

## A CROSS-CULTURAL COMPARISON OF FITNESS CENTER MEMBERS' MOTIVATION FOR TRAINING IN NORWAY AND INDIA

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### ABSTRACT

*This study explored motivational and participation similarities and differences between Norwegian (n=196) and Indian (n=192) fitness center members. Motives were assessed via the MPAM-R questionnaire, which measures five different motives: fitness, appearance, competence, social and interest/enjoyment. In addition, participants were asked about the number and duration of their weekly training sessions. The results indicated that males were more active in the fitness centers than females in both Norway and India. Furthermore, the motive competence was more pronounced in males than in females in both countries. In general, the Norwegians scored higher on the intrinsic motives interest/enjoyment, competence and social, whereas the Indians scored higher on the extrinsic motive appearance. In both countries interest/enjoyment was the strongest predictor of exercise behavior. All in all, this study indicated both cultural similarities and differences between Norwegian and Indian fitness center members. Future studies are necessary to investigate the underlying reasons for the differences that were found.*

**Keywords:** *Self-determination theory, physical activity, fitness studio*

### 1. INTRODUCTION

Regular physical activity has been identified as a health-promoting factor that can have positive effects on mental, physical and social well-being. Regular physical activity has been shown to have positive effects on cardiovascular strength and to improve health in people with diseases like diabetes (Lee et al., 2014; Merlotti, Morabito, Ceriani, & Pontiroli, 2014). It also has a beneficial impact on anxiety and stress, as well as improving self-esteem, just to mention a few positive effects (Andersen, Schnohr, Schroll, & Hein, 2000; Thompson, 2003; Williamson, Vinicor, & Bowman, 2004). Despite numerous campaigns and many research findings about the positive outcomes of physical activity, surveys conducted especially in the Western World indicate that people do not engage in sufficient exercise, meaning that the intensity and duration of the exercise do not meet the guidelines from the World Health Organization (Martin, Morrow, Jackson, & Dunn, 2000; Waxman, 2005), and therefore might not lead to the expected health benefits.

One type of institution that has the potential to increase individuals' activity levels is the commercial fitness studios. The first modern gym was opened in California in 1940 (Buck, 1999), and since then there has been a tremendous growth in commercial gyms all over the world. These gyms offer a wide variety of opportunities for physical activity. Curves, for example, is the world's largest fitness franchise. It has more than 4 million members and over 8,000 locations in around 90 countries (Curves, 2013). Gold's Gym International, the second largest global fitness chain, features 650 locations in 30 countries with more than three million members (Gold's-Gym, 2013). IHRSA, the International Health, Racquet & Sports Club Association (the trade association serving the health and fitness club industry), has more than 10,000 club members in 70 countries (IHRSA, 2013).

Fitness centers offer their members various types of activities that can be conducted individually and in groups. Physical activities offered in fitness centers target different health promoting aspects like strength, endurance and

flexibility. In addition, fitness studios are widely available, and sometimes even open 24 hours a day, seven days a week, 365 days a year. But even though fitness studios offer such a wide variety of activities and can cater to so many different interests and motives, they are also battling with the problem of low adherence rates. The statistics from SATS (one of the biggest fitness centers in Norway, with more than 100,000 members) shows that 15 % of the members seldom visit the fitness centers (NTB, 2007).

One important psychological factor that determines whether participants stay involved in regular physical activity is motivation. People's goals for participating in exercise and sports can differ substantially, and can range from improving skills and talent to achieving health and physical fitness benefits. Mullen and Whaley (2010) revealed that the main motives for involvement in fitness clubs were health, functioning and appearance, while factors facilitating commitment to regular activity were seeing physical changes and feeling in control. This study was conducted in the USA and included mainly Caucasians (92%) (Mullen & Whaley, 2010). Drummond and Lenes (1997) identified a number of factors that describe US-American participants' reasons for joining a community-based fitness facility. The most important factors for joining were intrinsic motivation (enjoyment of an activity), resistance equipment (free weights, exercise machines), extrinsic motivation (receiving praise), socialization (opportunities to interact with other members) and aerobic equipment (treadmills, stationary cycles). The findings from both of these studies suggest that individual and contextual factors play important roles in a person's decision to join a fitness club (Drummond & Lenes, 1997).

Motivational aspects relevant to participating in physical activity are often categorized into intrinsic and extrinsic factors. People with an extrinsic mindset tend to hold an external orientation while engaging in leisure activities because they are more concerned about making a good impression on others than with developing their own potential (Kasser, Ryan, Couchman, & Sheldon, 2004). Intrinsic motivational processes characterize individuals who are more oriented toward being involved in and experiencing leisure as a reward in itself (Weissinger & Bandalos, 1995). Intrinsically motivated individuals have strong self-determination, feel competent in most areas of their life, and become deeply involved in and enjoy challenges in their leisure pursuits (Camacho, Soto, González-Cutre, & Moreno-Murcia, 2011).

Previous studies have indicated that exercising to improve physical fitness (which is integrated regulation and high on autonomy) correlates positively with exercise attendance and the challenge during a workout session. Exercising to increase one's physical appeal (external regulation) is unrelated or negatively related to length of workout, exercise attendance and hours per week of participation (Ryan, Frederick, Lepes, Rubio, & Sheldon, 1997; Sebire, Standage, & Vansteenkiste, 2009; Vansteenkiste, Soenens, & Lens, 2007). Intrinsic goal setting promotes higher persistence and performance than extrinsic goal framing (Duncan, Hall, Wilson, & Jenny, 2010; Patrick & Canevello, 2011; Vansteenkiste, Niemiec, & Soenens, 2010; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). An exercise session is likely to be perceived as more useful or instrumental if the exercise activity is framed in terms of serving an extrinsic goal compared to such a goal being absent (Lens, Simons, & Dewitte, 2002; Simons, Vansteenkiste, Lens, & Lacante, 2004; Standage, Sebire, & Loney, 2008). Extrinsic goal framing, however, leads to decreased autonomy and poorer performance compared to both intrinsic goal framing and no-goal control conditions (Patrick & Canevello, 2011; Sebire, Standage, & Vansteenkiste, 2008; Vansteenkiste, Simons, Soenens, & Lens, 2004). Intrinsically oriented individuals might put extra efforts into activities, which help them attain the desired external indicators of worth (Sebire, Standage, & Vansteenkiste, 2011; Taylor, Ntoumanis, Standage, & Spray, 2010). In conclusion, these studies show that there are multiple factors involved when participating in fitness activities but that a focus on intrinsically motivating factors seems preferable when it comes to regular adherence to physical activity (McLachlan & Hagger, 2011; Teixeira, Carraca, Markland, Silva & Ryan, 2012).

Most studies in the field of fitness sports focusing on motivational factors have been conducted solely in industrialized and well-developed countries (Drummond & Lenes, 1997; Halliwell, Dittmar, & Orsborn, 2007; Lin, Chen, Wang, & Cheng, 2007; Mullen & Whaley, 2010; Prichard & Tigemann, 2008; Sassatelli, 1999). Furthermore, the measuring instruments as well as the underlying theoretical frameworks have also been developed within Western societies and can fail to recognize cultural variance (Raepsaet, Knapen, Vancampfort, & Probst, 2010; Ryan, et al., 1997; Sit, Kerr, & Wong, 2008; Stuart, 2013; Turke, 2012). Motivation for physical activity may be shaped and influenced by cultural and social forces, including living standards. Several studies

have shown motivational differences in relation to engagement in competitive sports between Western and Non-Western countries (Elbe, Madsen, & Midtgaard, 2010; Hayashi & Weiss, 1994; Markus & Kitayama, 1991). In general, Ryba and Wright (2005), describe the absence of interest in investigating cultural differences in the field of sport and exercise psychology.

There has been little research on motivation for training in developing countries, where inactivity and obesity are new but growing problems. There are only a limited number of studies on physical inactivity in India, and it has been identified as an important area for future research (Swaminathan & Vaz, 2013). Gupta et al. (2012) show that low educational, occupational and socioeconomic status Asian Indians have a greater prevalence of obesity, lower HDL cholesterol, smoking or tobacco use and low physical activity levels (Gupta et al., 2012). Vaz and Bharathi's (2000, 2004) studies indicate that Indian women are significantly more active than men, largely due to a larger amount of household activity, which is not offset by the higher leisure-time-related exercise of males. Eastern Asian women also tended to be serious, cooperative, compliant, concerned about others, and they expressed a desire to keep arousal levels relatively low when they participated in physical activity (Sit, Kerr, & Wong, 2008; Wang, Liu, Sun, Lim, & Chatzisarantis, 2010).

Developing countries are faced with many problems, including lack of jobs, a general low educational level in the population, low economic growth and inadequate nutritional resources. In the past, these problems have had greater priority than developing sports in these countries (Heineman, 1993). A country's economic power determines, to a great extent, its success in the Olympic Games (De Bosscher, De Knop, Van Bottenburg, & Shibli, 2007; Heineman, 1993; Novikov, & Maximenko, 1972). India has achieved an overall total of 26 medals in the Olympic games (all of them in the summer Olympics). By comparison China, a country with a similar number of inhabitants, has so far has achieved 517 medals in total, of which 473 were won in the summer Olympics (IOC, 2013 a). This is an indication that India does not place great emphasis on elite sports and/or being successful in international competitions.

The aim of this paper is to investigate a specific developing country, India, and to compare it to a very highly industrialized first world country, Norway, with regard to motivations for participation in fitness activities. India has a population of 1.2 billion people; the Human Development Index (HDI) is 0.547 (medium), and

it is ranked on the index list as number 119 in the world (United Nations, 2013). In 2010 the World Bank reported that 32.7% of the total population in India is ranked below the international poverty line (1.25 US\$) and 68% of the population lives on less than 2 US\$ a day (World-Bank, 2010). India faces multiple threats from diseases like obesity, low HDL cholesterol, and smoking or use of tobacco (Gupta, et al., 2012). The increasing trend of lifestyle-related health problems is becoming a serious issue in India (Ng & Popkin, 2012; Senjam & Singh, 2012).

Norway, on the contrary, with a population of ca. 5 million is considered to have a very high standard of living, is a welfare state with a thriving economy, and ranks as no. 1 on the HDI with an index of 0.955 (very high) (United Nations, 2013). According to the World-Bank no one in Norway lives below the international poverty line (World-Bank, 2010). Norway has achieved a total of 147 medals in the summer Olympics and 303 in the winter Olympics (IOC, 2013 b). This number needs to be seen in relation to Norway's small population size and indicates the high value ascribed to elite sports and success in international competitions in Norway.

In this study we will explore differences in motives between Indian and Norwegian members of a fitness club. Motivation for physical activity may be shaped and influenced by social and cultural forces, including living standards. As an example, Jarvie (2006, p. 374) writes: "To a European athlete, an Olympic gold medal is the pinnacle of his or her career; however for an athlete from a developing country it may simply be a gateway to earn money that will transform the lives of the athlete and his or her community." Cultural identity appears to be an important determinant of motivational factors in as much as cultural groups are seen to differ in their motives (Hayashi & Weiss, 1994; Markus & Kitayama, 1991). These motivational differences when it comes to elite sports could possibly also present itself in the form of what motivates individuals to participate in fitness activities. So far studies have mainly focused on Western participants in fitness activities but not investigated fitness participants from developing countries.

### 1.1 Cross-Cultural Measurement Issues

Ryba and Wright (2005) describe the absence of interest investigating cultural differences in the field of sports and exercise psychology. One reason for this could be the challenges involved when conducting cross-cultural studies, for example

with regard to reporting culturally biased results and interpretations (Duda & Hayashi, 1998). Researchers must be aware that culturally dependent variables such as values, norms and attitudes might have an impact on whether or not the measured constructs have the same meaning in different cultures. In order to prevent cultural bias in the design, and also in the interpretation of research, equivalency of the phenomena that are being analyzed must be secured (Silvennoinen, 1986). Duda and Hayashi (1998) and Helms (1992) therefore point out five types of equivalency that need to be ensured in cross-cultural research. These apply to functional and conceptual equivalence (meaning that the questions are interpreted in the same way and that the scores therefore hold the same meaning), linguistic equivalence, psychometric equivalence, testing condition equivalence and sampling equivalence.

The research questions investigated in our study are the following. We assume gender differences in motives for training, but also gender differences in duration and frequency of training in both the Indian and Norwegian sample (Frederick & Ryan, 1993; Ryan et al., 1997). Previous Western studies have shown that women in general score higher on body-related motives and men higher on competence motives. Drummond and Lenex (1997) found that women indicated socialization, aerobic equipment, and both intrinsic and extrinsic motivation as more important than men. Men reported aquatic-related facilities (sauna etc.) and resistance equipment as more important than women. Gender differences were also expected with regard to training duration and frequency. Previous studies have shown that men score higher on both duration and frequency of training than women (Duncan, et al., 2010; Frederick & Ryan, 1993; Mullen & Whaley, 2010; Ryan et al., 1997).

Secondly, we assume cultural differences between intrinsic and extrinsic motives. We assume that the participants in India will score higher on more extrinsic motives such as appearance and fitness than the Norwegians, and lower on more intrinsic motives like social (Elbe, Madsen, & Midtgaard, 2010; Sheldon, Abdad, & Omoile, 2009; Wang et al., 2010). and competence motives. This assumption is based on previous cross-cultural studies in sports

Thirdly, this study investigates which motives predict training attendance in the two countries. In general, the literature suggests that more intrinsic motives are associated with positive psychological outcomes and greater exercise adherence (Ingledew, Markland, & Medley, 1998; Markland & Ingledew, 2007; Sheldon, Ryan, Deci, & Kasser, 2004), and it is therefore assumed that

intrinsic motives will predict training behavior in both countries.

## 2. METHODE

### 2.1 Participants

The participants were 388 members of commercial fitness centers in Norway and India. In Norway, the sample consisted of 95 (48.5%) women and 101 (51.5%) men, and in India it was 92 (49.9%) women and 100 (52.1%) men. The respondents varied in age from 13 to 59 years, with a total mean of 26.4 years. The mean age for India was 26.9 years, and for Norway 25.7 years.

### 2.2 Procedure

The data in India were collected during a three-month period in Bangalore at one fitness center. The language of the questionnaire was English. In Norway data collection was conducted in three different fitness centers (due to the size of the centers). Prior to distribution the questionnaire had been translated into English and translated back into Norwegian (Brislin, 1970; 1986). The samples were randomly selected, with half women/men. The only inclusion criteria were that the participants were members of the respective fitness center. To test for functional, conceptual and linguistic equivalence interviews were conducted with two fitness instructors in Bangalore. A pretest of the questionnaire was conducted to ensure psychometric equivalence. Equal testing conditions in Norway and India were ensured by collecting the data in the afternoon and after the participants had been working out in both countries.

### 2.3 Measures

Participants' motives were assessed with the Motives for Physical Activity Measure - Revised (MPAM-R) (Ryan et al., 1997). The scale consists of a total of 30 items assessing five different motives for participating in physical activities: fitness, appearance, competence, social and interest/enjoyment. Fitness (5 items) refers to being physically active out of the desire to be physically healthy and to be strong and energetic ("Because I want to be physically fit"). Appearance (6 items) assesses 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 ("Because I want to lose or maintain weight so I look better"). Competence (7 items) refers to being physically active because of the desire just to improve at an activity, to meet a challenge, and to acquire new skills ("Because I like engaging in activities that physically challenge me"). Social (5 items) refers to being physically active in order to be with friends and meet new people ("Because I enjoy spending time with others



doing this activity"). *Interest/enjoyment* (7 items) measures being physically active just because it is fun, makes you happy, and is interesting, stimulating, and enjoyable ("Because I like the excitement of participation"). The items are rated on a seven-point Likert scale ranging from one (*not at all true for me*) to 7 (*very true for me*).

The following questions were applied to measure training frequency and the duration of training sessions: "How many days during a normal week do you work out?" and "How long does a mean training session last for you?" The duration of the training session(s) is the mean value of sessions in a normal week. The answers to the questions relating to duration of training session were categorized as follows: 1=<15 minutes, 2=15–29 min., 3=30–44 min., 4=45–59 min., 5=60–89 min. 6=90–119 min. and 7= $\geq$ 120 minutes per session.

### 2.4 Analyses

The data were analyzed using SPSS (Version 20.0). In the section describing the sample, ANOVAs were applied to determine sample differences. Multivariate analyses of variance (MANOVA) were applied to investigate multivariate associations between workout days, duration of training and the motivational scales. Paired sample t-test was applied to test for mean differences between the MPMA-R subscales. Significant main effects were followed up using one-way analyses of variance (ANOVA). Effect sizes are reported using Cohen's *d* and partial eta-square  $\eta^2$ . Cohen defined effect sizes as "small,  $d = .2$ ," "medium,  $d = .5$ " and partial eta-square  $\eta^2$ . Cohen defined effect sizes as "small,  $d = .2$ ," "medium,  $d = .5$ " and "large,  $d = .8$ " (Cohen, 1988). Eta-square  $\eta^2$  defines effect sizes as "small  $\eta^2 = .02$ ," "medium  $\eta^2 = .13$ " and "large  $\eta^2 = .26$ ".

## 3. RESULTS

### 3.1 Preliminary data analysis

Data were screened according to the recommendations of Hair, Black, Babin and Anderson (2009). Examination of the assumptions associated with regression analyses (homoscedasticity, linearity and normality) suggests that there were no particular problems with the data. Both homoscedasticity and linearity assumptions were tenable.

To explore whether the data were marked by multicollinearity, both tolerance and variance inflation were examined. No problems were found, since the obtained values are within the range of acceptable values (Hair et al., 2009).

### 3.2 Reliability analysis

Internal consistency estimates (Cronbach's alpha) of the MPAM-R subscales were computed separately for the Norwegian and Indian sample. The reliability analyses indicate that internal consistency coefficients were good. In Norway the Cronbach's alpha for all multi-item scales ranged from .77 to .92 and in India they ranged from .80 to .91.

### 3.3 Descriptive statistics

No significant differences with regard to gender ( $F=.024$ ,  $\eta^2=.00$ ,  $d=.04$ ) or age distribution ( $F=2.95$ ,  $\eta^2=.29$ ,  $d=-.17$ ) could be found between the two samples. A statistically significant difference at the 5% level could be found between Norway and India in duration of training indicating that the Norwegians reported longer sessions than the Indians ( $F=4.83$ ,  $\eta^2=.08$ ,  $d=.44$ ). There is also a significant difference at the 1% level between the two countries in workout days per week. The Indians reported more workout days during a week than the Norwegians ( $F=18.88$ ,  $\eta^2=.08$ ,  $d=-.44$ ).

### 3.4 Gender differences

There is a significant difference between men and women in India at the .01 level in duration of training sessions ( $F=18.71$ ,  $\eta^2=.09$ ,  $d=.63$ ). Men in India reported longer duration of their average training session than women. In Norway there is a significant difference at the .01 level between men and women in workout days ( $F=21.19$ ,  $\eta^2=.10$ ,  $d=.67$ ). The Norwegian men reported more workout days during the week than women.

The following gender differences in motives could be found in Norway. Males scored higher on "competence" than females. There is a statistical difference at the 1% level with a  $\eta^2=.20$  and  $d=.47$ . The exact same gender difference could be found in India. The statistical difference was significant at level .01 with a  $\eta^2=.25$  and  $d=.39$ . No other significant gender differences could be identified.

### 3.5 Overall differences between Norway and India

Due to the similarity in gender differences the following analyses were conducted with the entire samples of the two countries. In relation to motives, the Indians scored statistically higher than the Norwegians on the extrinsic motive appearance at the 1% level ( $\eta^2=.11$  and  $d=-.41$ ). There are also significant differences regarding the intrinsic motives: interest/enjoyment ( $\eta^2=.11$  and  $d=.32$ ), competence ( $\eta^2=.13$  and  $d=.26$ ), and social ( $\eta^2=.14$  and  $d=.46$ ) at the 1% level. The Norwegians scored higher on these motives than the Indians.

### 3.6 Regression analysis

Four separate hierarchical regression analyses were conducted to examine how extrinsic and intrinsic motives predict the variables, workout days and duration of training sessions in both Norway and India.

The predictors of workout days in Norway (.01 level) were found to be high interest/enjoyment, high competence and high appearance. These variables explained 33 % of the variation. Duration of training session was only explained by a high interest/enjoyment (.01 level,  $\beta=.61$ ) in the Norwegian sample. This variable explains 19% of the variation.

In India the only motive with explanation for workout days was interest/enjoyment (.01 level,  $\beta=.33$ ). This motive only explained 5% of the variation. In relation to duration of training sessions in India there were two motives that offered explanations at the 5% level. This was appearance and fitness. Those with a long duration of the sessions scored highly on the motive appearance and low on the motive fitness. These two motives only explained 4% of the variation recorded.

## 4. DISCUSSION

### 5.

The aim of the study was to examine three questions with regard to exercise motives and behaviour in a fitness setting in Norway and India. The first question related to gender differences. The results indicate differences in both countries with regard to the motive competence, with higher scores for males than for females. This finding supports previous studies in Western countries (Drummond & Lenes, 1997) but at the same time indicates that it can be replicated in an Asian context. Previous findings indicate that women score higher on intrinsic motives (Amarose, 2007; Duncan et al., 2010; Frederick & Ryan, 1993; Hein & Koka, 2007; Mullen & Whaley, 2010; Ryan et al., 1997; Wang & Biddle, 2007); however, this could not be confirmed with neither the Indian nor the Norwegian data in this study. Gender differences could also be found with regard to training frequency and duration. Looking specifically at the Norwegian sample, significant gender differences apply to workout days, whereas in India the gender differences refer to training duration, which are both higher in males than in females. This result confirms previous studies, which have shown that men score higher on both duration and frequency of training (Duncan, et al 2010; Frederick & Ryan, 1993; Mullen & Whaley, 2010; Ryan, et al., 1997).

Second, we investigated cross-cultural motivational differences with regard to working out

at fitness centres' between Norway and India. It was assumed that Indians would score higher on more extrinsic motives whereas Norwegians would score higher on intrinsic motives. Results indicated that in both countries social motives are the least prominent. Furthermore, the two samples show significant differences in relation to four of the five motivational scales. The Norwegians overall scored higher on interest, social and competence whereas the Indians scored higher on appearance. This indicates that Norwegians tend to be more motivated by intrinsic than extrinsic factors than Indian participants. This confirms findings that show that other motives seem to be more important in non-Western countries (e.g. Elbe et al., 2010).

Our last question investigated whether intrinsic motives are associated with greater exercise adherence. Earlier findings in Western countries showed that interest/enjoyment and competence motives were positively associated with time spent on exercising per week. Body-related motives were positively associated with weekly frequency of exercise but negatively associated with the actual time spent exercising (Duncan, et al., 2010; Frederick & Ryan, 1993; Patrick & Canevello, 2011; Ryan, et al., 1997). Literature suggests that having more intrinsic motives is associated with positive psychological outcomes and greater exercise adherence (Ingledeu et al., 1998; Markland & Ingledeu, 2007; McLachlan & Hagger, 2011; Sheldon et al., 2004; Teixeira et al., 2012). Our study only partly supports these findings. Our study replicates the finding that interest/enjoyment is an important predictor of number of workout days in both Norway and India. Additionally, competence and appearance predict number of workout days in Norway, which confirms the finding of Markland and Ingledeu (2007) and Sheldon et al. (2004).

The duration of training sessions was only explained by the motive interest/enjoyment in the Norwegian sample (1% level), and in India there were two motives that offered explanation, namely high scores on appearance and low scores on fitness (5% level). Overall, however, the motives in Norway explained a much larger amount of variance than in India, indicating that additional factors might be more strongly related to exercise behaviour among Indian participants.

### 4.1 Limitations of the study

There are some limitations to this study. The fact that the data in Norway were collected from three different fitness centers compared to only one center in India needs to be addressed.

However, no single, sufficiently large fitness studio could be found to match the Indian one. Another limitation of the study is the fact that it can be assumed that fitness center members in India probably belong to a higher socioeconomic class than fitness center members in Norway. Socio-economic class was not included as a variable in this study.

## 6. FUTURE RESEARCH PERSPECTIVES

Future research should investigate the reasons why females are less active in the centers than males, and if there are cross-cultural differences with regard to the reasons for this. Further investigations are also needed with regard to the question of why the motives explain so much less variance in India than in Norway. It needs to be investigated which motives could explain exercise behavior in India better. Perhaps other motivational questionnaires would be able to explain these differences more satisfactorily, or perhaps a new instrument respecting the Indian cultural background needs to be developed for this kind of study.

The fact that motivation has shown to change over age makes it interesting to look into different age groups to find out which motives dominate at different ages. Future studies with larger overall samples and a larger age distribution could investigate age differences but also further investigate the role of socioeconomic status with regard to physical activity in both countries.

## 7. CONCLUSIONS

In conclusion, this study found both similarities and differences between Indian and Norwegian participants' motives for exercising in a fitness center and their exercise in a fitness center. Both countries showed larger exercise engagement among males than among females, which is in accordance with previous findings, as well as a stronger importance of the motive competence among males than females. Differences between the two countries were found with regard to the importance of intrinsic and extrinsic motives and the degree to which these motives could predict actual exercise behaviour. This study indicates that more cross-cultural studies are necessary and that the results of studies conducted in Western countries cannot automatically be transferred to Non-Western contexts. Future studies are therefore necessary to investigate the underlying reasons for these differences. Nevertheless, enjoyment/interest

in physical activity seems to be a very important factor in both cultures for physical activity and may be a more universal precondition for regular physical activity.

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## APPENDIX

Table 1

*Description of the Sample (N = 388) differentiated by Country, Gender, Age,**Duration of Training Session and Work-Out Days*

|                        | Total Sample<br>N = 388(%) | Norwegian<br>Sample<br>n = 196 (50.5%) | Indian Sample<br>n = 192 (49.5%) |
|------------------------|----------------------------|--|----------------------------------|
| Gender                 |                            |  |                                  |
| Female                 | 187 (48.2%)                | 95 (48.5%)                             | 92 (28.8%)                       |
| Male                   | 201 (51.8%)                | 101(51.5%)                             | 100 (51.1%)                      |
| Age mean (SD)          | 26.4 (6.07)                | 25.7 (5.97)                            | 26.9 (49.9%)                     |
| Female                 | 26.1(6.92)                 | 26.3 (7.05)                            | 27.5(7.21)                       |
| Male                   | 26.7 (5.21)                | 25.1 (4.89)                            | 26.3(5.09)                       |
| Duration mean (SD)     | 4.40 (1.19)                | 3.30 (1.21)                            | 4.24(1.12)                       |
| Female                 | 4.13(1.21)                 | 2.76 (1.21)                            | 3.87(1.17)                       |
| Male                   | 4.64(1.17)                 | 3.81(1.79)                             | 4.60 (1.14)                      |
| Workout days mean (SD) | 3.65 (1.64)                | 4.52 (1.26)                            | 4.02 (1.60)                      |
| Female                 | 3.35 (1.60)                | 4.38 (1.31)                            | 3.96 (1.64)                      |
| Male                   | 3.95 (1.67)                | 4.65 (1.21)                            | 4.08 (1.56)                      |

Table 2

*Mean Score Values and Standard Deviations differentiated by Country and Gender for the MPAM-R (scores range from 1 to7)*

|                        |        | Country     |             | Gender      |             |
|------------------------|--------|-------------|-------------|-------------|-------------|
|                        |        | Norway      | India       | Men         | Women       |
| Interest/<br>enjoyment | Norway | 5.03 (1.16) | 4.63 (1.27) | 4.96 (1.15) | 4.70(1.28)  |
|                        | India  |             |             | 5.20 (1.03) | 4.85(1.27)  |
| Competence             | Norway | 4.85 (1.37) | 4.48 (1.45) | 4.70 (1.25) | 4.55 (1.29) |
|                        | India  |             |             | 4.93 (1.34) | 4.39(1.45)  |
| Appearance             | Norway | 4.80 (1.34) | 5.31(1.19)  | 5.11 (1.24) | 4.58 (1.46) |
|                        | India  |             |             | 4.75 (1.43) | 4.20 (1.43) |
| Fitness                | Norway | 5.70 (.89)  | 5.80 (1.12) | 5.10 (1.27) | 5.02 (1.31) |
|                        | India  |             |             | 4.75 (1.35) | 4.84(1.33)  |
| Social                 | Norway | 3.30 (1.17) | 2.70 (1.24) | 4.51(1.10)  | 4.20 (1.28) |
|                        | India  |             |             | 5.72 (.94)  | 5.79 (1.09) |
|                        | Norway |             |             | 5.62 (.79)  | 5.80 (.99)  |
|                        | India  |             |             | 5.82 (1.06) | 5.78 (1.88) |
|                        | Norway |             |             | 3.10 (1.23) | 2.93(1.20)  |
|                        | India  |             |             | 3.39 (1.13) | 3.21(1.21)  |
|                        |        |             |             | 2.80 (1.30) | 2.63 (1.18) |

Table 3

*Hierarchical regression analyses predicting Workout days and Duration of training session in Norway from MPAM-R Subscales*

| Independent variables | Workout days |               | Duration of training session |               |
|-----------------------|--------------|---------------|------------------------------|---------------|
|                       | B            | 95% CI        | B                            | 95% CI        |
| Constant              | -.59         | [-1.84, 0.67] | 2.52**                       | [1.51, 3.53]  |
| Interest/enjoyment    | .50**        | [0.19, 0.82]  | .58**                        | [0.32, 0.83]  |
| Competence            | .35**        | [0.08, 0.62]  | -.05                         | [0.32, 0.83]  |
| Appearance            | .22**        | [0.06, 0.39]  | .81                          | [-0.67, 0.19] |
| Fitness               | -.62         | [-0.55, 0.02] | -.14                         | [-0.37, 0.87] |
| Social                | .02          | [-0.18, 0.21] | -.07                         | [0.23, 0.89]  |
| R <sup>2</sup>        | .33          |               | .19                          |               |
| F                     | 20.58**      |               | 9.40**                       |               |

\*p < .05. \*\*p < .01

Table 4

*Hierarchical regression analyses predicting Workout days and Duration of training session in India from MPAM-R Subscales*

| Independent variables | Workout days |               | Duration of training session |                |
|-----------------------|--------------|---------------|------------------------------|----------------|
|                       | B            | 95% CI        | B                            | 95% CI         |
| Constant              | 3.85**       | [2.58, 5.11]  | 3.81**                       | [2.85, 4.77]   |
| Interest/enjoyment    | .43**        | [0.09, 0.76]  | .07                          | [-0.18, 0.33]  |
| Competence            | .06          | [-0.21, 0.33] | .19                          | [-0.01, 0.40]  |
| Appearance            | .11          | [-0.33, 0.11] | .20*                         | [0.04, 0.37]   |
| Fitness               | -.22         | [-0.51, 0.07] | -.26*                        | [-0.48, -0.04] |
| Social                | -.11         | [-0.31, 0.09] | -.13                         | [-0.28, 0.02]  |
| R <sup>2</sup>        | .05          |               | .04                          |                |
| F                     | 2.87*        |               | 3.12**                       |                |

\*p < .05. \*\*p < .01