

Effect of 90-Min Bikram Yoga on Basic Psychological Needs Among Practitioners in the Southwestern United States

Abstract

Background: In our modern society, physical activity is a lifestyle choice. Bikram Yoga is a low impact, moderate exercise and the understanding of motivation and adherence to the practice is unknown. This study aimed to evaluate the effect of 90 min Bikram Yoga practice on basic psychological needs of competence (the sense of skill mastery), autonomy (volitionally performing a task), and relatedness (a connection with others) as postulated in self-determination theory for motivation. **Methods:** The sample included Bikram Yoga practitioners in the Southwestern United States ($n = 126$) averaged between the age group of 35 and 64, predominately female, and highly educated. Responses to the Psychological Need Satisfaction in Exercise Scale were analyzed using multivariate analysis of variance. **Results:** Results showed a statistically significant effect of frequency of Yoga attendance on the satisfaction of basic psychological needs (i.e., competence, autonomy, and relatedness); ($P = 0.025$); specifically, Yoga practitioners who attended four or more classes per week had higher satisfaction levels of Basic Psychological Need for competence ($P = 0.013$) and relatedness ($P = 0.034$). A statistically significant effect of the level of experience on the satisfaction of basic psychological needs (i.e., competence, autonomy, and relatedness) ($P = 0.014$) found in experienced Bikram Yoga practitioners, specifically for competence ($P = 0.013$) and relatedness ($P = 0.023$) compared to novice counterparts. **Conclusion:** The study provides some evidence of an individual's motivation for a 90 min Bikram Yoga practice and possible adherence. Future investigation of Bikram Yoga practice adopting self-determination theory appears worthwhile.

Keywords: Basic psychological needs, Bikram Yoga, motivation, self-determination theory

Introduction

In our modern society, physical activity is a lifestyle choice. Physical inactivity is the leading cause of cardiovascular disease in the United States, and only 19.9% of all adults met the minimum aerobic physical activity guidelines established in 2008.^[1] Yoga is an ideal, low-impact exercise for adults. In a controlled pilot study, findings suggested Yoga, as a form of exercise program, could be an effective intervention for those who are physically inactive.^[2] Due to the strict format of 26 postures in the same sequence, with certified instructors using standardized scripts, all conducted in a climate-controlled environment, Bikram Yoga is uniquely suited for scientific research.^[3] However, it is unknown why someone is motivated to participate in long-term Yoga practice to maintain health benefits over time.

Self-determination theory assumes that individuals are innately self-motivated,

want to succeed, and learn in a way that is personally satisfying which drives their internal motivation.^[4] The degree of intrinsic motivation combines with the levels of satisfying the self-determination theory component of basic psychological needs comprised competence (the sense of skill mastery), autonomy (volitionally performing a task), and relatedness (a connection with others).^[5] Self-determination theory is useful in understanding exercise participation and health-related well-being.^[6] This study aimed to evaluate the effect of 90 min Bikram Yoga practice on basic psychological needs of competence, autonomy, and relatedness as postulated in self-determination theory for motivation.

Methods

This study employed a purposive sampling to gain participants who completed a 90 min Bikram Yoga class. A web-based

Richard Ibrahim Rodriguez

Grand Canyon University,
Phoenix, Arizona, USA

Address for correspondence:
Dr. Richard Ibrahim Rodriguez,
3300 W Camelback Rd,
Phoenix, AZ 85017, USA.
E-mail: rrodri63@gmail.com

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cross-sectional survey was distributed in the spring of 2017 ($n = 850$), inclusion criteria comprised participants who completed at least one 90 min Bikram Yoga class within 30 days of the survey and were between the ages of 18 and 70. The Institutional Review Board approved this study at Grand Canyon University.

Measures

Demographic information collected included gender, age, and level of education. The data for the independent variable labeled, “frequency of class attendance,” were collected from demographic questions whereby the study participants selected one of three options: (a) one class per week (b) two or three classes per week, or (c) four or more classes per week. Data for the independent variable labeled, “level of experience” were collected using a demographic questionnaire whereby the study participants selected one of two options (no) teacher training and (yes) teacher training. For analytical purposes, there were two groups – ordinal which were Group A with no Bikram Yoga teacher training (novice) and Group B who had Bikram Yoga teacher training (experienced). The original study built on an 18-item Psychological Needs Satisfaction in Exercise Questionnaire;^[7] to measure the self-determination theory components of basic psychological needs (i.e., competence, relatedness, and autonomy) on separate subscales using a 6-point Likert scale.

Data analysis

Descriptive analyses along with a series of one-way Multivariate Analysis of Variance (MANOVA) due to the inclusion of two categorical independent variables and three slightly correlated dependent variables were utilized. A MANOVA applying a statistical significance level of $P \leq 0.05$ used to evaluate the main effects of frequency of class attendance and level of Bikram Yoga experience on the self-determination theory components of competence, autonomy, and relatedness. *Post hoc* test was used for the significant statistical result to determine which group contributed the most to significance. The hope was to understand if the frequency of classes attended by the practitioner affected self-determination theory components of competence, autonomy, and relatedness.

Results

The sample size ($n = 126$) was 84% of females ($n = 106$), and 95% ($n = 120$) had practiced Bikram Yoga for >3 months at the time of the survey. 77% ($n = 97$) had completed a Bachelor degree or higher. ($n = 79$) 63% of the respondents were between the ages of 18 and 55.

Effects of frequency of Bikram Yoga class attendance

To understand the effect of frequency of Bikram Yoga attendance on the satisfaction of basic psychological needs (i.e., competence, autonomy, and relatedness) in Bikram Yoga practitioners in the southwest United

States. Practitioners were divided; (Group A = 1 class/week, Group B = 2 or 3 classes/week, and Group C = 4 or more classes/week) and resulted in a statistical significance ($P = 0.025$). Further investigation revealed the Basic Psychological Need of competence ($P = 0.013$) and relatedness ($P = 0.034$) contributed most to those differences. Bikram Yoga practitioners who attended four or more classes per week ($n = 31$) scored significantly higher on competence ($M = 5.58$) and relatedness ($M = 5.01$) than their counterparts who attended class once per week ($n = 28$; competence $M = 5.11$; relatedness $M = 4.21$). However, groups who attended four or more classes per week scored significantly higher than those who attended class two or three times a week for competence only ($n = 67$; competence $M = 5.23$), and these differences were all positively correlated. It would appear as the Yoga practitioners increase their frequency of attendance; it strongly supported their need for competence. In addition, their need for relatedness was satisfied when attending a high frequency of classes.

Effects of level of experience of Bikram Yoga

To understand the effects of level of experience on the satisfaction of basic psychological needs (i.e., competence, autonomy, relatedness) in Yoga practitioners in the southwest United States. Practitioners were separated by two groups (experienced versus novice) with experienced defined as someone who had completed Bikram Yoga teacher training. Overall statistical significance was found ($P = 0.014$) and further investigation revealed competence ($P = 0.013$) and relatedness ($P = 0.023$) contributed most to those differences. Bikram Yoga practitioners who were categorized as experienced ($n = 20$) specifically scored significantly higher on competence ($M = 5.62$) and relatedness ($M = 5.23$) than their counterparts who were categorized as novice ($n = 106$; competence $M = 5.22$; relatedness $M = 4.58$). It would appear that experienced Yoga practitioners find Bikram Yoga to satisfy their needs of competence and relatedness compared to their novice counterparts.

Discussion

Self-determination theory provides a scientific approach to understand an individual's motivation and adherence to an activity, in this case, Bikram Yoga. Based on the findings, Bikram Yoga appears to satisfy the core components of self-determination for those practitioners who are experienced and have higher class attendance. There seems to be an opportunity for Bikram Yoga studio owners to retain students, increase participation, by providing an environment for enjoyment and supporting the practitioner's needs for competence and relatedness.

Teachers and studios that support a strong connection with the practitioners appear to be satisfying their need for relatedness. It may be a strong connection with the teacher, studio staff, or fellow practitioners that fuels the individual

over time. Practitioners also appear to experience the right level of challenge from the Bikram Yoga practice by way of supporting their need for competence. The postures have various steps or stages that practitioners can conquer overtime. This step function allows the practitioners to feel accomplishment as they master various stages of postures that satisfies their need for competence in the activity itself.

To date, this is the first study to use self-determination theory to analyze the motivation for a Bikram Yoga practice. This theory has proven generalizable across culture, race, and age. In addition, empirically proven across various domain from business to physical activity. It would be essential to explore further other aspects of the Bikram Yoga utilizing self-determination theory in future. In particular, the role the instructor plays in supporting the basic psychological needs of the practitioners.

Conclusion

This research, taken in its entirety, has contributed to the body of knowledge for both self-determination theory and Bikram Yoga. Specifically, this research has established that self-determination theory is an appropriate theoretical lens through which to consider the motivation for a Bikram Yoga practice. Further, this research has demonstrated the importance of basic psychological need satisfaction in increased participation and adherence to a Bikram Yoga practice.

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Conflicts of interest

There are no conflicts of interest.

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