The Role of Yoga’s Rituals in Psychological Well-being

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**Abstract**

Yoga is an ancient discipline that has been shown to increase both mental and physical health and well-being. Individuals are constantly looking for a way to counter the psychological effects of a rapid paced life, and yoga has been a solution for many. While past research identifies physiological changes associated with yoga practice that lead to a decrease in stress and increased well-being, little is known about the psychological processes that lead to well-being. Past research connects synchronous rituals of yoga with increases in prosocial behavior. Other research finds correlations between yoga and psychological well-being, but little research has looked at the connections between synchronous rituals of yoga, prosocial behavior and well-being. A theoretical model is proposed to explain the effect of yoga’s rituals on psychological well-being, where prosocial behavior mediates the relationship between the synchronous rituals of yoga and psychological well-being. Limitations and directions for future research are discussed.

Keywords: rituals, yoga philosophy, prosocial behavior, behavioral synchrony, social psychology

**The Role of Yoga’s Rituals in Psychological Well-Being**

Yoga is popular for the many benefits that it provides – increased health, longevity, and the much-needed relief from stress. In today’s world of advancing technology, where speed, accessibility, and multitasking prevail, stress is becoming an ever-increasing problem (Beiter et al., 2015; Sapolsky, 1994). More and more people suffer from insomnia and stress-related diseases, such as diabetes and heart disease, than ever before (Coffey, Cox, & Williams, 2014; Hu, 2011; Hysing, Pallesen, Stormark, Lundervold, & Sivertsen, 2013; Sapolsky, 1994). People are looking to find anything that will help to take off the edge, and many have found refuge in yoga (Goldberg, 2010).

Yoga is part of an ancient Indian tradition and philosophy. It is one of the oldest systems of self-development in the world, encompassing practices that are aimed to improve body, mind, and spiritual connections. The term *yoga* means union, or to yoke. The union here refers to union of body, mind, and spirit; of the lower self with the higher mind; or the individual with the Supreme (Vishnudevananda, 1960).

Research on yoga demonstrates that yoga has shown efficacy for a broad range of physical and mental health conditions, including (but not limited to) stress (Chong et al., 2011), depression (Uebelacker et al., 2010), arthritis (Haaz & Bartlet, 2011), metabolic syndrome (Innes & Vincent, 2007), asthma (Posadzki & Ernst, 2011), and pain (Posadzki, Ernst, Terry, & Lee, 2011).

Practicing yoga is also associated with several biochemical effects such as influence on blood pressure, heart rate, urinary catecholamines (Granath et al., 2006), and cortisol levels in healthy subjects (Vera et al., 2009; Rocha et al., 2012). The effects of yoga seem to be mediated via multiple paths such as reduction in sympathetic tone, activation of antagonistic neuromuscular systems, relaxation in the neuromuscular system, and stimulation of the limbic system (Riley, 2004) which yield to the restoration of homeostasis in the stress response systems (Streeter, Gerbarg, Saper, Ciraulo, & Brown, 2012).

However, little attention is given to the psychological causes of yoga’s effect on well-being, mostly focusing on psychological benefits that result as a side-effect of increased parasympathetic activation (Khattab, Khattab, Ortak, Richardt, & Bonnemeierm 2007), decreases in stress hormones (Monnazzi, Leri, Guizzardi, Mattioli, & Patacchioli, 2002), and increases in vagal tone (Streeter et al., 2012).

In a recent study, Ivtzan and Papantoniou (2013) identified a positive correlation between hedonic (gratitude) and eudaimonic (meaning) aspects of psychological well-being in long-term yoga practitioners, linking yoga’s psychological benefits to constructs in positive psychology. The Itzvan and Papantoniou (2013) study offers some insight into the psychological benefits of yoga, stating that both meaning of life and gratitude are increased by yoga practice, which are thought to be important indicators of overall well-being in positive psychology (Straume & Vittersø, 2012). However, although the Itzvan and Papantoniou (2013) study identifies important markers of psychological well-being, the process that leads to hedonic and eudaimonic well being through yoga practice is not clearly addressed. It fails to address group processes that may be acting as a mediator in yoga practice as a possible explanation for increased sense of meaning and gratitude that has been shown to be correlated with yoga practice.

**Theoretical Model**

We propose a three-factor model for the relationship between yoga and psychological well-being (see fig. 1). Our model posits that the ritualization of yoga practice contributes in large part to the effect of psychological well-being found in yoga practice. It further suggests that synchronous rituals in particular work to bring about an increase in prosocial behavior, which is an important process that contributes to the effects of psychological well-being that are associated with yoga practice, and has been overlooked by past research. Thus, the three factors of the proposed model are synchronous rituals of yoga, prosocial behavior, and well-being, where prosocial behavior mediates the relationship between synchronous rituals of yoga and psychological well-being.

**Theoretical Model**

**Fig. 1.** Mediated model demonstrating the relation between synchronous rituals, prosocial behavior, and psychological well-being.

**Synchronous Rituals of Yoga Lead to an Increase in Prosocial Behavior**

**Rituals in yoga.** Rituals can be defined as follows: 1) a religious or solemn ceremony consisting of a series of actions performed according to a prescribed order; 2) the prescribed order of performing a ceremony, especially one characteristic of a particular religion or church; and 3) a series of actions or type of behavior regularly and invariably followed by someone (Oxford English Dictionary, 2003).

Traditional yoga is often practiced in a highly ritualized fashion (White, 2012). Eastern based yoga practices involve systematic ritualization of the practice, which may involve performing certain postures in a particular order, a prescribed length of time for holding each posture, and setting aside a particular time and place for the practice of yoga. However, to our knowledge, there have been no systematic reviews of the psychological benefits of yoga that address the effect of rituals on psychological well-being.

We feel that this is an important aspect to consider, as ritualization has been shown to be effective in reducing grief and regulating emotions by past research (Norton & Gino, 2014). Furthermore, rituals that involve behavioral synchrony—coordinated movements that occur between individuals in a social interaction—have been shown to have the power to increase group affiliation (Hove & Risen, 2009), prosocial behavior (Sosis, 2000; Wiltermuth & Heath, 2009), and positive affect (Collins, 2004; Haidt, Seder, & Kesebir, 2008; Watson, Clark, & Tellegen, 1988).

We now turn to a brief review of the literature on behavioral synchrony and synchronous rituals.

**Synchronous rituals.** Past research (Wiltermuth & Heath, 2009) suggests that rituals involving synchronous activity may produce positive emotions that weaken the psychological boundaries between the self and the group. The article found that people acting in synchrony with others cooperated more during group economic exercises that followed, even in situations that required personal sacrifice. The results showed that positive emotions do not necessarily need to be generated for synchrony to foster cooperation. This suggests that acting in synchrony with others can increase cooperation by strengthening social attachment and bonding among group members.

Yoga is often practiced in a group setting where members of the group are moving in synchrony with one another (Singleton, 2010). Some yoga teachers may chant ‘Om’ or other sacred sounds at the beginning and end of each class (White, 2012). Other teachers may include a short meditation at the end of the yoga session. What matters here is not the type of ritual performed, but the fact that the practice is ritualized by practitioners in one way or another; the most common and ubiquitous way being practicing yoga in a group setting and in a synchronous fashion (Singleton & Byrne, 2008).

A study examining the effects of rituals on positive affect, group unity, and prosociality (Callander, 2013) compared 19 naturally occurring rituals with varying levels of synchrony. Some examples of such rituals include yoga, meditation, running, choir practice, Zumba, and potluck dinners. Coders evaluated the degree of synchrony using three levels: 1) Exact synchrony (all participants performing same movements in a shared rhythmic patter), 2) complimentary synchrony (participants perform full synchrony within subgroups, complimentary to the whole, as in choir practice), and 3) no synchrony (participants perform movements independently of their own accord). Results showed that activities with higher levels of synchrony (i.e. exact synchrony), such as yoga, increase positive affect, group unity, and prosociality significantly more than those with less synchrony (i.e. potluck dinners).

**Yoga as a synchronous ritual.** Taking into account past research on rituals, yoga, and behavioral synchrony, we refer to yoga in our model as a synchronous ritual, or the “synchronous rituals of yoga” – a series of movements done in conformity with a group in a prescribed, ritualistic manner. Given the widely held belief that yoga is an ancient practice that has an element of sacredness (Goldberg, 2010) and that yoga is often practiced in a group setting, we believe that this is an apt definition of yoga as it relates to ritual and behavioral synchrony.

Given that past research on behavioral synchrony in general and synchronous rituals in particular shows that engaging in synchronous rituals increases social attachment and bonding among group members (Wiltermuth & Heath, 2009), we propose that the synchronous rituals of yoga will also act increase social attachment and bonding.

**Prosocial Behavior Leads to an Increase in Psychological Well-being**

**Prosocial behavior.** Prosocial behaviors are those actions that benefit other people, or society as a whole even at cost to the individual (e.g. helping, sharing, donating, cooperating, and

volunteering) (Brief & Motowidlo, 1986). Although there is little agreement about how ritual promotes cooperation, it is widely accepted that its collective nature is an essential feature (Sosis, 2000).

Research by Fischer et al. (2013) examined eleven rituals and their effects on prosociality, as measured by a prosocial attitudes questionnaire and the results of a public goods game. They found that rituals with synchronous body movements were more likely to enhance prosocial attitudes, and were associated with the largest contributions in the public goods game. Similarly, Wiltermouth and Heath (2009) found that synchronous rituals increased cooperation during group economic exercises, even when requiring personal sacrifice. While Fischer et al. (2013) proposed that shared sacred beliefs mediate the relationship between synchronous rituals and prosocial behavior, Wiltermouth and Heath (2009) proposed that increased feelings of group affiliation acted as a possible mediator between the two. Thus, while it remains unclear what causes the relationship between yoga’s synchronous rituals and prosociality, it is clear that a positively correlated relationship exists, providing support for the first part of our model.

**Psychological well-being.** Broadly, well-being has been defined from two perspectives. The clinical perspective defines well-being as the absence of negative conditions, whereas the psychological perspective defines well-being as the prevalence of positive attributes (Fraillon, 2004). Positive psychological definitions of well-being generally include six general characteristics (Ryff, 1989). These include Self-acceptance, Positive relations with others, Autonomy, Environmental mastery, Purpose in life, and Personal growth (1989). Ryff’s seminal work integrated the views of Erikson (1959), Maslow (1968), Rogers (1961), Allport (1961), and Jahoda (1958) into the well-known six-factor model (Dierendonck et al., 2001). This spawned research on each of the various dimensions and how they each contribute to psychological well-being.

Past research has shown that yoga is closely related to several of Ryff’s six dimensions of well-being, particularly Self-acceptance (Schure et al., 2008), Autonomy (Gonçalves et al., 2011), and Purpose in life (Voigt, Howatt, & Brown, 2010). However, research looking at yoga’s effects on Positive relations with others has been scarcer, although recent studies by Callander (2013), suggest that the synchronous rituals of yoga increase Positive relations with others by increasing prosociality.

There is a rich psychological literature that shows that prosocial behavior leads to increased happiness and well-being (Aknin, Norton, & Dunn, 2009; Andreoni, 1989, 1990; Anik, Aknin, Norton, & Dunn, 2009; Lyubomirsky, Shelden, & Schkade, 2005; Kurtz & Lyubomirsky, 2008; McGowen, 2006; Post, 2005; Rucker, DuBois, & Galinsky, 2011). Although initial research showed a correlational relationship between prosocial behavior and well-being (Anik, Aknin, Norton, & Dunn, 2009), recent research suggests there may be a causal relationship. For example, when Field, Hernandez-Reif, Quintino, Schanberg, and Kuhn (1998) asked a volunteer group of retired senior citizens to give infants a massage three times a week for three weeks, these seniors experienced less anxiety and depression, as well as reduction in stress –related hormones and improved health overall. Further support comes from work by Lyubomirsky, Tkach, and Sheldon (2004), which shows that simply asking people to commit random acts of kindness can significantly increase their happiness levels for several weeks. Specifically in their investigation, Lyubomirsky and colleagues randomly assigned students to a no-treatment control group or to an experimental group, in which students were asked to commit five random acts of kindness a week for six weeks. Students who engaged in random acts of kindness were significantly happier than controls.

Volunteer work – a prototypical form of prosocial behavior – enhances happiness, life satisfaction, self-esteem, sense of control over life, physical health, and long-term well-being, while mitigating depression (Piliavin & Siegl, 2007; Thoits & Hewitt, 2001). Other research shows that committing acts of kindness boosts both temporary mood and long-lasting well-being (Lyubomirsky, Sheldon, & Schkade, 2005; Kurtz & Lyubomirsky, 2008; McGowen, 2006).

Psychological well-being is an important predictor of many positive real-world outcomes, including physical health (Diener & Chan, 2011), longevity (Danner, Snowden, & Friesen, 2001), life satisfaction (Diener, 2000; Schimmack et al., 2002), and interpersonal relationships (Ryan & Deci, 2000). While psychological well-being has many facets, research has shown that prosocial behavior is an important predictor of well-being (Kahana et al., 2013; Aknin et al., 2013, Ryff & Singer, 1996; Ryan & Deci, 2000), perhaps because it is so closely related to the six-factor model’s dimension of Positive relationships with others.

In sum, research shows that supportive social relations are an important part of well-being, and that prosocial behaviors, such as helping a friend, are crucial to developing strong and positive social bonds between family and community members alike (Keltner & Kring, 1998). Thus, prosocial behavior proves to be an important link in our model between yoga’s synchronous rituals and psychological well-being.

**Contributions and Limitations**

Our model contributes to the past literature on yoga in addressing two important areas of yoga previously ignored by psychological researchers: 1) the importance of yoga’s rituals in generating psychological well-being; and 2) explaining the processes that lead to psychological well-being. It further contributes to the literature of social psychology by offering a novel explanation for the effects of synchronous rituals on behavior and psychological well-being.

The limitations of the model include the fact that it is drawn from inferences based on past research, much of which has not commented on the direct relationships between synchronous rituals and yoga. The model provided gives one of many possible explanations for the processes that lead to psychological well-being as a result of yoga practice. For example, mindfulness is another component of yoga practice that could contribute to the increased well-being experienced by its practitioners (Salmon, Lush, Jablonski, & Sephton, 2009). Perhaps practicing yoga alone might increase well-being through mindfulness and meditation elements, whereas practicing yoga in a group might have the added benefit of behavioral synchrony among group members, leading to further well-being via increased prosocial behavior. Examining the effects of practicing yoga alone versus in a group setting would help to test the proposed model. Empirical support is needed in order to reach strong conclusions regarding the proposed three-factor model explaining the relationship between yoga and psychological well-being.

**Directions for Future Research**

In order to test the proposed model, further research is needed. A paradigm could be set up in the following manner to test the effect of synchronous rituals of yoga on well-being. Researchers could set up a controlled experiment where three groups are tested on three levels of synchrony. One group of participants could perform yoga exercises alone in a solitary room, and the second group could perform yoga in the same room but in a non-synchronous fashion. A third group could practice yoga in a group in the traditional, synchronous fashion. Researchers could then ask participants to perform a group task, such as those used in Wiltermouth and Heath (2009), where a prosocial element is involved, to test whether levels of giving vary with the level of synchrony. Perhaps the same goals could be accomplished using archival data. Regardless of the method, a novel contribution to the literature would result in taking a measure of well-being and correlating the three variables of our model – synchronous rituals of yoga, prosocial behavior, and psychological well-being – in one study.

In order to test the effects of synchronous rituals on prosocial behavior, parameters would need to be established for which prosocial behaviors are most relevant to yoga practice. Given that yoga practice is associated with increased vagal tone (i.e. resiliency of the vagus nerve; Streeter et al. 2012), it would make sense to measure those prosocial behaviors that have been found to be associated with greater vagal tone, such as the 3-item Relations Subscale of the Psychological Well-Being Scales (Ryff, 1989) and a 10-item measure of agreeableness (Goldberg et al., 2006) from the International Personality Item Pool, which captures enduring individual differences in prosocial personality (Kogan et al., 2014). This is just one idea; many other possible measures could be used. One could then rate yoga practitioners on these scales and compare to a measure of overall psychological well-being, as was used in Straume and Vittersø, 2012. Since yoga interventions are increasingly popular (Khattab et al., 2007), and yoga practices are varied (Singleton, 2010), understanding more about the mechanisms through which yoga increases well-being could help psychologists and medical health care practitioners to determine which aspects of yoga are helpful to the individual in order to target yoga practice regimes that lead to maximal well-being.

Conducting these preliminary studies could provide initial evidence for the three-factor model, and if supportive evidence is found, they could provide the groundwork for more rigorous empirical testing of the model.

**Conclusion**

This paper reviews the literature on yoga and rituals, and presents a new theoretical model for the role of yoga’s rituals in creating psychological well-being. This three-factor model posits that the synchronous rituals of yoga act as the independent variable on psychological well-being, the dependent variable; and that prosocial behavior acts as a mediator between the two. Limitations are addressed, and directions for further research are given.

Understanding the effects of rituals on well-being and the role of behavioral synchrony in facilitating prosocial behaviors that lead to well-being can help yoga practitioners and social psychologists alike. Yoga practitioners can be helped by understanding the mechanisms through which yoga produces psychological well-being in order to achieve maximum benefit from the practice, and social psychologists can benefit by observing social-psychological phenomena that occur in the practice of yoga. Examining group processes, such as behavioral synchrony, that play a role in facilitating emotional and psychological well-being in yoga practitioners offers social psychologists an exciting new avenue of research that draws on the wisdom of an ancient Eastern tradition that has been shown to have both great power and great potential. Therefore, applications of such novel findings and an in-depth understanding of the processes at work in a practice that has stood the test of time could yield important discoveries for social psychologists about the nature of human social behavior. It is hoped that the proposed model will provide a framework for future researchers in social psychology to empirically test the effects of yoga’s rituals on prosocial behavior and psychological well-being.

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