joseph S, Lindley A (2006) Positive Therapy (A Meta-theory for Psychological Practice). New York: Brunner Routledge Press.
22. Jeana L, Magyar M (2009) Therapist's Guide to Positive Psychological Interventions. San Diego, CA: Academic Press.
23. Romo-Gonzalez T, Ehrenzweig Y, Sanchez-Gracida O, Enriquez-Hernandez C, Lopez-Mora G, et al. (2014) Promotion of Individual Happiness and Wellbeing of Students by a Positive Education Intervention. J Behavior Health Soc Issues 5: 79-102.
24. Tugade M, Fredrickson B (2004) Resilient individuals use positive emotions to bounce back from negative emotional experiences. *J Pers Soc Psychol* 86: 320-333. [Crossref]
25. Cohn M, Fredrickson B, Brown S, Mikels J, Conway A (2009) Happiness un-packed: positive emotions increase life satisfaction by building resilience. *Emotion* 9: 361-368. [Crossref]