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MINDFULNESS BEHAVIOR AND ITS EFFECTS ON ANXIETY

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ABSTRACT

A quasi experimental study was conducted at a South West State University counseling program to investigate if using meditation techniques would lower levels of anxiety and create mindfulness attention awareness among counseling students enrolled in a counseling skills course, taught in a masters-level counseling program. A total of 29 students were recruited from three counseling skills courses, two of which were included in the treatment condition and one was designated as the control condition. Students in the treatment condition were instructed in one pointed breathing meditation and it was practiced for five minutes at the beginning of each class. The results indicated that, there was a significant reduction in anxiety in the treatment group; however, no significant changes in mindfulness were noted.

Keywords: Mindfulness, Meditation, Anxiety, Stress, Mindfulness Awareness.

INTRODUCTION

As the helping profession progresses further into the 21st century, the concept of mindfulness has gained acceptance in the counseling world (Rothaupt & Morgan, 2007). A review of the counseling literature indicates the use of mindfulness techniques to help clients learn how to be in the moment and present in their own lives. Furthermore, counseling professionals are also utilizing mindfulness techniques and behaviors to help combat their own stress, anxiety, depression, and burnout (Welwood, 2002).

Unmanaged chronic emotions tied to stress and anxiety have been known to have a negative impact on an individual's health. This includes Counselors and Counselors-in-Training (Christopher et al., 2011). Negative impact on health may include increase in blood pressure, gastrointestinal disorders and burnout. Training in mindfulness has been known to help depressed persons by redirecting thoughts of hopelessness through focus on aspects of the moment such as breathing and walking (Hooker & Fodor, 2008). Mindfulness practice and the use of mindfulness activities may also help to better prepare, present and future counselors to cope with stress resulting from working with the mental health issues of clients. Mindfulness practice can also help in better preparing

new counselors for their future career by providing a tool to diminish stress and burnout (Shapiro, Schwartz, & Bonner, 1998).

Review of the Literature

Mindfulness is a way of being in which a person pays attention to what is occurring in the moment. It has origins in Eastern meditation practices and Buddhist teachings (Baer, 2003). Mindfulness meditation is dedicated to present-moment awareness of personal thoughts, feelings and senses, and has been used for the purpose of better managing stress responses such as anxiety (Tadlock-Marlo, 2011). Williams and Kabat-Zinn (2011) have suggested that the use of mindfulness practice in Western society may be beneficial to those individuals who are not willing to adopt Buddhist traditions, yet may still be interested in the benefits of mindfulness practice.

The purpose of learning mindfulness behaviors include bringing complete attention to the present experience on an ongoing moment to moment basis. In the last 20 years, mindfulness has gained considerable attention among the counseling practitioners. From a holistic perspective, one reason for this is the impact of mindfulness on a person's Physical, Cognitive, Psychological, Behavioral, Social, and Spiritual domains (Boudette, Gandhi, Nobleza, Rosenfeld, & Rubinstein, 2010). Many

professional helpers have come to understand that, mindfulness behavior can impact levels of stress and anxiety in a positive manner not only for clients; but, also for a professional helper's own well-being (Bishop et al., 2004).

Since, it is understood that, mindfulness is rooted in Buddhist philosophy and beliefs, inclusion into Western counseling paradigms has not been uniform, even though using mindfulness to lessen states of anxiety has been an effective tool used by many counseling professionals (Murphy, 2006).

Training in the use of mindfulness for self-care is based on a simple idea to stay present in the moment (Schwarze & Gerler, 2015). Mindfulness has also been described as a type of intentional consciousness, awareness, or a way of being attentive in the present moment that can be learned by using different types of mindfulness behaviors (Jacobs & Blustein, 2008). Kabat-Zinn (2003) stated that, mindfulness can be seen as a universal quality of attention, and does not necessarily need to be tied to either a philosophical or religious tradition to be an effective way of being. Mindfulness can also be thought of as pouring complete attention without reservation into the most important issue or task at hand (Germer, 2005). Utilizing mindfulness-based behaviors can help a person achieve clarity and the recognition that thoughts are finite and fleeting. The practice of mindfulness behaviors can bring into focus what is occurring in the moment and in turn can help a person make changes that will bring about a reduction in anxiety or stress (Baer, 2003).

The practice of mindfulness behavior can take several forms. One form of mindfulness behavior is meditation. Mindfulness meditation practices can include sitting and walking meditation. Some other forms include mindfulness of eating, mindfulness of driving, and mindfulness of breathing (Dimidjian, & Linehan, 2003). Mindfulness activities can include the use of mindfulness silence, mindfulness art such as drawing mandalas, and mindfulness thoughts in which a person is mindful of thought processes that may be contributing to stress or anxiety (Brown Marquis & Guiffrida, 2013). These types of mindfulness activities can be useful in helping people

deal with depression, anxiety, or physical problems such as pain and stress (Arkowitz & Lilienfeld, 2014). A third form is the utilization of mindfulness-based therapies that seek to decrease the experience of either a psychological problems such as anxiety, stress, or depression as well as physical problems such as pain (Vollestad, Nielsen, & Nielsen, 2012).

Christopher et al. (2011) speculated that, since wellness behaviors are an important component of training of counselors-in-training that the use of mindfulness behaviors for themselves would have a positive impact on their psychological and physical well-being. The study involved graduate counseling students in a counseling program, exploring the benefits of mindfulness by consenting to approximately one hour of training in mindfulness practices, which included meditation and yoga twice a week for 15 weeks. The findings indicated that students were impacted by the study in the areas of personal development and self-care. Students reported feeling less anxious and more centered with an ability to relax, be more focused, and be calmer.

In a study conducted by Sharma, Mao, and Sudhir (2012), the use of Mindfulness-Based Cognitive Behavior Therapy was evaluated for the effectiveness in reducing cognitive and somatic anxiety. The study used four clients who were recruited in order to study the efficacy of using Mindfulness-Based Cognitive Therapy in the management of anxiety disorders. The results of the study showed a reduction in anxiety symptoms of the participating clients.

In a study conducted by the John Hopkins University of Research indicated that, daily meditation (20-30 minutes) might improve symptoms of anxiety and depression without the use of medication. The researchers were studying mindfulness meditation and their findings showed promise in alleviating not only stress; but, some pain symptoms as well (JAMA Internal Medicine, 2014).

Mindfulness activities in school settings have also received attention in the last few years. Advocates of mindfulness state that, engaging in this behavior increases students' focus and lowers stress and anxiety

(Holland, 2015). The practice of mindfulness, including techniques such as focusing on breath, concentration, and cognitive control helps children learn how to regulate their emotions and reduce levels of stress and anxiety.

An exploratory study using mindfulness with nursing students to lower the levels of stress indicated that, using mindfulness activities positively impacted the self-reported stress levels (Schwarze & Gerter, 2015). The results of this study strengthened the research base on the use of mindfulness for helping students lower their stress levels.

Purpose of the Study

Since unmanaged chronic emotions tied to stress and anxiety has been known to have a negative impact on an individual's health, which includes counselors and counselors-in-training (Christopher et al., 2011). The purpose of this study is to investigate if using meditation techniques would lower levels of anxiety and create mindfulness attention awareness among the counseling students enrolled in a counseling skills course, taught in a masters-level counseling program.

Hypotheses

The hypotheses were:

- H₁*: There will be a significant reduction in anxiety levels in students in the treatment condition.
- H₂*: There will be a significant increase in mindfulness attention awareness in students in the treatment condition.
- H₃*: A correlation will be found between anxiety levels and mindfulness attention awareness levels.

Methodology

A quasi experimental study was conducted at a South West State University counseling program to investigate if using meditation would lower levels of anxiety among counseling students enrolled in a counseling skills course. The investigators used the classroom setting to conduct the study. All participants signed a consent form to participate in the investigation. The researchers used two assessment instruments to evaluate students' levels of anxiety and mindfulness behaviors.

Participants

All participants in the study were over the age of 18. The investigators used four counseling skills classes that were offered during a spring semester. Two out of three counseling skills classes were designated the experimental group and one of the four counseling skills classes was the control group. A total of 57 students participated in the study with 21 students in the control group. A total of 29 students participated in the study; 20 students participated in the experimental condition and nine students in the control group condition.

Materials and Procedure

The present study utilized the Mindfulness Attention Awareness Scale, which was developed by K.W. Brown and R.M. Ryan. It consists of a 15 item scale designed to assess a core characteristic of dispositional mindfulness, namely, open or receptive awareness of and attention to what is taking place in the present. The scale shows strong psychometric properties and has been validated with college, community, and cancer patient samples. Correlational, Quasi-Experimental, and Laboratory studies have shown that, the Mindfulness Attention Awareness Scale (MAAS) taps into a unique quality of consciousness that is related to and predictive of a variety of self-regulation and well-being constructs. The measure takes 10 minutes or less to complete. To score the scale requires computing a mean of the 15 items; the higher the score on the Mindfulness Attention Awareness Scale, the higher levels of dispositional mindfulness (Brown & Ryan, 2003).

Students' anxiety was assessed by utilizing the Burns Anxiety Inventory. The Burns Anxiety Inventory is a brief inventory that measures anxiety. The scale is highly reliable (generally above 0.90) and each scale can be completed and scored in less than 15 seconds. This scale is frequently used with clients prior to and after a counseling session to assess progress (Burns, 1984).

The participants were assessed three times for mindfulness behavior and level of anxiety:

- (a) At the beginning of the semester in the first class meeting,

- (b) At the midterm of the semester and,
- (c) At the end of the semester.

The participants were assessed for mindfulness behavior and level of anxiety on the first day of class without receiving the intervention. On the second class meeting and consecutive class meetings, the participants engaged in a mindfulness meditative activity during the first 5 to ten minutes of each counseling technique class without being assessed for mindfulness behavior and the level of anxiety until the midterm and again at the end of the semester. This mindfulness activity consisted of the researcher reading to the participants a set of instructions that consisted of four steps:

- (a) sit tall,
- (b) be still and silent,
- (c) breathe and,
- (d) calm your mind.

These instructions were followed by five minutes of silence. At the end of the five minutes of silence, participants resumed their class time instruction.

Results

A total of 57 treatment condition surveys and 21 control group surveys were collected. A one-way between-

Assessment Period	Experimental Group			Control Group		
	n	M	(SD)	n	M	(SD)
Initial	20	31.75	(15.77)	9	24.78	(20.17)
Midterm	19	19.95	(14.40)	6	20.17	(26.21)
Final	18	16.06	(11.86)	7	26.29	(29.00)

Table 1. Burns Anxiety Inventory Results

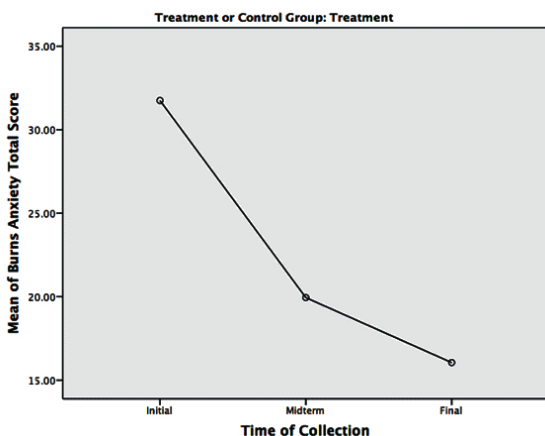


Figure 1. Mean of Burns Anxiety Inventory – Treatment Group Condition

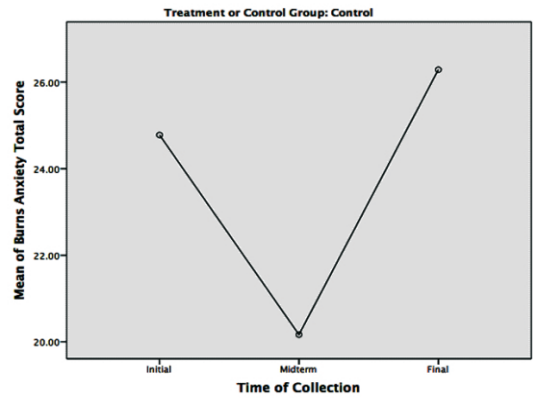


Figure 2. Mean of Burns Anxiety Inventory – Control Group Condition

Assessment Period	Experimental Group			Control Group		
	n	M	(SD)	n	M	(SD)
Initial	20	4.16	(.69)	9	3.67	(1.25)
Midterm	19	4.37	(.87)	6	4.18	(1.19)
Final	18	4.41	(1.05)	7	3.71	(1.10)

Table 2. Mindfulness Attention Awareness Scale Results

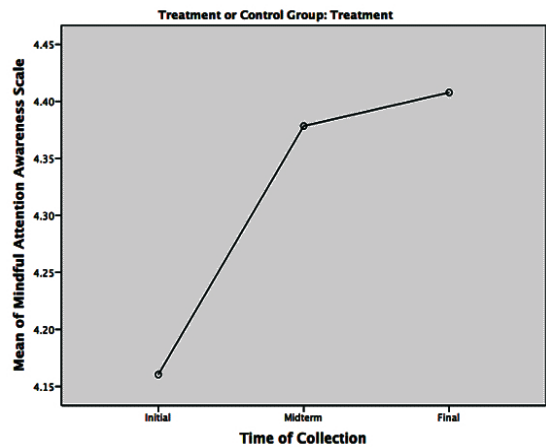


Figure 3. Mean of Mindfulness Attention Scale – Treatment Group Condition

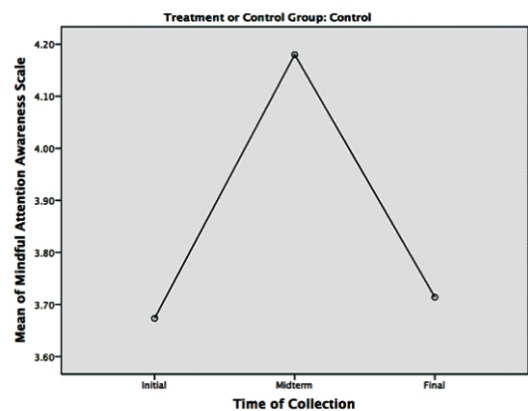


Figure 4. Mean of Mindfulness Attention Scale – Treatment Group Condition. Correlation: Burns Anxiety Scale x Mindfulness Scale

subjects ANOVA was performed consisting of two factors with three levels: initial assessment, midterm assessment, and final assessment of the Burns Anxiety Inventory and the Mindfulness Attention Awareness scale.

The data set was split on treatment/control group condition and an ANOVA was performed. There was a statistically significant effect of time of the semester in terms of levels of student anxiety, $F(2,54) = 6.409$, $p < 0.003$. Eta Square effect size was calculated and was found to be large, $\eta^2 = 0.1918$. Results indicated that, there was a significant reduction in the Burns Anxiety scores in the treatment group between the initial and final assessment of anxiety. These findings support the research hypothesis H_1 . Participants reported the most anxiety during the initial data collection, less anxiety during the midterm data collection, and the least amount of anxiety during the final data collection (Table 1 and Figure 1). Figure 2 shows that, results were not significant for the control group.

There were no significant changes in participants pertaining to the Mindfulness Attention Awareness Scale, $F(2,54) = 0.463$, $p < 0.632$. Scores on this scale did not significantly increase or decrease; the meditation intervention was not found to be effective in increasing mindfulness attention in participating students (Table 2, Figure 3, and 4). The research hypothesis H_2 was not supported by the data. Also, there was no significant difference found between the treatment and control group in terms of levels of anxiety or mindfulness attention

awareness.

A Pearson Product-Moment correlation was conducted that included both, treatment as well as control group students. A moderate negative correlation was found between anxiety levels and mindfulness attention awareness levels ($r = -0.553$, $N = 78$, $p < 0.0005$, two tailed), meaning that, the higher the levels of anxiety, the lower levels of mindfulness and vice versa (Figure 5). The research hypothesis H_3 predicting a correlation between anxiety and mindfulness was supported by the data. Post hoc review of the data showed that, there was an instructor effect in that students in the instructor 1 class reported the highest initial anxiety, followed by students in the instructor 2 class; students in the instructor 3 class reported lower initial anxiety levels.

Discussion

The present study showed that, there was a significant reduction of anxiety levels in students in the treatment condition. It is not clear, whether this was due to the mindfulness meditation intervention or some other factors such as type of instructor or progression of the semester. There were no significant changes in participant scores on the Mindfulness Attention Awareness Scale and the intervention was found not to be effective.

Correlational data showed that, anxiety and mindfulness were inversely related indicating that, those students that were more mindful were less anxious overall. While mindfulness awareness scores were not impacted by the intervention, it still stands to reason that mindfulness practice could be helpful in reducing anxiety. As discussed earlier, Christopher et al. (2011) utilized an intervention that included yoga breathing exercises that lasted approximately 10 minutes, followed by 5 minutes of silence, once a week for 15 weeks. It might be that additional, longer, or more frequent practice of the intervention techniques could have had stronger impact on students' anxiety levels and mindfulness scores.

The findings of the present study's generalizability are limited by a small sample size and lack of experimental control. For example, confounding variables such as instructor effect could have impacted/skewed the results.

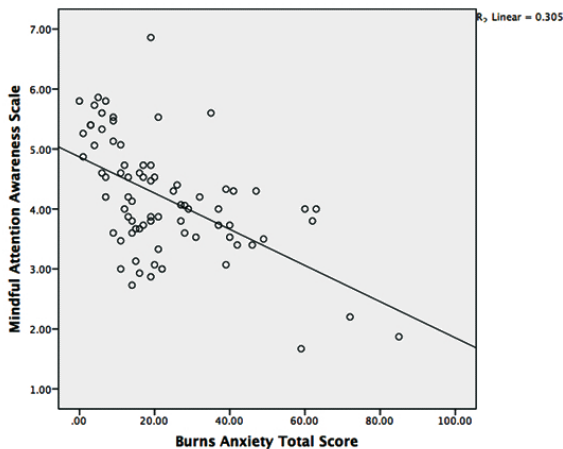


Figure 5. Correlation Burns Anxiety Inventory scores and Mindfulness Attention Awareness scores

Conclusion and Recommendations

As stated by Welwood (2002), the counseling profession is seeing an increase in the use of mindfulness techniques and behaviors to help combat their own stress, anxiety, depression, and burnout. There has been a plethora of research on mindfulness and its impact on a person's physical, cognitive, psychological, behavioral, social, and spiritual domains (Boudette et al., 2010). The literature is supportive of the benefit of mindfulness and the present study demonstrated a correlation between anxiety levels and mindfulness attention awareness levels of the participants, which underscores the benefits to the students. The results of this study could perhaps encourage counselor educators to include courses or modules in mindfulness in their counseling programs. This would also prepare future counselors to include mindfulness in their work with their clients.

Future studies should focus on training and preparation of participants to practice meditation and relaxation techniques for a greater amount of time and more frequently in order to obtain more definite results on the effectiveness of mindfulness activities in reducing anxiety.

References

- [1]. Arkowitz, H., & Lilienfeld, S. O. (2014). "Is mindfulness good medicine?". *Scientific American Mind*, Vol. 25, No. 5. Retrieved from <http://www.scientificamerican.com/article/is-mindfulness-good0medicine>.
- [2]. Baer, R. A. (2003). "Mindfulness training as a clinical intervention: a conceptual and empirical review". *Clinical Psychology: Science and Practice*, Vol. 10, No. 2, pp. 125-3. doi:10.1093/clipsy/bpg015
- [3]. Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Parody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). "Mindfulness: A proposed operational definition". *Clinical Psychology: Science and Practice*, Vol. 11, No. 3, pp. 230-24. doi: 10.1093/clipsy/bph077
- [4]. Boudette, R., Gandhi, S., Nobleza, D., Rosenfeld, V., & Rubinstein, L. (2010). "The mind-body team: Mindfulness in college health". Symposium conducted at the meeting of American College Health Association.
- [5]. Brown, A. P., Marquis, A., & Guiffrida, D. A. (2013). "Mindfulness-based interventions in counseling". *Journal of Counseling & Development*, Vol. 91, pp. 96-104.
- [6]. Brown, K. W., & Ryan, R. M. (2003). "The benefits of being present: Mindfulness and its role in psychological well-being". *Journal of Personality and Social Psychology*, Vol. 84, pp. 822-848.
- [7]. Christopher, J. C., Chrisman, J. A., Trotter-Mathison, M. J., Schure, M. B., Dahlen, P., & Christopher, S. B. (2011). "Perceptions of the long-term influence of mindfulness training on counselors and psychotherapists: A qualitative inquiry". *Journal of Humanistic Psychology*, Vol. 51, No. 3, pp. 318-349. doi: 10.1177/0022167810381471. Retrieved from <http://jhp.sagepub.com>
- [8]. Dimidjian, S., & Linehan, M. M. (2003). "Defining an agenda for future research on the clinical application of mindfulness practice". *Clinical Psychology: Science and Practice*, Vol. 10(2), pp. 166-171. doi: 10.1093/clipsy/bpg019
- [9]. Germer, C. K. (2005). "Teaching mindfulness in therapy". In C. K. Germer, R. D. Siegel, & P. R. Fulton (Eds), *Mindfulness and Psychotherapy*, New York: Guilford Press. pp. 113-119.
- [10]. Hooker, K. E., & Fodor, I. E. (2008). "Teaching mindfulness to children". *Gestalt Review*, Vol. 12(1), pp. 75-91.
- [11]. Holland, E. (2015). "Can mindfulness" help students do better in school?". *The Wall Street Journal*. Retrieved from <http://www.wsj.com/articles/can-mindfulness-help-students-do-better-in-school>
- [12]. Jacobs, S. J., & Blustein, D. L. (2008). "Mindfulness as a coping mechanism for employment uncertainty". *The Career Development Quarterly*, Vol. 57, pp. 174-180.
- [13]. JAMA Internal Medicine, (2014). *Mindfulness meditation helps with mild anxiety and depression, finds review*. Retrieved from http://www.science20.com/news_articles.
- [14]. Kabat-Zinn, J. (2003). "Mindfulness-based interventions in context: past, present, and future". *Clinical Psychology: Science and Practice*, Vol. 10, pp. 144-156.

- [15]. Murphy, M. C. (2006). "Taming the anxious mind: An 8-week mindfulness meditation group at a university counseling center". *Journals of College Student Psychotherapy*, Vol. 21(2), pp. 5-13, doi:10.1300/J035v21n02_03. Retrieved from <http://jcsp.haworthpress.com>
- [16]. Rothaupt, J. W., & Morgan, M. M. (2007). "Counselors' and counselor educators' practice of mindfulness: A qualitative inquiry". *Counseling and Values*, Vol. 52, pp. 40-54.
- [17]. Schwarze, M. J. & Gerler, E. R. (2015). "Using mindfulness-based cognitive therapy in individual counseling to reduce stress and increase mindfulness: An exploratory study with nursing students". *The Professional Counselor*, Vol. 5(1), pp. 39-52. Retrieved from <http://tpcjournal.nbcc.org>
- [18]. Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). "Effects of mindfulness-based stress reduction on medical and premedical students". *Journal of Behavioral Medicine*, Vol. 21, No. 6, pp. 581-599.
- [19]. Sharma, M. P., Mao, A., & Sudhir, P. M. (2012). "Mindfulness-based cognitive behavior therapy in patients with anxiety disorders: a case series". *Indian Journal of Psychological Medicine*, Vol. 34, No. 3, pp. 263-269. doi: 10.4103/0253-7176.106026
- [20]. Tadlock-Marlo, R. L. (2011). "Making minds matter: Infusing mindfulness and school counseling". Faculty Research & Creative Activity, Paper 29. Retrieved from <http://thekeep.eiu.edu>.
- [21]. Vollestad, J., Nielsen, M. B., & Nielsen, G. H. (2012). "Mindfulness-and acceptance-based interventions for anxiety disorders: A systematic review and meta-analysis". *British Journal of Clinical Psychology*, Vol. 51, pp. 239-260. doi: 10.1111/j.2044-8260.2011.02024.x. Retrieved from www.wileyonlinelibrary.com
- [22]. Welwood, J. (2002). *Toward a Psychology of Awakening: Buddhism, Psychotherapy and the Path of Personal and Spiritual Transformation*. Boston: Shambhala.
- [23]. Williams, J. M. G., & Kabat-Zinn, J. (2011). "Mindfulness: Diverse perspectives on its meaning, origins, and multiple applications at the intersection of science and dharma". *Contemporary Buddhism: An Interdisciplinary Journal*, Vol. 12, No. 01, pp.18. doi:10.1080/14639947.2011.564811.

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