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Exploring the Relationship Between Character Strengths and Meditation: a Cross-Sectional Study Among Long-Term Practitioners of Sahaja Yoga Meditation

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Abstract

A growing body of research has associated the practice of meditation with the development of character strengths. Sahaja Yoga (SY) is a spiritual practice designed to help people develop a set of character strengths. The primary goal of the current work is to determine whether practitioners of SY meditation endorse signature strengths. Using the VIA Inventory of Strengths 120, we conducted a survey to measure character strengths among 310 daily practitioners of SY meditation and compared them to a matched sample from the database of the VIA Institute on Character. Practitioners of SY meditation endorsed seven signature strengths, relative to non-meditators: spirituality, forgiveness, gratitude, self-regulation, teamwork, appreciation of beauty, and hope. Findings suggest that the practice of SY meditation may be related to a unique and broad set of character strengths. The findings pave the way for research identifying signature strength development in other group contexts.

Keywords Character strengths · Meditation · Sahaja Yoga · Kundalini · Spirituality

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1 Introduction

Meditation is a family of complex emotion and attention regulation practices aimed at developing emotional balance and well-being, among other healthful outcomes (Lutz et al. 2008). Meditation has received considerable scientific attention over the past two decades and the accumulating evidence indicates that the effects of meditation are largely health promoting among clinical and non-clinical populations. Meta-analyses consistently report associations between meditation practice and decreased levels of depression, anxiety, stress, pain, and fatigue, as well as improved self-perceptions, learning and memory capacity, and emotion regulation (Goyal et al. 2014; Klainin-Yobas et al. 2012).

More recently, mindfulness-based meditation practices have been linked to the development of character strengths (Duan and Ho 2018; Niemiec et al. 2012)—universal personality traits that may be developed to enhance personal wellbeing (Niemiec 2012; Proyer et al. 2013). The positive aspects of character strength development appear especially profound when considering one’s signature strengths—a set of character strengths unique to each individual that, when harnessed, have been associated with increased positive affect, decreased depression, and increased life satisfaction (Schutte and Malouff 2019). Despite the potential value in relating meditative practices to the development of signature strengths, the literature remains remarkably silent on this topic. It is unclear whether meditative practices are associated with specific signature strengths. Moreover, there is little information about the association between strengths and non-mindfulness-based practices. To fill these gaps, the current research examines whether practicing Sahaja Yoga (SY) meditation is related to specific signature strengths, relative to a non-meditating control.

Character strengths are universal personality traits that manifest via thoughts, feelings, desires, and behavior (Niemiec 2012). Character strengths are considered active components of human virtues—core characteristics that allow humans to flourish (e.g., wisdom, justice, and transcendence). To categorize human strengths and virtues, scholars developed a taxonomy of character strengths and virtues: the *Values in Action Inventory of Strengths* (VIA-IS; Peterson and Seligman 2004). This framework encapsulates socially positive traits, identifying twenty-four individual but interrelated character strengths, thought to be organized into six overarching virtues. The VIA-IS is viewed by many as a starting point for the categorization of positive human traits (McGrath 2018) and the study of character strengths and virtues has become one of the core pillars of positive psychology (Pluskota 2014).

Most people have between three and seven character strengths that they frequently display and which are typical for them—what have been referred to as signature strengths (Park et al. 2004). Identifying one’s signature strengths and enacting them with intention is a widely used intervention (Hendriks et al. 2019). Studies show that using one’s signature strengths is associated with increased subjective and psychological well-being (Govindji and Linley 2007; Hausler et al. 2017; Proctor et al. 2011a; Seligman et al. 2005), increased life satisfaction (Allan and Duffy 2014; Proctor et al. 2011b), and increased job performance (Harzer and Ruch 2013).

1.1 Mindfulness-Based Meditation and Characters Strengths Development

Meditative practices with roots in mindfulness and Buddhist traditions may help people to develop specific character strengths. For instance, a meta-analysis including twenty-

six randomized controlled trials (RCTs) of various Buddhist meditative practices (i.e. mindfulness, loving kindness, and compassion meditation) reported significant increases in compassion, empathy, and pro-social behaviors (Luberto et al. 2018; but for a more recent meta-analytic review suggesting limited prosocial effects, see Kreplin et al. 2018). These qualities correspond to VIA-IS character strengths such as love, social intelligence, and kindness.

Related to the above, scholars in the field of positive psychology have also developed the Mindfulness-Based Strength Practice (MBSP), an 8-week protocol program that focuses on the development of character strengths through mindfulness-based practice (Niemic et al. 2012). The program trains people to develop character strengths in service of improving mindful attention, overcoming barriers during meditation, and stimulating mindfulness in their daily life. Additionally, these programs train participants to use mindfulness to become aware of and to catalyze the deployment of their signature strengths (Sharp et al. 2017). One randomized control study on the effects of MBSP showed that the program produced significant increases in love, appreciation of beauty, gratitude, and spirituality, compared to a waitlisted control (Pang and Ruch 2019a). However, other related studies found that MBSP increased well-being but did not significantly change character strengths (Pang and Ruch 2019b).

Taken together, there have been few studies to examine the relationship between meditation and character strength development and the evidence put forth by these studies has been equivocal. Moreover, most of these studies examined mindfulness-based practices, excluding other forms of meditation. Thus, the role that meditation might play in developing character strengths—signature strengths in particular—remains unclear.

1.2 SY Meditation and Character Strengths Development

Given that most studies examining the association between meditation and character strengths are limited to meditation practices rooted in Buddhism and mindfulness, there is room for a greater understanding about how other meditative practices relate to character strengths and signature strengths in particular. In the current research, we focus on SY meditation. The primary goal of SY meditation is to achieve a state of thoughtless awareness, or mental silence (Manocha et al. 2007). In this state, one's attention is on the present moment, with full awareness of one's surroundings but with a strong reduction or even elimination of thoughts (Rubia 2009). This state, known as *thuriya-avastha* in Sanskrit, is akin to the state described in open monitoring meditation (Lutz et al. 2008). It could also be expressed as a state of mind-emptiness, rather than mindfulness. Whereas mindfulness practitioners are encouraged to observe their thoughts, while not judging them, the goal in SY is to go beyond thoughts.

According to SY meditation, thoughtless awareness can be achieved through the awaking of *Kundalini*, an inner energy believed to lie dormant in the base of the spine (Sanchez and Daniels 2008). SY meditation also posits the existence of a non-visible subtle system that is comprised of energy centers (*chakras*) and channels (*nadis*). Although our objective physical organization and the subtle system do not closely correspond, the existence of a non-visible system of energy channels and centers is one of the cornerstones in yoga philosophy and Hinduism (Barrett 2016), as well as in traditional Chinese medicine (Ramey 2001). It is believed that this system influences

the physical body and mind, and takes care of our mental, emotional, and physical well-being (Sharma et al. 2005). Moreover, it is thought that each energy center has specific qualities (Suero Palancar 2009) that may undergird character strengths as defined by the VIA-IS (See Appendix 1). Bruck et al. (2017) refer to these energy centers as aptitude centers, suggesting that character strengths may be developed in a systematic and integral way.

Indeed, studies of novice practitioners of SY suggest that a variety of character strengths can be developed through SY meditation. For instance, a multi-site RCT aimed at increasing socially responsible behavior among corporate managers revealed that SY meditation training significantly increased a variety of strengths including wisdom, forgiveness, inner harmony, unity with nature, appreciation of beauty, inspiration, authenticity, mature love, and a reduced occupation with preserving public image (Schneider et al. 2010). Relatedly, a RCT among business graduate students with no prior meditation experience reported significant increases in cooperativeness and self-transcendence as well as reduced Machiavellianism (willingness to manipulate others against their self-interest; Zollo et al. 2021). These strengths correspond to VIA character strengths such as teamwork, fairness, and honesty. Taken together, these findings suggest that SY meditation may develop a wide range of character strengths and virtues among novice meditation practitioners. Currently, a specific set of signature strengths has not been identified among SY practitioners.

1.3 Current Study

Previous studies have examined the link between meditation and a limited number of character strengths. To our knowledge, no studies have compared the practice of meditation on the entire set of twenty-four character strengths, as defined by the VIA-IS. Moreover, past scholarship has focused narrowly on meditative practices based in Buddhist traditions. To fill these gaps, the current research used a multinational, cross-sectional design to examine the relationship between signature strengths and the long-term practice of SY meditation. Taking an exploratory approach without specific hypotheses (Tong 2019), we compare whether experienced SY meditators' endorsements of character strengths differ relative to a comparable non-meditating control. Given the multinational design of this study and our large sample, we further explore whether the geographical region (western vs. non-western), sex, or age modify the associations between SY meditation and character strengths. We also explore the interactions between geographic region and group (SY meditator status).

2 Method

2.1 Participants

SY meditators ($N = 310$) originating from 43 different nations completed the VIA-IS either online ($n = 228$) or using a paper-and-pencil version of the VIA-IS 120 ($n = 82$). For our comparison group, we requested a random sample of participants ($N = 3000$) from an extensive database maintained by the VIA Institute on Character (www.viacharacter.org). From this random sample, we selected a subset of participants for

inclusion in our analyses. The participants in this subset were matched according to the characteristics of our SY meditator sample (e.g., gender, age, and continent of origin). This matched sample consisted of 1,611 respondents. Data collection occurred between September, 2015 and August, 2017. Additional demographic information about participants can be found in Table 1. The study involved the administration of a cross-sectional survey and used a mixed non-probability convenience and purposive sampling method. The inclusion criteria were: i) age 14 years or older; ii) exclusively practicing meditation according to the principles and techniques of SY on a daily basis for over two years.

2.2 Procedure

Recruitment of participants took place during four SY seminars at various international locations: Canajoharie, United States, September 2015; Cabella, Italy, September 2015; Brasilia, Brazil, March 2016; and Göteborg, Sweden, June 2016 and continued on via e-mail outreach until August 2017. Promotional flyers invited SY meditators to complete the VIA-120 questionnaire at the VIA Institute on Character website, which is available in 36 different languages. Additionally, SY centers around the world were

Table 1 Demographics of SY meditation practitioners and VIA control group

Population	SY		VIA control		Total	
	#	%	#	%	#	%
<i>Male</i>	93	30.0	466	28.9	559	29.1
<i>Female</i>	217	70.0	1145	71.1	1362	70.9
<i>Total</i>	310		1611		1921	
Mean age (SD) age range	42.3 (SD 14.2) 14–79		42.8 (SD 13.8), 14–74		42.7 (13.8), 14–79	
Age groups	#	%	#	%	#	%
<18	4	1.3	26	1.6	30	1.6
18–30	58	18.7	232	14.4	290	15.1
30–40	73	23.5	421	26.1	494	25.7
40–50	81	26.1	460	28.6	541	28.2
50–60	58	18.7	280	17.4	338	17.6
60–70	24	7.7	151	9.4	175	9.1
>70	12	3.9	41	2.5	53	2.8
	310	100.0	1611	100.0	1921	100.0
Per continent	#	%	#	%	#	%
<i>North America</i>	61	19.7	317	19.7	378	19.7
<i>South America</i>	62	20.0	322	20.0	384	20.0
<i>Europe</i>	95	30.6	494	30.7	589	30.7
<i>Africa & Middle East</i>	6	1.9	31	1.9	37	1.9
<i>Asia</i>	66	21.3	343	21.3	409	21.3
<i>Australia</i>	7	2.3	36	2.2	43	2.2
<i>Unknown</i>	13	4.2	68	4.2	81	4.2

approached by e-mail for participation in the online survey or were sent paper-and-pencil versions of the VIA-IS 120. Also researchers in the field of SY in the United States, Canada, Mexico, Brazil, Suriname, Netherlands, Italy, France, Germany, Italy, Spain, China, and India invited participants to complete the questionnaire on the VIA website, or distributed the paper-and-pencil version themselves. Participants received no financial or material compensation.

2.3 Measures

2.3.1 Demographics

Participants indicated their age, gender, and country of origin.

2.4 Character Strengths

To measure character strengths, we used the VIA Inventory of Strengths (VIA-IS 120), a 120-item self-report questionnaire (Littman-Ovadia and McGrath 2015). Each of twenty-four character strengths was assessed by five items. Example items include ‘I am a true life-long learner’ (love of learning), ‘I rarely hold a grudge’ (forgiveness) and ‘I have lots of energy’ (zest). The degree to which respondents agreed with each item were rated from 1 (very much unlike me) to 5 (very much like me).

2.5 Statistical Analyses

Statistical analysis of the demographic data was conducted using SPSS version 25. All other statistical analyses were conducted using OpenMx (Neale et al. 2016). Before commencing primary analyses, we needed to decide whether to analyze each character strength independently, or jointly as part of a factor model. A factor model attempts to identify groups of character strengths that tend to correlate. At least seven factor models of the VIA-IS, using different samples and modest sample sizes, have been proposed (McGrath 2014). McGrath (2014) advanced yet another factor model based on half a million participants. Although there may be some true latent structure that relates character strengths, given these data, we hesitate to pick a winner. We can imagine at least two ways to account for findings of different factor structures: a large sample may reflect true population-level relationships or it could reflect noise that remains after averaging over diverse true relationships in smaller subpopulations. Given that the question of which factor model best fits the VIA-IS is unsettled, we decided to analyze character strengths independently.

With only five response options per item, it was important to examine the distribution of responses before adopting the assumption of normality. Skew (b_1 , as defined in Joanes and Gill 1998) for the control group ranged from -0.84 to -0.26 with a median of -0.5 . In comparison, skew for the SY was more spread out, ranging from -1.22 to 0 with a median of -0.48 . Gratitude was the item with the most extreme skew (Fig. 1). Given the high degree of skew evident in some items, we hesitated to assume normality.

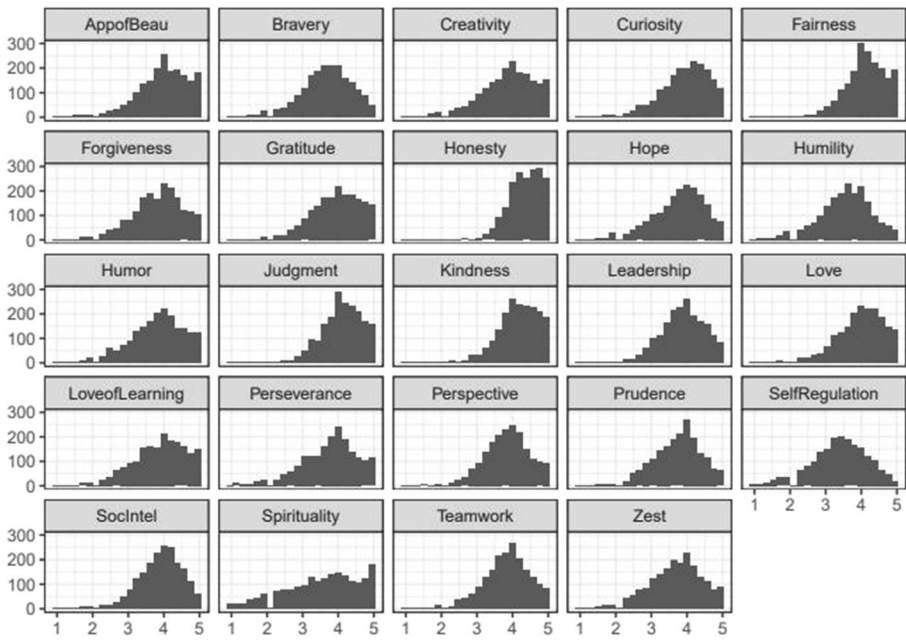


Fig. 1 Histograms of all character strengths by SY group

To guard against the unwarranted assumption of normality, we conducted a non-parametric Mann-Whitney U test in addition to a Z test when comparing means and only regarded a difference as significant if both tests were significant. To guard against false positive findings, we use a Bonferroni correction of 24 since we regarded each character strength as independent. We adopted the customary alpha of 0.05; with the Bonferroni correction, this works out to a two-tailed alpha of $0.05/24 = 1.042 \times 10^{-3}$. We calculated Cohen's D effect sizes. Effect sizes of 0.20–0.50 can be considered as small, effect sizes of 0.50–0.80 as medium, and effect sizes of 0.80–1.40 as large (Cohen 1988).

3 Results

3.1 Character Strengths

A complete overview of the means and standard deviations of the outcomes of the VIA character strengths list of the SY and control group can be found in Appendix 2. When the SY group is compared relative to the control group, we find that the SY group reported significantly higher scores on the first seven character strengths listed (Fig. 2). We regard these as the signature strengths among SY practitioners, compared to controls. If we assume that scores are normally distributed, then spirituality has a large association with SY meditation practice, forgiveness and gratitude have medium associations, and self-regulation, teamwork, appreciation of beauty, and hope have small associations (Cohen 1988; Fig. 3).

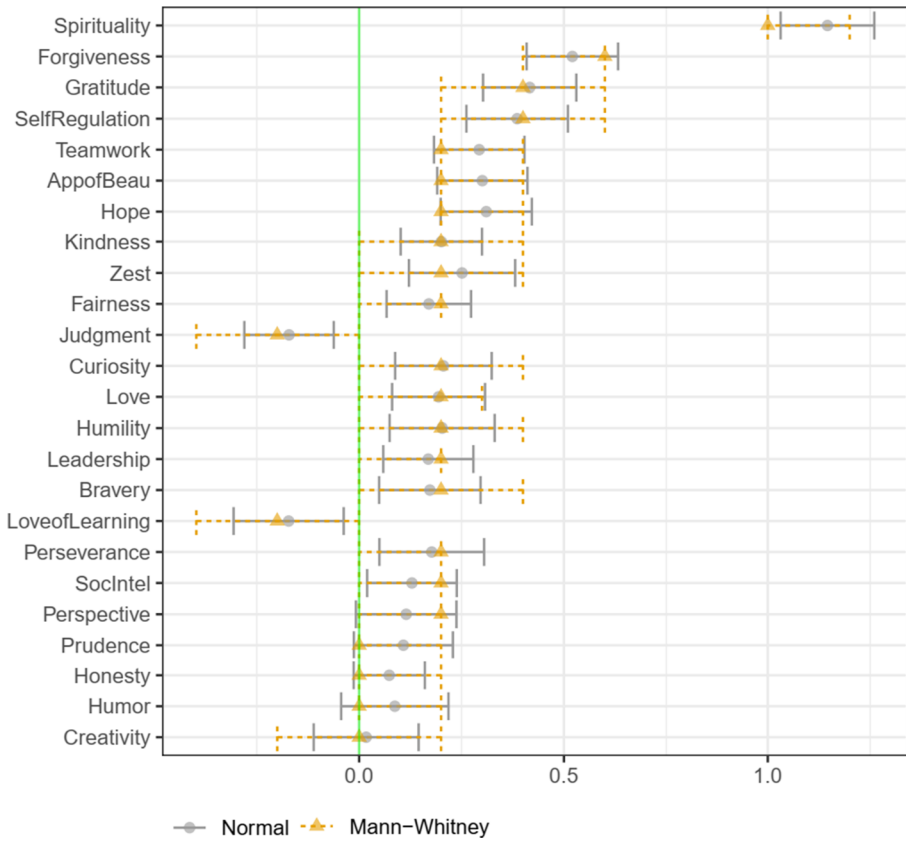


Fig. 2 SY group means relative to control group means using the Mann-Whitney and Normal tests, 95% uncertainty interval. A difference of zero indicates that the mean was indistinguishable in both groups

3.2 Geographic Region

Sample size was insufficient to identify statistically significant within SY group differences by geographical region (western vs. non-western), sex, or age, even using the assumption of normality. Using the assumption of normality, one significant interaction was identified, between geographic region and group. Lower spirituality was observed in the western subset of the control group ($M = 3.11$) compared to the non-western subset ($M = 3.66$) but this difference was not observed in the SY group; western and non-western subsets of the SY group exhibited indistinguishable levels of spirituality, both $M = 4.51$.

4 Discussion

The goals of this study were twofold: to determine whether practitioners of SY meditation exhibit a set of signature character strengths, relative to a non-

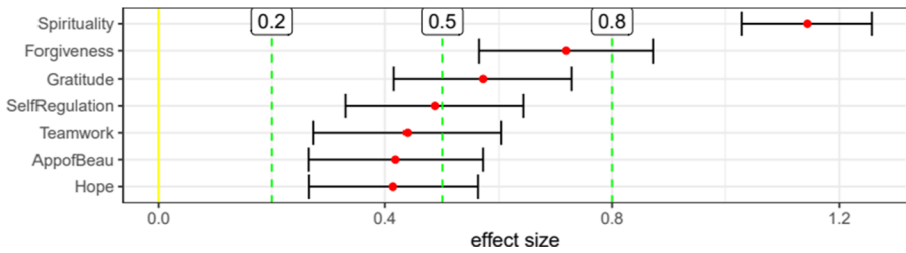


Fig. 3 SY group means relative to control group means. 95% uncertainty interval scaled such that effect size is shown on x axis. Common reference effect sizes are indicated by vertical dashed lines

meditating control, and to explore whether demographic characteristics, such as geographical region, sex, and age modify the association between SY meditation practice and endorsement of specific character strengths. We found that practitioners of SY meditation endorsed seven signature strengths, relative to non-meditators: spirituality, forgiveness, gratitude, self-regulation, teamwork, appreciation of beauty, and hope. For the majority of the remaining strengths under study, SY practitioners and non-meditators did not differ significantly, with the exception of judgment and love of learning, for which non-meditators scored higher. We also observed lower spirituality in the western subset of the control group relative to the non-western subset of the control but this difference was not observed in the SY group; western and non-western subsets of the SY group exhibited indistinguishable levels of spirituality.

The findings of the current study are comparable to prior cross-sectional research comparing mindfulness practitioners to non-meditators. Similar to SY practitioners, mindfulness meditators scored higher than non-meditators on the majority of character strengths and endorsed spirituality more than other strengths (Pang and Ruch 2019b). Moreover, forgiveness, gratitude, and appreciation of beauty were identified as signature strengths among practitioners of both types of meditation. Yet SY practitioners also highly endorsed self-regulation and teamwork, strengths that mindfulness practitioners did not identify as particularly important, suggesting that self-regulation and teamwork might be signature strengths unique to SY among meditative practices. And whereas love of learning was a signature strength among mindfulness practitioners, in our data, love of learning appears less developed in SY practitioners. Thus, our work extends prior research by demonstrating that SY practitioners endorse specific signature strengths, relative to non-meditating controls, and, as related to prior findings, suggests that there also may be important differences in SY practitioners' endorsements of signature strengths, relative to other meditative practices.

Cultural dissimilarities between SY meditators and mindfulness meditators might explain differences in endorsement of team work across studies. Although team work and citizenship are also linked to the practice of mindfulness (Niemiec et al. 2012; Pang and Ruch 2019b), SY meditation emphasizes collectivity, in particular, meditating and achieving one's spiritual evolution in the context of a collective of SY practitioners. If such differences were pronounced, it might explain why SY practitioners endorsed this trait so strongly.

That SY practitioners endorse self-regulation more than mindfulness practitioners, however, is somewhat surprising. Research abounds demonstrating links between self-regulation and meditation in studies of both SY (Dodich et al. 2019; Hernández et al. 2018; Zollo et al. 2021) and mindfulness meditation (e.g., Leyland et al. 2019; Shapiro and Giber 1978; Teper et al. 2013). Why mindfulness practitioners would be less likely to endorse this strength relative to the SY meditators in the present study remains an open question, worthy of further comparative research.

In relation to the strengths where SY practitioners scored lower than the controls, the following can be noted. SY practitioners do not focus on judgment of thoughts, or judgment of other persons. Instead of judging, they practice to surrender their judgmental thoughts. This is similar to the non-judgmental nature of mindfulness meditation (Van Dam et al. 2018). In relation to love of learning, the lower scores on this strength could be explained by a lack of construct validity of this construct in the VIA survey. Two of the five questions about love of learning pertain to learning through the reading of books (*'I read a huge variety of books'* and *'I love to read non-fiction books for fun'*). This reveals a western-centric understand of learning, where new skills and knowledge are attained through studying books (Shlain 1999). There are many other ways of learning, and many SY practitioners express their love of learning by learning to play a musical instrument (in particular Indian instruments such *tabla* and *sitar*), devotional singing (Sanskrit *bhajans*), painting, or engage in agriculture and handcrafts.

A particularly novel contribution of the current work is the application of the signature strengths framework to a *group* of people. Typically, signature strengths have been theorized as pertaining to the individual with an emphasis placed on drawing out an individual's signature strengths to facilitate personal growth and well-being (Park et al. 2004). Indeed, a limitation of the existing positive psychology interventions is that they focus primarily on the development of singular strengths, such as gratitude (Davis et al. 2016; Dickens 2017), compassion (Kirby et al. 2017), and forgiveness (Wade et al. 2014). Our research suggests that groups of people who engage in a specific meditative or spiritual practice may develop a specific *set* of character strengths that may assist them in the development of personal growth and other achievement related goals. Moreover, our findings hint that people could develop broader sets of strengths by joining specific kinds of groups. For instance, subsequent research on sports teams, recreational clubs, or political organizations might reveal topographies of signature strengths specific to each group. Knowing these topographies may enable people to customize their approach to developing sets of strengths by joining those groups whose signature strengths align most with those they wish to develop. Additionally, developing a topography of

signature strengths might also uncover a darker side to the roles that groups play in shaping who people become. Spending too much time on social media platforms where hate, misinformation, and conspiracy theories proliferate might lead people to abandon strengths that make them loving and tolerant. Knowing the topography of signature strengths of such groups could aid in the development of interventions to help bring people out from such organizations.

4.1 Limitations and Future Research

The cross-sectional design of the present study precludes us from drawing causal inferences about the practice of SY meditation and the development of specific signature strengths. Although RCTs offer some evidence that SY meditation leads people to develop some character strengths identified as signature strengths in the present research (Schneider et al. 2010), it could be that people with the set of signature strengths discovered in this study are more attracted to SY meditation or to the community of meditators who practice this form of meditation. Indeed, decades of research demonstrate a clear relationship between perceived similarity and attraction between people (Berscheid 1985). Future research using longitudinal cohort designs would advance the field by determining whether participation in SY meditation results in the development of a specific set of character strengths.

A related limitation is that our control sample was drawn from the database provided by the VIA Institute on Character. People who filled out the VIA survey are very likely to be interested in positive psychology and strengths development. Thus, there is a possibility of biased recruitment, which may result in a limitation of representativeness of the study populations. Moreover, we do not know how many participants in the control group meditate, since the practice of meditation is not measured when people take the VIA survey and this could be a confounding factor in our results. Future research would benefit from drawing upon samples where it is clear that non-meditators are in the control sample.

4.2 Conclusion

Our study demonstrates that the practice of SY meditation may be related to a specific set of character strengths: spirituality, forgiveness, gratitude, self-regulation, teamwork, appreciation of beauty, and hope. More broadly, our findings suggest that individuals may develop specific sets of character strengths according to their membership in specific social groups. Yet future work identifying the signature strengths common to other types of meditation and to other social groups is needed before more precise interventions may be designed to help people develop a specific set of character strengths.

Appendix 1 Emic psycho-physiological strength model of Sahaja Yoga meditation

Here is a possible assignment of character strengths to SY qualities. Some effort was undertaken to assign each character strength to a single quality most closely associated with SY, but true assignments may not be so constrained. This chart should be regarded as provisional and subject to revision.

Center/Chakra	SY Qualities	Character strengths	Center/Chakra	SY Qualities	Character strengths
<i>Mooladhara</i> (Pelvis plexus)	- Innocence - Wisdom - Chastity/Purity - Eternal Childhood	- Curiosity	<i>Anahata</i> (Centre cardiac plexus)	- Love - Compassion - Security - Fearlessness - Courage - Responsibility	- Love - Bravery - Perseverance
<i>Swadisthan</i> (Aortic plexus)	- Creativity - Attention/Knowledge - Inspiration - Energy - Sense of Aesthetics and Art	- Creativity - Love of Learning - Zest - Appreciation of Beauty and Excellence	<i>Vishuddhi</i> (Cervical plexus)	- Collectivity - Communication - Truthfulness - Diplomacy - Detachment - (Self) Respect	- Teamwork - Honesty - Prudence - Perspective
<i>Nabhi</i> (Solar plexus)	- Satisfaction - Peacefulness - Generosity - Evolution	- Gratitude - Fairness	<i>Agnya & Hamsa</i> (Crossing optic thalamus)	- Forgiveness - Humility - Discernment	- Forgiveness - Humility - Judgment
<i>Bhavsagar*</i>	- Self-Mastery - Balance/Stability - Righteousness	- Self-regulation	<i>Sahasrara</i> (limbic area)	- Joy - Integration (Self realization) - Thoughtless awareness - Collective consciousness	Spirituality

*Bhavsagar, or void, is a region located within the abdominal cavity. It contains the nabhi

Appendix 2 Overview of means and standard deviation of VIA-IS character strengths by group

Character Strength	Group	Mean	SD	Group	Mean	SD
Spirituality	SY	4.50	0.49	CG	3.36	1.00
Forgiveness	SY	4.25	0.56	CG	3.73	0.72
Gratitude	SY	4.27	0.57	CG	3.85	0.73
Self-Regulation	SY	3.70	0.62	CG	3.32	0.79
Teamwork	SY	4.08	0.56	CG	3.78	0.67
Appreciation of Beauty	SY	4.23	0.55	CG	3.93	0.72
Appreciation of Beauty	SY	4.04	0.55	CG	3.73	0.75
Kindness	SY	4.34	0.51	CG	4.14	0.58
Zest	SY	3.89	0.66	CG	3.64	0.77
Fairness	SY	4.28	0.53	CG	4.11	0.58

(continued)

Character Strength	Group	Mean	SD	Group	Mean	SD
Judgment	SY	3.96	0.57	CG	4.13	0.59
Curiosity	SY	4.12	0.60	CG	3.91	0.72
Love	SY	4.15	0.58	CG	3.96	0.69
Humility	SY	3.71	0.66	CG	3.51	0.75
Leadership	SY	4.02	0.56	CG	3.85	0.64
Bravery	SY	3.81	0.63	CG	3.64	0.73
Love of Learning	SY	3.72	0.69	CG	3.90	0.77
Perseverance	SY	3.89	0.64	CG	3.71	0.82
Social Intelligence	SY	4.00	0.56	CG	3.87	0.65
Perspective	SY	3.92	0.64	CG	3.81	0.65
Prudence	SY	3.81	0.62	CG	3.70	0.70
Honesty	SY	4.42	0.45	CG	4.34	0.49
Humor	SY	3.88	0.67	CG	3.80	0.77
Creativity	SY	3.89	0.65	CG	3.87	0.77

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Author's Contribution T. H. designed the study and collected the data. All authors contributed to the conceptualization of the analytic approach. J. P. conducted the primary analyses and was supported by R. C. All authors contributed to interpreting the results. T. H. and C. D. co-wrote the manuscript.

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Declarations

Ethical Considerations This study involved human participants and was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standard. Informed consent was obtained from all participants.

Competing Interests The authors declare that they have no competing interests.

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