

The Relationship of Mindfulness, Inner speech and Gender

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Abstract

The relationship of mindfulness, Inner speech and gender was investigated in the current study by administering Self-Talk Scale and Mindful Attention and Awareness Scale to four hundred participants (N=400) consisted of both genders (male, 225; female, 175), with the age limit of 20-40 years. The sample was taken from Islamic International University, Islamabad and University of Peshawar, Pakistan and analyzed by applying t-test and regression analysis. The findings of the study showed that mindfulness was negatively related to the frequency of inner speech. Self criticism and social assessment inner speech were found to be negatively related to mindfulness. Women were found to be more mindful compared to men. Women also scored higher compared to men on social assessment inner speech.

Key words. Mindfulness, Inner speech, Consciousness, Gender, Self-talk

Introduction

Mindfulness is "a receptive attention to and awareness of present events and experience"⁽¹⁾.The concept of mindfulness comes from Buddhism ; however similar concepts

can also be found in some western philosophical traditions e.g. existentialism, phenomenology and transcendentalism⁽¹⁾. Mindfulness can be viewed as a state as well as a trait. As a state it can be experienced momentarily but as a trait it is considered as innate characteristic of an individual and therefore the capacity to be more or less mindful differs from individual to individual. This innate disposition to be mindful is also called as dispositional mindfulness. Mindfulness can also be acquired through a certain set of techniques which are used in spiritual practices as well as in clinical setting.

A person in a mindful mode is aware of the contents of his or her experiences i.e. thoughts and emotions as well as what happens in external environment. The events internal or external are just noticed and observed. Mindfulness is disidentification with one's mental contents as well as with the world. In the state of mindfulness, a person is focused on present rather than on past or future. Brown et al,⁽¹⁾state that, a Zen metaphor equate mindfulness with a mirror where the mind reflects whatever take place, without adding anything and this mirroring can also lead to an insight about reality. According to Leary and Tate,⁽²⁾ one cannot attend the present experiences if he is constantly engaged in self talk. Therefore people are instructed in mindfulness training, to continually bring their attention to breathe or asked to describe their experiences with non evaluative labels for reducing self-talk.

Inner speech is the activity of talking to oneself silently.⁽³⁾ It is like a silent verbal running commentary on events. Other terms used to refer to inner speech are internal monologue, self statements, self verbalizations, subvocal speech and self-talk.⁽⁴⁾ A person construct the story of his life including past and future, through inner speech. Vygotsky,s theory is important in understanding the development of inner speech as cited by Morin.⁽⁵⁾ According to Vygotsky, Culture not only provides much of the contents for the thought processes of the child but it also

instruct the child, how to think and thus contribute to the child's cognitive development. A child learns problem solving with the help of his family members, peers and siblings. Language plays an important role as information is conveyed to the child through language by people around him. Afterwards the child uses that information by talking to himself aloud and then as inner speech to guide his behavior. In this way the child internalizes the skills and knowledge to regulate his behaviors, which were once existed outside of him. All this internalization of information is accomplished through inner speech. Thus inner speech arises from the social speech and its main function is self regulation.

Empirical findings suggest that inner speech is an important conscious phenomenon. Inner experience was investigated by using a beeper⁽⁵⁾The participants were asked to report, whatever they were experiencing at the time of probe. Inner speech was one of the five inner experiences, reported by the subjects. Other inner experiences include imagery, feelings, sensory awareness and thought without symbols. Morin and Hamper⁽⁶⁾ investigated inner speech by using thought listing method. The sample contained over 400 university graduate students. They found that inner speech for the most part was about the self. Inner speech was also found to serve self regulatory functions. Uttl, Morin, Faulds, Hall and Wilson⁽⁷⁾ probed inner speech by using cell phones. Participants were found to be talking to themselves 50% of prompt occasions. This was higher compared to 25% of the frequency of inner speech found by the previous study. ⁽⁵⁾

The frequency of inner speech can be distinguished from the contents of inner speech. The frequency of inner speech represents how frequently a person engages in inner speech or how often he talks to himself. It has nothing to do with the contents of inner speech. On the other hand, the contents of inner speech represent the positive, negative or neutral aspects of inner speech.

Inner speech is central for the acquisition of reflective consciousness or self-awareness. However, nonreflective or selfless consciousness i.e. mindfulness, is attained by reducing the inner speech. The literature on mindfulness contain many allusions to the reduction of inner speech through mindfulness. The inner speech in this literature is referred to as inner voice, voice in the head, internal dialogue , brain chatter, self chatter and self talk.^(8,9,10,11,12,13,14) Inner speech is reduced by different ways in mindfulness i.e focusing one's attention on a certain stimulus, by becoming aware of one's inner speech or detached observation of one's inner speech.

The research about the relationship of inner speech and gender yield mixed findings. Brinthaup and Christian ⁽¹⁵⁾ found that men were more engaged in self-reinforcing self-talk than women. In earlier study Brinthaup, Hein & Kramer ⁽¹⁶⁾ found no difference in inner speech for men and women. However in another study, male college students reported more naturally occurring inner speech than their female colleagues⁽⁵⁾ Some studies found no relationship between gender and mindfulness^(17,18,19) but some studies suggest that women are more mindful compared to men.^(20,21)

The literature on mindfulness suggests that the reduction of inner speech play an important role in the acquisition of mindfulness. Therefore the current study was designed to empirically evaluate those claims. Mindfulness is an important therapeutic tool in different psychotherapies and therefore investigating its relationship with inner speech would contribute to the arena of mental health. The present study would also contribute to the existing empirical research on the relationship of mindfulness and inner speech to gender.

The current study was aimed at investigating the relationship of inner speech to mindfulness. It was predicted that there would be negative relationship between the frequency of inner speech and mindfulness. Various forms of inner speech (e.g. self-criticism, social

assessment, self-reinforcement and self-management) were also investigated in relation to mindfulness . Gender was also explored in relation to inner speech and mindfulness.

Method

Participants

The sample was consisted of 400 subjects (N=400) including both genders i.e. males (221) and females (179). They were selected from the University of Peshawar and Islamic International university, Islamabad, Pakistan. Subjects with age range from 20 to 40 were recruited for the study.

Materials & Procedures

Demographic Form. A form was prepared to get information about the demographic profile of each subject. The demographic variables include age, education and gender of the subjects.

Self-Talk Scale (STS).The Self-Talk Scale was developed by Brinthaup , Hein and Kramer⁽¹⁶⁾ The STS is 16 items questionnaire which describe situations where people might talk to themselves. The scale is divided in four subscales which include self management, self criticism, self reinforcement and social assessment scales. According to Brinthaup and Christian⁽²²⁾ STS is internally consistent. The alpha coefficients for the four subscales are between .79 and .89.The scale is positively related to verbally oriented information processing strategies ($r =.47$) and private self- consciousness ($r =.37$) which shows its congruent validity. All items are completed on 5-point likert scale.

Mindful Attention and Awareness Scale (MAAS)⁽²³⁾ MAAS is consisted of 15 items. It is the most empirically tested scale for measuring mindfulness. MAAS assesses a person's awareness and attention in relation to present moment. Brown and Ryan⁽²³⁾ found MAAS to be internally consistent. The alpha coefficient for the scale is .82 and the alpha coefficient for its test-retest reliability is also .82. The scale is positively related to the wellbeing measures which show its convergent validity. Many independent analyses attested to the reliability and validity of the scale.^(24,25,26)

Procedure

The study was carried out by approaching the subjects in the University premises. After developing rapport, questionnaires were administered i.e. Self-talk scale and Mindful Attention and Awareness scale to assess inner speech and mindfulness respectively.

Discussion

The findings of the present research showed that mindfulness is negatively related to inner speech. This outcome is consistent with the claims regarding mindfulness and its relationship to inner speech, in the literature about mindfulness.^(8,9,10,11,12,13,14)

Mindfulness is about attending the present moment and one cannot remain focused on the present if he is engaged in frequent inner speech. Inner speech draws a person towards the past or future and detach him from what is happening in the present moment. People are less mindful when they are suffering from psychological disorders e.g. anxiety and depression. In anxiety disorders people are continuously engaged in worrying about imagined catastrophes. Worrying not only involves imagery but also involve increased inner speech. Depression is

characterized by rumination. Depressed people ruminate about their past decisions, mistakes or negative events which requires frequent inner speech. Therefore it seems that the more we engage in inner speech, the more our minds wander away which means poor attention and less focus on the present.

Mindfulness training or practices involves different skills which help in reducing inner speech. One way of decreasing inner speech is to consider it neutral. Inner speech is neither judged as good nor bad. This decreases one's involvement with the contents of inner speech. This kind of non-judgmental attitude to inner speech weakens its grip on a person and consequently reduce its intensity and frequency. Inner speech is also reduced by focusing on breath or bodily sensations. These practices can obstruct the intrusive flow of inner speech by creating some space in the mind. Mystical traditions and their advocates have always asserted that meditation and mindfulness reduce inner speech and the current study provided empirical evidence in support of their claims.

The findings of the present study showed that self-criticism and social assessment aspects of inner speech were the negative predictors of mindfulness. Mindfulness deconstructs meaning or conceptual thinking. For example self-criticism or thoughts about social evaluations are not considered factual but they are labeled as mere words or thoughts in mindfulness. We ruminate about something when we value it but the non evaluative stance in mindfulness reduces the frequency of those thoughts. This furthermore indicate that mindfulness is conducive to well being as it negatively relates to the evaluative or negative forms of inner speech. The results of the current research showed that there was no significant relationship between mindfulness and the two forms of inner speech i.e. self-reinforcement and self-management.

Women scored higher compared to men on mindfulness. The findings are consistent with some previous studies^(20,21) as other studies found no relationship between the two.^(17,18,19) In our society women for the most part are confined to home whereas men have more exposure to the outside world. Mindfulness decreases when our senses are exposed to the external environment more frequently and that could be one of the reasons for men to be less mindful compared to women in the present study. The difference could also be due to their different interests. Men are more interested in abstract or global issues compared to women who are more focused on family.

There was no difference on overall inner speech between male and female but women scored higher on social assessment inner speech compared to men. Women are more interested in social relationships⁽²⁷⁾ and therefore they are most likely to evaluate social events more frequently in their minds compared to men.

Limitations

The present study has certain limitations. The sample of the current study was limited and therefore the findings cannot be generalized to large populations. Mindfulness was assessed by administering questionnaires in the present study but some researchers prefer other methods to assess mindfulness i.e. qualitative investigations and interview method.⁽²⁸⁾ Mindfulness can also be studied by inducing it through different exercises⁽²⁹⁾. Questionnaires with its fixed set of questions may not be very good at capturing the natural flow of inner speech according to Morin⁽⁵⁾ Therefore he recommends other methods in addition to questionnaires for measuring inner speech which include think aloud method, videotape reconstruction procedure, thought listing method and electromyographic recordings of tongue and lip movements during problem solving.

Implications

The current study has many implications for future research. The present study found negative relationship between mindfulness and inner speech but further studies should be carried out in this domain to see whether the findings of the present study could be replicated or not. The present research explored the relationship between inner speech and mindfulness among general population but future research could explore this relationship among experienced meditators. Comparative studies can also be carried out between meditators and general population to investigate the relationship between inner speech and mindfulness. Mindfulness is related to mystical experiences therefore the relationship of inner speech and mindfulness can also be investigated in those individuals who had mystical experiences. This would help in figuring out whether the inverse relationship between mindfulness and inner speech hold true, in case of these different groups i.e. meditators or those having mystical experiences.

The negative association between mindfulness and inner speech in the current study has implications for mental health. Mindfulness is positively related to wellbeing^(30,31,32,19) and less frequency of inner speech may be one of the contributing factor to that wellbeing. The content of inner speech play an important role in psychological disorders and its treatment⁽³³⁾ but the frequency of inner speech may also be important and by modifying the frequency of inner speech we can reduce distress and increase wellbeing. Therefore future research can explore the relationship of the frequency of inner speech to both psychological disorders and well being.

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Results

Table 1

Detail of Sample Characteristics for the Study (N=400)

Sample	Categories	F	%
Gender	Male	221	55.3
	Female	179	44.7
Education	Intermediate	152	38.0
	Graduation	91	22.8
	Master	154	38.5
	Missing	3	0.8
Sample	Mean	SD	Range
Age	24.68	4.83	20-39

Table 1 represents the distribution of total sample on the basis of their gender, education level and age. Results show the precise and comprehensive distribution of sample characteristics under study. Education of respondents is divided into three groups on the basis of completion of educational years.

Table 2

Effect of inner speech on the prediction of Mindfulness scale (MAAS) (N=400)

Model	B	SE	B	T	p-value
Constant	64.85	3.61		17.98	.000
Inner Speech	-.139	.07	-0.11	-2.08	.038

$F(1,298)=4.33, p < .05, R^2=.011$

Note: B=Unstandardized Coefficients, β =Standardized Coefficients, SE=Standard Error.

Simple Linear Regression analysis is computed with inner speech as a predictor variable, and mindfulness as an outcome variable. The R^2 value of .011 specifies that 1.1% of variance in the dependent variable can be considered for, by the predictor with $F=4.33$ and $p<.05$. The results also specify that inner speech has a significant negative effect on prediction of mindfulness.

Table 3

Multiple Linear Regression analysis showing the effect of subscales of inner speech on the prediction of Mindfulness scale (MAAS) (N=400)

Model	B	SE	B	T	p-value
Constant	62.368	3.653		17.072	.000
Self-criticism	-.543	.198	-.151	-2.746	.006
Self- reinforcement	.124	.205	.032	.605	.546
Self-management	.406	.259	.095	1.566	.118
Social assessment	-.441	.222	-.119	-1.988	.047

$F(4,395)=3.93, p < .05, R^2=.038$

Note: B=Unstandardized Coefficients, β =Standardized Coefficients, SE=Standard Error.

Multiple Linear Regression analysis is computed with self-criticism, self-reinforcement, self-management and social assessment as predictor variables, and mindfulness as an outcome variable. The R^2 value of .038 specifies that 3.8% of variance in the dependent variable can be considered for, by the predictors with $F=3.93$ and $p<.05$. The results specify that self-criticism and social assessment have a significant negative effect on prediction of mindfulness whereas self-reinforcement and self-management has a non-significant positive effect on mindfulness scale.

Table 4

Mean differences between Male and Female on Inner Speech (STS) and on its subscales (N=400).

	Male (n=221)		Female(n=179)		t (398)	P	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
STS	52.91	8.27	53.99	8.86	1.25	.21	-2.76	0.61	0.127
SC	11.96	3.25	12.19	3.10	0.71	.48	-0.85	0.40	0.072
SR	14.08	2.95	14.11	3.04	0.80	.93	-0.62	0.57	0.010
SM	13.96	2.61	14.15	2.78	0.69	.49	-0.72	0.35	0.070
SA	12.91	3.05	13.55	3.13	2.06	.04	0.30	1.25	0.208

Note: M=Mean; SD=Standard Deviation; STS= Self Talk Scale; SC = Self-Criticism; SR=Self-Reinforcement; SM=Self-Management; SA=Social Assessment

Table 4 shows the mean differences and standard deviation between male and female on the score of STS. Independent-samples t-test indicates that there is no significant means differences between male and female on the frequency of inner speech (STS) and its subscales, self-criticism, self-reinforcement and self-management, whereas there are significant differences between male and female on the subscale of Social Assessment of inner speech. Figures show that females has slightly higher mean on social assessment as compared to male sample with $t=2.06$ and $p < .05$.

Table 5

Mean differences between Male and Female on the score of Mindfulness (MAAS) (N=400).

	Male (n=221)		Female (n=179)		t (398)	P	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
MAAS	55.92	10.65	59.31	12.1	2.06	.003	1.15	5.63	0.300

Note: M=Mean; SD=Standard Deviation; MAAS= Mindfulness

Table 5 shows the mean differences and standard deviation between male and female on the score of Mindfulness scale. Independent-samples t-test indicates that there is a significant means differences between male and female on the mindfulness scale. Figures show that female sample has higher mindfulness as compare to male sample. The mean difference 3.39 is significant as $p < .01$

