Daily Spiritual Experience Scale (DSES) research results provide a basis for developing preventative resources for resiliency, greater sense of meaning and post-traumatic growth, more prosocial attitudes, and diminished burnout in the face of distress (for more about the 16 questions on the DSES see www.dsescale.org)

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The following is a summary of studies using the DSES that I pulled together for the use of other researchers. They indicate that increasing DSES could prevent some negative psychological effects of trauma and chronic disease, and diminished burnout in those caring for others. I have provided brief summaries of the results relevant to the DSES in the papers. There are many ongoing studies, as well as the published ones below at the end, that are looking at different interventions or practices that could increase DSE’s. Since the average scores can change over time within subjects, and the questions in the scale can address those of many faiths and those not comfortable in a faith tradition, it might provide special opportunity for intervention development and testing from many points of view. Some possibilities for this are suggested in Underwood, L. Spiritual Connection in Daily Life (2013).

DSES and Resilience and Stress Buffering

1. High frequency of DSE’s were associated with decreased psychological distress and served as a significant predictor of family cohesion in African American mothers with HIV.

2. More frequent DSE’s predicted higher resilience during emerging adulthood following childhood exposure to violence. The potency of protective factors outweighed that of adversity and psychopathology.

3. More frequent DSE’s in young adults buffered the negative effects of having a depressed parent.

4. Daily spiritual experiences moderate the effects of exposure to violence in the community on psychological well-being for urban African-American adolescents. Contributed significantly to satisfaction with life and positive affect over and above demographic factors and the perception of family support.
5. Daily spiritual experiences predicted less suicidal thoughts in a group of Veterans diagnosed with PTSD.

6. A study of 162 children aged 9-12 in Indonesia found that more frequent DSE's increased resilience after being exposed to flooding. Age, illness, gender, and emotion were not significantly correlated with resilience.


8. More frequent DSE's and religiosity moderated stress and health in a study by Reutter. However, only DSES scores partially mediated the relationship. In addition, religiosity did not moderate the mediating effects of spirituality

9. Daily spiritual experiences were linked with higher existential well-being and predicted less subsequent spiritual strain in those with advanced congestive heart failure.

10. Higher levels of spirituality were related to better mental and physical health and lower anxiety about and fear of ageing, and buffered the impact of negative life events where they occurred. 143 Participants comprised staff, children of adults in care, and Uniting Church congregational members in Australia.

\textbf{Substance abuse and health behaviors}

11. DSE's rather than religious attendance or religious beliefs were a good predictor of positive health behaviors in young adult cancer survivors.
12. More DSE’s were uniquely protective against the degree of substance use in 3966 adolescents and 2014 older adults. Level of depression was found to be inversely associated with positive psychology traits which were correlated with more frequent DSE’s.

13. Six-month changes in DSES in alcoholics predict drinking outcomes at nine months.

14. Increasing frequencies of DSE’s improve youth self-care and care for others in 195 court-referred youth to a 2-month addiction treatment program. Increased DSE’s over the course of treatment were associated with greater likelihood of abstinence from alcohol or drugs, and increased pro-social behaviors and reduced narcissistic behaviors.

15. Higher DSES predicts less sedentary behavior in a population of 602 Latino adults from 21-85.

16. Higher frequency of DSE’s predicted lower levels of HIV sexual risk behaviors in older African Americans.

17. DSE’s predicted stronger sense of being able to cope with their illness, a sense of self-efficacy, in older adults living with congestive heart failure.

18. DSE’s rather than religious attendance or religious beliefs were a good predictor of positive health behaviors in a comparison of existential and religious-spiritual aspects of students’ and alcohol addicts’ functioning, in Poland. AA participants showed greater DSES than students.

Meaning of life and hope were found to mediate between spiritual experiences and satisfaction with life as well as between spiritual experiences and positive affect.

19. In the Ukraine, a place with one of the highest rates of alcohol consumption in the world, less frequent DSE’s in adults predicted higher alcohol consumption.

20. Saudi Arabia: **Better medication adherence in schizophrenics high in DSE’s**
   

### Post Traumatic Growth and Meaning

   

22. More frequent DSE’s at Time 1 predicted time 2 sense of meaning. And time 2 sense of meaning predicted post-traumatic growth.
   

23. Cross-lagged paths showed that higher baseline spirituality (DSES) predicted more positive change in meaning over time. Survey data were collected at baseline and 6 (heart failure patients) or 12 months (cancer survivors) later in 161 Cancer Survivors. These results support the widely held notion that spirituality can provide increased meaning in life among individuals dealing with substantial adversity.
   

24. Higher baseline frequency of DSE’s predicted more positive change in meaning in life over time in Heart Failure Patients and Cancer Survivors, examples of times of adversity.
   
George, Login S, and Crystal L Park. (2017)
   

25. Students’ higher DSES predicted more sense of meaning in life, and prosocial motivation in Poland.
   

26. Strong sense of purpose in life, intrinsic goals, and more frequent DSE’s helped people to grow from negative life events, and predicted greater volunteering behaviors.
   

27. In a study of 8594 Catholic pastoral workers in Germany, Neuroticism was a negative predictor of having a sense of coherence. However transcendent perception, measured by
the DSES, buffered these negative effects, resulting in a greater sense of coherence.  
(Kerksieck et al., 2016)


Preventing Burnout

28. In 142 female support staff from community disability centers in Oman, DSE’s were modest predictors of less stress. Emam, M, and Al-Lawati S (2014)


29. In 8574 German pastoral professionals (48% priests, 22% parish expert workers, 18% pastoral assistants, 12% deacons), pastoral professionals’ stress perception was associated with diminished health. DSE’s buffered the negative effects of stress on health. Frick E et al (2015)


30. More frequent DSE’s were associated with lower levels of burnout, depression, and anxiety in 312 health care workers in Hong Kong. Ho, R et al (2016)


31. More frequent DSE’s diminished physical, cognitive, and emotional forms of burnout in those working in end-of-life settings. (Holland JM, Neimeyer RA 2005)


32. DSE’s do not only serve as a protective factor in moderating compassion fatigue, but also increase compassion satisfaction among mental health service providers.


33. Hospital workers in Hong Kong with higher DSE’s experienced less burnout and greater well-being. (Ng S et al 2009)


34. Higher DSES, less burnout in those care workers and professionals who work with the elderly. (Ng, Siu-man 2014)

35. Volunteers with more frequent DSE’s, in non-profit organizations, had lower quitting intentions compared to those with less frequent DSE’s. (Scherer LL et al 2016).

36. Medical students having higher levels of daily spiritual experiences described themselves as more satisfied with their life in general, while med students with low scores on daily spiritual experiences had higher levels of psychological distress and burnout.

37. Higher DSES predicted less compassion fatigue, and more compassion satisfaction among 147 Israeli residential child-care workers working in residential treatment facilities for children and youth at risk.

**Life satisfaction and well-being**

38. In a comparison study of different ethnic groups, spiritual experiences (DSES) were shown to be a positive resource, distinct from worship attendance, that enable older African Americans to overcome decreasing life satisfaction. And lower spiritual experiences may be particularly harmful for older African American’s life satisfaction.

39. Examining the levels of daily spiritual experiences (DSEs) in community-dwelling older adults, compared the levels of spiritual experiences with the levels of prayer and religious service attendance, and examined the demographic and psychosocial correlates of spiritual experiences. In 6534 participants in the Chicago Health and Aging Project, an ongoing population-based, biracial (65% African American) study of the risk factors for incident Alzheimer’s disease among older adults, the majority of the participants reported having spiritual experiences at least daily. In the bivariate analyses, African Americans and women had higher DSES scores than Whites and men, respectively ( p<0.001). Prayer and worship were moderately associated with DSES scores. In the multivariable analyses, African American race, older age, female gender, better self-rated health, and greater social networks were associated with higher DSES scores, while higher levels of education and depressive symptoms were associated with lower DSES scores. They found that the DSES is related to, but distinct from the traditional measures of religiosity.

40. In a town in northern Taiwan with multiple tragedies involving child abuse and homicide, it was found that more frequent DSE’s predicted a higher level of happiness among parents living in that city.

41. More DSE’s diminished hopelessness, depression, and suicidal behavior among Malaysian adolescents.

42. More DSE’s predict greater psychological well-being in those with chronic disease.

43. In 615 ethnically and denominationally diverse adolescents, various dimensions of religiosity and spirituality were associated with life satisfaction, but DSE’s accounted for the largest amount of variance.

44. DSE’s were associated with less-depressive symptomatology in girls.

45. More DSE’s predicts better adjustment, positive affect and life satisfaction in urban 6th 7th and 8th grade students. The relations generally were more robust among males, with greatest effects in the youngest students.

Relationships and Pro-social behaviors

46. In the “nonreligious-based” population in China, spirituality measured using the DSES was positively connected with personal prosocial trait, prosocial attitude, and prosocial behavior.

47. In a large representative US sample spiritual experiences are a statistically and substantively significant predictor of volunteering, charitable giving, and helping individuals one knows personally. Daily spiritual experiences better predict helping to distant others than to friends and family, indicating that they may motivate helping by fostering an extensive definition of one’s moral community. The relationship between the DSES and helping is not moderated by sympathy and is robust to the inclusion of most religiosity measures. It was especially effective in predicting helping behaviors among the non-affiliated.
48. Leader age and leader daily spiritual experiences predicted overall leader emotional intelligence.

49. In 139 individuals daily online surveys of 18-69 year olds over 50 days, multilevel regression analyses found that daily religious activities were linked to daily moral emotions by way of daily spiritual experiences.

50. Spirituality (DSES) predicted more compassionate love, sample size 400 Jaipur City, India.

51. University of Connecticut based smartphone study increased DSES from baseline buffered stress, enabling greater feelings love and care for others. (Paper submitted Brelsford, Underwood and Wright, 2017).

Interventions:


53. In a study testing whether two 1-day retreats focused on spiritual self-care would positively change nurse participants’ spirituality [measured by the DSES]: A total of 199 critical care nurses were accepted into this study; 87 were randomized to receive the retreat intervention. All 199 nurses were tested pre-retreat, 1 month and 6 months post-retreat. Retreat participants demonstrated increased DSE's. Bay, P.S.; Ivy, S.S.; Terry, C.L. 2010

54. In 195 youth court-referred to a 2 month treatment program, increased Daily Spiritual Experience over the course of treatment was associated with: 1) greater likelihood of abstinence from alcohol or drugs. 2) increased pro-social behaviors and reduced narcissistic behaviors. Increasing levels of DSE’s improves youth self-care and care for others.

55. A multifaith “spiritually-based” intervention helped patients with Generalized Anxiety Disorder, and DSES scores shows increased frequency over time.


56. In 5339 adolescents (13-15) from 60 schools across 15 countries, this paper reports on the effect of spirituality (measured by the DSES) on their happiness and psychological well-being. A customized spiritual program was administered and post-treatment outcome variable scores of the experimental group were higher. Adolescents from relatively affluent nations, boys, Christians, and those who self-practiced scored higher post-test. This makes a case for nominating spirituality as an important developmental variable for 13- to 15-year-olds cross-culturally.


57. Direct contact person-to-person prayer for patients with depression and anxiety.

   Participants receiving the prayer intervention showed significant improvement of depression and anxiety, as well as increases of daily spiritual experiences and optimism compared to controls. Subjects in the prayer group maintained these significant improvements (p < 0.01 in all cases) for a duration of at least 1 month after the final prayer session. Boelens, P. A., et al (2009).


58. Comparing the effects of spiritual meditation, secular meditation, and relaxation on spiritual, psychological, cardiac, and pain outcomes, the spiritual meditation group had greater decreases in anxiety and more positive mood, spiritual health (DSES), and spiritual experiences than the other two groups. Wachholtz Pargament (2005).


   a. The four spiritual disciplines—reading scripture, praying, seeking guidance, and solitude—have both significant within- and between-person effects on DSES scores. The between-person effects are greater in magnitude than the within-person effects. This indicates that the type of people who practice these spiritual disciplines have more spiritual experiences than those who do not; in addition, and to a lesser extent, when people practice these activities, regardless of how often they do so, they subsequently have more spiritual experiences.

   b. The two measures of religious activities tell a different story. Each of the two religious-activity variables has a significant between-person effect on the DSES but an insignificant within-person effect. This finding indicates that the type of people who attend religious services or meetings typically have more spiritual experiences than the type of people who do not attend them. However, among those people who
attend religious services and meetings, doing so does not increase spiritual experiences the following day.

60. In members of Sex and Love Addicts Anonymous (SLAA) from Poland, multiple regression analysis confirmed that spiritual experiences mediate between religious faith and prayer, and hope. It means that among SLAA participants relationship between religiosity and hope is indirect. Higher level of religious faith and more frequent prayer has a positive impact on spiritual experiences, which in turn improve hope.


61. Mindfulness Based Stress Reduction reduces self-report measures of stress and increases daily spiritual experiences in employees in an academic health care setting, and these effects are stable for at least 1 year.


62. Changes in spirituality (defined in this study by DSES scores) partly explain health-related quality of life outcomes after Mindfulness-Based Stress Reduction.


63. Increases in both mindfulness and daily spiritual experiences uniquely explained improvement in depressive symptoms. After adjustment for baseline symptom scores, age, sex, and religious affiliation, a significant proportion of variance in post-MBSR depressive symptoms was uniquely explained by changes in both spirituality (β=−0.15; p=0.006) and mindfulness (β=−0.17; p<0.001).


64. Burnout reduction and increase of DSE were found following a one-month MBS intervention in Hong Kong, in staff who provide services for elderly people. Repeated measures of burnout, daily spiritual experience (DSE) and engagement were taken at pre-intervention, post-intervention and one month after intervention.

More Evidence of Time Course

65. **Spirituality and the Temporal Dynamics of Transcendental Positive Emotions.** Study examined the relationships between individual differences in spirituality, as measured by the Daily Spiritual Experience (DSE) scale, and the temporal dynamics of transcendental positive emotions. Using event-sampling, in which 390 participants rated their emotions repeatedly at 30-min intervals over 2 days, higher DSE was associated with higher inertia in transcendental positive emotions and greater switch from negative emotions to transcendental positive emotions across the 2 days. Importantly, these relationships were independent of the Five-Factor Model personality constructs, were generally not replicated in other emotions, and were also independent of the temporal dynamics of other emotions. The article discusses, among other issues, what these findings might mean for the well-being implications of spirituality.