The Effectiveness of Yoga Practice on Positive Psychology Constructs: Meaning in Life, Gratitude and Marital Intimacy

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The aim of this study was to examine the effects of yoga exercises on three dimensions of mental health: meaning in life, gratitude and marital intimacy. The population consisted of married women between the ages 20-55 years from the city of Kermanshah. The participants had high school diplomas and higher education. The research design was pre-test and post-test with a control group. Forty subjects were selected randomly among the volunteers participating in yoga classes in Mersad, Kosar and Shohada sports facilities. The subjects were randomly assigned in two groups: Yoga Group and Control Group. The Yoga Group participated in yoga sessions for two days a week (12 sessions and each session was for 90 minutes). Each yoga session consisted of 10 minutes in awareness rotation, 15 minutes of stretching, 45 minutes asana and 20 minutes of shavasana and the Control Group did not participate in any sessions. All the participants were evaluated via the Meaning of Life Questionnaire (MLQ), Gratitude Questionnaire (GQ-6) and Intimacy Scale (IS). The statistical method of covariance was used to analyze the data. The results of covariance analysis showed that there were significant differences between the two groups. The meaning of life, gratitude and intimacy in the experimental group were increased...
significantly (p<0.1) after 12 sessions of yoga training. In conclusion, the yoga exercise had positive effects on meaning in life, gratitude and intimacy. Likewise, yoga exercises reflect the holistic benefits of well-being experienced by those who practiced yoga. Therefore, the prevalence of this practice by psychotherapists as well as in settings such as schools and universities and offices is recommended. Therefore, the prevalence of this practice from psychotherapists’ point of view is to recommend having such a yoga program in schools, universities and offices.

**Keywords:** Yoga, Meaning in Life, Gratitude, intimacy

Yoga is considered as a way of cultivating aspects of overall psychological well-being, which constitutes a focal interest in positive psychology (Singleton, 2010). The well-being functions as a general term encompassing optimal functioning of self-actualization and flourishing which refers to both the desirable condition of our existence and the end state of our quest (Ivtzan, Bernard, Skhon & Gardner, 2013; Wong, 2011).

In general, modern yoga includes many yoga principles which allow one to accept change in life. These include elements such as Yama (moral code), Niyama (self-discipline), Asanas (postures or poses), Pranayama (mindfulness of breathing), Pratyahara (detachment from senses), Dharana (concentration), Dhyanna (meditation or positive mindful focus on the present), Savasana (state of rest) and Samadhi (ecstasy) (Bhavanani, 2011; Iyengar, 2000). Some of those elements are related to concepts that have received theoretical and research attention in Positive psychology. For example, the Yama and Niyama are characterized by self-control, self-discipline and self-awareness that could be viewed as related to the positive psychology concept of flow (i.e. of being entirely engaged and involved in the moment).
It was identified from the aims and initial reports of finding that there was close relationship between yoga and positive psychology. This leads to the idea of further exploring their relationship by focusing on three specific aspects of mental health in general: meaning in life, gratitude and marital intimacy.

The experience of meaning in life is known as an important factor for health and well-being (Wong & Fry, 1998; Ryff & Singer, 1998). In fact, Frankel (1963/1984) in his classic work stated that meaning in life is a basic, chronic need (Heine, Travis, & Vohs, 2006). The importance of meaning in life was showing its relationship with a number of mental health variables such as depression, anxiety, hope, and life satisfaction (Mascaro & Rosen, 2005; Reker, Peacock, & Wang, 1987; Ryff, 1989; Steger & Frazer, 2005; Zika & Chamberlain, 1987, 1992). Steger, Frazer, Oishi and Kaler (2009) saw meaning in life as a way in which people feel their lives have purpose, and how they understand their experiences.

It appears reasonable to hypothesize that practicing yoga exercise, which are not only limited to the physical body but are also embedded in a spiritual aspect of life (Singleton, 2010) will have a positive relationship on overall psychological well-being. Spirituality has been shown to promote psychological well-being (Ivtzan et al., 2011). Therefore, it is natural to say that the spiritual part of yoga practice which combines the physical and spiritual aspects of the yoga practice are also beneficial for well-being. Meaning was considered a central building block in a spiritual experience (Wong, 2012), therefore, spirituality is strongly linked to yoga exercise which as a result is central to spirituality.

Meaning of life consists of several things, the combination of which is unique for each individual (Wong, 1998). Some scholars
argued that one source of meaning stems from action and involvement in activities such as work, giving, and receiving love (Frankl, 1963), while others claimed that meaning is derived from close relationships, spirituality, and nature (Emmons, 2003; Fegg et al., 2007). As Eggleston (2009) has succinctly stated, “yoga is the recognition of the divine within the self, outside of the self, and the connection between the self and others outside the self” (p.11). Therefore, it appears that research findings showed that the regular practice of yoga is related to an increase of meaning in life and well-being (Heo, 2007; Stebbins, 2003), and should be understood within this context.

Following this research findings, it was hypothesized that a positive correlation existed between the level of yoga practice and the presence of meaning in one’s life. This hypothesis was also based on the connection between yoga’s aims to facilitate an encounter with one’s real self. Schlegel et al. (2009) suggested that access to the real self (finding personal values and self-awareness) was an important contributor to well-being as well as a significant source of meaning. Impett et al. (2006) found that more frequent yoga practice was associated with increased positive effect and satisfaction in life which decreased negative effects. Gard et al. (2012) also found that participation in a four-month residential yoga-based program significantly predicted increases in the quality of life, mindfulness, and self-compassion, along with decreases in perceived stress. In addition to that, Sharma et al. (2008) found that individuals who participated in a ten day yoga intervention showed significant improvement in SWB as compared to controls. Finally, Brazier et al. (2006), who examined stress treatment in an HIV
positive population, found that yoga was significantly correlated with positive effect, life satisfaction, and psychological well-being.

Smith (2007) defined gratitude as a word of greeting that offers the most immediate and direct compensation. As a positive emotion, gratitude contributes to the building of lasting and beneficial resources for the individual in accordance with the principles of Frederickson’s (1998, 2001) “broaden and build” theory. Following this theory, positive emotions undo the adverse effects of negative ones while extending cognitive functioning through more creative, flexible, or efficient patterns of thinking. With the passage of time, the broadening possibilities of positive emotions builds a range of positive resources, which help individuals become healthier, more socially integrated, and more resilient. Having examined a number of research findings on gratitude and well-being, as well as their theoretical integration, Wood et al. (2010) concluded that there was a significant link between gratitude and well-being. This appeared to be unique and causal which might work through “broaden and build” principles.

In a study conducted among Iranian college students (Naser & Hojatollah, 2011), gratitude was found to be positively correlated with SWB as well as all factors of psychological well-being touched upon by Ryff’s Psychological Well-being Scales (Ryff, 1989). Findings from empirical research have indicated that gratitude can improve well-being both directly, as a causal agent of well-being, and indirectly, as a means of buffering against negative states and emotions experienced due to bereavement or depression (Nelson, 2009). In an experimental study examining the positive emotional outcomes of gratitude inductions, it was found that a gratitude condition that contained mindfulness components was
highly effective in boosting immediate positive effects and lowering negative effects (Mcintosh, 2008).

As yoga was not a mere series of exercises but was embedded in a philosophical and spiritual approach, it was expected that there would be a connection between yoga and dispositional gratitude as the latter had been shown to have strong associations with intrinsic spiritual beliefs and mindfulness (McCullough et al., 2002). Yoga was based on a philosophy that encompasses gratitude as could be seen in the very language used, which reflects an appreciation of the bliss of birth and life (e.g., Chidvilasananda, 1996). The incitement of practicing gratitude could also be seen in yoga writings; for example, in the Yoga Journal Boccio (2006) urged yoga practitioners to “Count your blessings and you’ll find that even an uneventful or ‘bad’ day is filled with precious gifts” (p.113). Among yoga practitioners, praying included gratitude, solidarity, openness of the heart and compassion (Radford, 2000). Gratitude makes one’s mind more aware of what is offered and what one can be thankful for. Yet another connection between yoga and gratitude may be assumed to take place through meditation practice. Schure et al. (2008) found that participants in their research regarding teaching mindfulness to counselling students claimed that meditation helped them increase acceptance of themselves and others. They also consequently experienced increased gratitude for what they had instead of focusing on what they lacked. As noted above, it was hypothesised that those individuals who had extended experience with yoga practice would tend to report higher levels of gratitude.

Intimacy was defined as a dynamic process involving closeness, good personal relationships and similarity. Excitement that requires
to identification and comprehension and also expression of similar thoughts and feelings (Bagorzi 2001). Craig (2000) conceptualized intimacy as a process of contact, self-comprehension and disclosing in attendance of couples.

Intimacy was one of the basic human needs for mental health and psychological adjustment (Descutner & Thelen, 1991). Psychologists defined intimacy as the ability to communicate with others and express emotions without inhibition (Bulum, 2006). Intimate relationships were an important source of personal happiness and a sense of meaning in life (Barthelomeo, 1990). The lack of intimacy is related to depression, low self-esteem, anxiety, and low satisfaction in communication (Deskanter & Telen, 1991, pilich et al., 2005). In addition, avoiding intimate relationships could have bad effects on emotional health, which leads to loneliness, emotional isolation and inefficient responses to stress (Dewey & Telen, 1993).

During yoga practice, the individuals were able to increase awareness and attention which led to a mindful and meditative state (Germer et al., 2005; Hart et al., in press; Murphy & Donovan, 1997; Walsh, 1999). Yoga had been reported leading to an increase in empathy (Walsh, 2001) and connecting awareness with higher levels of compassion, gratitude, intimacy and respect in both human and non-human relationships, ideas and beliefs (Radford, 2000).

Similarly, to positive psychology, there was a focus on attempting to increase mindfulness while enhancing well-being and awareness of self and environment, along with disciplining the mind and emotions (Levine, 2000).

There was a close relationship between our research objectives and the similarities between yoga and reports of positive
psychology create the context for exploring more in this regard. In our research, we were focusing on three specific aspects of positive psychology that lead to overall mental health: the meaning of life, sense of gratitude and marital intimacy. The present study aimed to estimate the efficacy of yoga in promoting a sense of meaning in life, gratitude and marital intimacy.

Method

Participants

Our population sample consisted of married women between the age of 20-55 years with diplomas or higher education from Kermanshah. The method of sampling used was random cluster. Among the eight regions in Kermanshah, regions 3, 5, 6 and regions with a sports hall were randomly selected. The three sports clubs were selected from the four regions above such as Mersad, Kosar and Shohada. Among the volunteers participating in yoga classes, forty participants were selected randomly (14 for each sports hall) and were randomly divided in two groups: Yoga Group and Control Group

Instruments

Meaning in Life Questionnaire (Steger et al., 2006) evaluates two dimensions of meaning in life by 10 items rated on a seven-point scale from “Absolutely True” to “Absolutely Untrue.” The MLQ has good reliability, test-retest stability, stable factor structure, and convergence among informants. Based on the alpha coefficient the reliability of MLQ is 92. Mesrabadi’s result for construct validity of MLQ is acceptable for a sample of Iranian
students. The discriminative validity though was much more accurate in diagnosing individuals than people at risk.

Gratitude was assessed by the Gratitude Questionnaire-Six Item Form (McCullough, Emmons & Tsang, 2002), which consisted of six Likert type statements measuring the experience of gratitude (e.g., “I have so much in life to be thankful for”) with scores from 1 to 7. The reliability of the mentioned questionnaire through: test-retest, Cronbach’s Alpha, and split-half reliability was studied by Ghamarani (2009). The results indicated that the scale had satisfied item analysis, convergent validity, internal consistency, test-retest and split-half reliability. The scale was scored by summing responses on each item.

Intimacy was assessed by the intimacy scale (walker & Thompson, 1983). This scale was a 17 item instrument designed to measure general intimacy or affection. Intimacy was defined simply as family members caring about each other, and included such elements of emotional closeness as affection, altruism, enjoyment, respect, satisfaction, openness, solidarity, and commitment. The IS had excellent internal consistency, with alphas that range from .91 to .97. No stability data were reported. Etemadi and Khazaee (2007) reported alphas .96 and .85. The validity of this scale through the simultaneous performance with the intimacy questionnaire of Bagozzi and correlation coefficient of .82 was calculated that showed good reliability for this scale (Etemadi, 2005).

**Procedure**

We performed pre-test/post-test study with control group. Before starting yoga practice, all the subjects (control and experimental group) in each of the three sports halls were invited in a session
answer to meaning in life, gratitude questionnaire and marital intimacy scale. First, a brief explanation about the purpose and importance of the research was given to them and they were assured of confidentiality of their responses. After collecting responses from all subjects, the control group was asked to start yoga practice after 50 days (Pre-test).

Training courses for the experimental group were 45 days which included two 90-minute sessions per week. After 12 sessions along with the control group that did not receive any training in this period, they answered the questionnaires (Post-test).

Each session consisted of 10 minutes in awareness rotation, 15 minutes stretching, 45 minutes asana and 20 minutes of shavasana. The awareness rotation and relaxation at the beginning of class were focusing on attention and awareness without bringing the outside world into the classroom and mentally and physically preparing for training sessions. The stretching exercises prepared the body before starting Asana was implemented with focus on respiration. Asana was a physical exercise and shavasana was a relaxation at the end of class. The training objectives were as follow: 1. psychological awareness of physical condition (asana), (2) coordination of mental energy (pranayama), (3) control over the perceptions and reactions (pranayama); 4. Enhancement of positive mental energy and feeling happiness and intimacy (Dharana). The goals of the oga exercises were to improve mental states and not only consider physical training (Ahmad pour, 2009).

Results

As shown in Table 1, descriptive statistics for mean and standard deviation of dependent variables was shown for both experimental
and control groups separately in the two-step evaluation (pre-test, post-test).

Table 1
Descriptive Scores (mean ± SD) of Variables Measured in Two Separate Experimental and Control Groups

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaning in life (pre)</td>
<td>Control</td>
<td>59.94</td>
<td>6.32</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>56.85</td>
<td>9.52</td>
</tr>
<tr>
<td>Meaning in life (post)</td>
<td>Control</td>
<td>59.11</td>
<td>7.60</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>65.05</td>
<td>5.03</td>
</tr>
<tr>
<td>Gratitude (pre)</td>
<td>Control</td>
<td>35.05</td>
<td>4.05</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>32.41</td>
<td>6.65</td>
</tr>
<tr>
<td>Gratitude (post)</td>
<td>Control</td>
<td>34.17</td>
<td>4.91</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>37</td>
<td>4.97</td>
</tr>
<tr>
<td>Intimacy (pre)</td>
<td>Control</td>
<td>5.37</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>4.90</td>
<td>1.10</td>
</tr>
<tr>
<td>Intimacy (post)</td>
<td>Control</td>
<td>5.36</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>5.52</td>
<td>1.09</td>
</tr>
</tbody>
</table>
The first hypothesis of this study was to investigate the multivariate analysis of variance used to score differentials. The multivariate analysis of variance test requires the establishment of a number of statistical assumptions. Before analyzing the data, assumptions of normality of research variables, consistency error variance (Levin test), and also covariance matrix (box test) were evaluated. The results of the multivariate analysis of variance for meaning in life dimensions were shown in Table 2.

**Table 2**
Multivariate Analysis of Variance (MANOVA) to Compare Control & Experimental Group in a Linear Combination of Meaning in Life Variable

<table>
<thead>
<tr>
<th>Effect</th>
<th>Tests</th>
<th>Values</th>
<th>F</th>
<th>D.F Effect</th>
<th>D.F Error</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Pylayy effect</td>
<td>.33</td>
<td>7.645</td>
<td>2</td>
<td>31</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Wilks lambda</td>
<td>.67</td>
<td>7.645</td>
<td>2</td>
<td>31</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Hotelling effect</td>
<td>.493</td>
<td>7.645</td>
<td>2</td>
<td>31</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Square root</td>
<td>.493</td>
<td>7.645</td>
<td>2</td>
<td>31</td>
<td>.01</td>
</tr>
</tbody>
</table>

As seen in Table 2, the significant level of four multivariate statistic, Pylayy effect, Wilks lambda, Hotelling effect and Square root, statistic were smaller than .01 (p<.01). Thus, the statistical null hypothesis was rejected and determined that there was a significant difference between the meaning in life scores of the control and experimental groups.
### Table 3
**Results of One Way ANOVA for Comparing Meaning in Life between Control & Experimental Group**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Sum of square</th>
<th>D.F</th>
<th>Mean square</th>
<th>F</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for meaning</td>
<td>Between groups</td>
<td>156.73</td>
<td>1</td>
<td>156.73</td>
<td>12.07</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>415.52</td>
<td>32</td>
<td>12.985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of meaning</td>
<td>Between groups</td>
<td>207.52</td>
<td>1</td>
<td>207.52</td>
<td>14.808</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>448.47</td>
<td>32</td>
<td>14.015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 3, the results indicated that there was a significant difference between two control and experimental group in the search for meaning and presence of meaning. Thus, it could be concluded that yoga practice increased the meaning in life.

### Table 4
**Results of Covariance Analysis Scores of Gratitude**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Square</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>348.608</td>
<td>1</td>
<td>348.60</td>
<td>24.90</td>
<td>.01</td>
</tr>
<tr>
<td>Group</td>
<td>155.72</td>
<td>1</td>
<td>155.72</td>
<td>11.12</td>
<td>.01</td>
</tr>
<tr>
<td>Error</td>
<td>433.86</td>
<td>31</td>
<td>13.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43912</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows the results of covariance analysis to compare the scores of gratitude. The obtained F-value was 11.127. Due to the
fact that the significant F-value rejected the null hypothesis the research hypothesis was confirmed. Accordingly, it could be concluded that yoga practice increases gratitude.

Table 5

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of square</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>27.092</td>
<td>1</td>
<td>27.092</td>
<td>57.358</td>
<td>0.01</td>
</tr>
<tr>
<td>Group</td>
<td>2.270</td>
<td>1</td>
<td>2.27</td>
<td>4.806</td>
<td>0.05</td>
</tr>
<tr>
<td>Error</td>
<td>14.642</td>
<td>31</td>
<td>0.472</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1048.897</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 5, the results of covariance analysis for comparing the scores of couples’ intimacy was shown. The obtained F-value was 4.80. Due to the fact that the significant F-value rejected the null hypothesis the research hypothesis was confirmed. Accordingly, it could be concluded that yoga practice increases the intimacy of women.

Discussion

The aims of this study were to evaluate the effect of yoga on three positive psychology elements such as meaning in life, the sense of gratitude and marital intimacy that led to overall mental health. The results showed that the meaning in life, gratitude and marital intimacy in experimental groups compared with the control group significantly increased.

Yoga was concerned with existential issues- such as spirituality- which encourage a person to search for meaning. When practicing yoga, practitioners were expected to set their own goals involving, for example, self-control, self-discipline and self-awareness. As a result, a significant difference between
the meaning in life before and after yoga exercise was observed in this study. The results of this study about the effects of yoga on meaning in life corresponding to Yang (2012), Stebbins (2003) and Howe (2007) findings. Regarding the argument between Gannon and Life (2002), who maintains that contemporary yoga still incorporates the original potent spiritual influence, and Singleton (2010), who points toward contemporary yoga as based upon gymnastics and physical exercise, the data obtained in this paper supports Gannon and Life (2002). These findings strengthen the claim that spirituality was embodied in the yogic practice and that levels of meaning, which were at the heart of the spiritual experience, increase with the extended practice of yoga.

Another result that was found in this research was the effect of yoga practice on gratitude. It seems that the longer the individuals practiced yoga regularly, the higher their levels of gratitude were reported. The finding of this research was also in agreement with Schure et al. (2008) that found the yogic technique of meditation enhanced feelings of gratitude. This finding was in line with research hypothesis based on the fact that yoga practice encapsulated gratitude in its prayers and the language used (Chidvilasananda, 1996; Radford, 2000). Yoga might be used as a complementary tool or vehicle either triggering emotion or cultivating the disposition of gratitude through training in ways that could eventually enhance overall psychological well-being (Emmons & McCulloough, 2003).

The results of this study about the effect of yoga on intimacy corresponded with the Radford (2000) and Walsh study (2001). Yoga enhanced mood, which was followed by a feeling of happiness and vitality, which in turn increased the level of satisfaction in life and created intimacy. Participating in yoga practices brought people closer to each other, as well as
influencing health and fitness, emotional stability, increase in self-esteem, positive social and body image, meaning in life, relaxation, gratitude and reinforcement of positive thoughts. Therefore, yoga was a way for physical and mental development and we could state that yoga plays an important role in overall mental health (WHO, 2002).

The limitations of this study were sampling among the volunteers, which might limit the generalizability of the population. The lack of follow-up research project for assessing the reliability and changes, dissonance in theory and philosophy of yoga with Iranian culture was one limitation in this research. In addition, the lack of statistical methods and research projects that specified the share of each part offered in yoga practice were another research limitation.

No study in this area has been done in Iran due to the limitations. Therefore, more research for different populations especially in men populations is recommended in the above area. Also, according to the results obtained about the effectiveness of yoga in terms of meaning in life, gratitude and marital intimacy, the prevalence of this practice by psychotherapists as well as in educational settings such as schools and universities, is recommended.

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