

Walking Under the Ladder will Only Knock the Carpenter Off His Perch! Are Superstitions Mindless?

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ABSTRACT

Superstitions are an inevitable product of associative learning, which manifest in endless ways and have been impacting human behaviour in spheres such as health, business, education and sports etc. Superstitions benefit individuals in the form of a coping strategy or as a defense mechanism; but are only healthy if used in moderation. Superstitions have been termed as an irrational belief, a flawed perception and still persist despite the level of technological advancements taking place. Mindfulness as a means to enhance perception is an intervention that is gaining popularity and recognition in the field of psychology. The purpose of this paper is to establish a link between superstitions and mindlessness, in order to propose mindfulness as an intervention in a formal educational setting to combat superstitions.

Keywords: Superstitions, mindfulness, mindlessness, education, learning

“Superstition is the religion of feeble minds.”

– Edmund Burke

The phenomenon of superstition has stood the test of time in most societies and cultures. Furthermore, its prevalence is witnessed in number of domains because they have a major impact on the process of decision making. Superstitions also play a major role in the decision making process, wherein omens and other signs provide guidance. It is commonly known that culture, religion and health are impacted by superstitions; however, they also undermine consumer behaviour and financial decisions. For example in China, advertisements of consumer products include the number ‘8’ and exclude the number ‘4’, since ‘4’ is considered to be unlucky. Similarly, in Taiwan, consumers are ready to pay more for a packet of

8 balls as compared to 10 balls. Lastly, performance related tasks; such as the domain of sports, have also been heavily impacted due to this phenomenon.

Jan Beck and Wolfgang Forstmeier spring (2007), have suggested that superstitions are an inevitable by-product of adaptive learning. The seemingly irrational nature and the ability of superstitions to influence human behaviour are one of the prime reasons why efforts must be made in the field of psychology to combat this issue. Mindfulness techniques are gaining a boost in the field of psychology, in order to correct irrational thought and behaviour.

Therefore, author aims at providing a scope to understand mindfulness as a coping strategy to deal with the social issue of superstitions. In order to meet the purpose of this paper the author explores whether there is a coherent relationship between superstitious beliefs and mindlessness.

Understanding what undermines superstitious beliefs

In order to meet the purpose of the paper, it is imperative to have a holistic understanding of the processes that undermine the phenomenon of superstitions. According to Carl Jung, superstitions are a part of our collective unconscious and are an outcome of socialization, that is, superstitions have been passed down to us by our ancestors. However, according to the author, it is the cognitive process underlying superstitions beliefs play a major role in shaping the perception and behaviour of an individual. A superstition is ‘a belief manifested in endless ways, resulting from false interpretation of accidental contingencies that are governed by confusions in core ontological knowledge/concepts and which are not metaphorical or allegorical expressions’ (Skinner 1948; Lindeman & Svedhol, 2012). In more simple terms, superstitions can be defined as an outcome of the incorrect establishment of a cause and effect due to faulty perceptions. Superstitions can be understood as an outcome of classical. This informs us about the process that undergoes superstitious beliefs, however, it is also imperative for us to know what drives, or triggers this process.

Research had suggested that emotions such as fear, anxiety, stress and lack of controllability also undermine superstitious behaviour (Malinowski 1948; Keinan, 1994; Delacroix & Guillard; Stoberock & Mussweiler, 2010). Psychological processes such as emotions; have a signalling function (Oatley & Johnson, 1996) that enables individuals to safeguard themselves from dangers prevailing in the external environment, these mechanisms and instincts enabled our ancestors to survive. Emotions will only be an effective mechanism if they are inquisitively sensitive to external contingencies, but can also pose to be an issue if not switched off when the prevailing external environment has changed (Mark & Williams, 2010). Williams also is of the opinion that humans are said to have more maintained and prolonged emotional states than animals, that is, we do not switch off emotions when the event ends. Our evolutionary neural pathways lead to the reactivation of recollections from the past and affect our current mood, since these triggers and simulations are treated as real threats, as though we were experiencing them in real time. Similarly, these neural pathways lead an individual to create a causal relationship between a stimuli and response, irrespective of the present broader context, based on past experience and categorizations, giving rise to superstitious beliefs. Also, though superstitions may serve

as a coping and defence mechanism to deal with fear, anxiety and stress, and without which we would not have been able to function, over reliance on these mechanisms can have aversive pathological and psychopathological outcomes.

Superstitions: Defense Mechanism or a Coping Strategy?

Since research suggests that fear, uncertainty, the need to control outcomes and anxiousness are one of the few reasons why individuals indulge in superstitions, it can be claimed that superstitious beliefs are a form of defense mechanisms (Eva Delacroix & Valerie Guillard, *et al.*, 2010; Malinowski 1948, Keinan, 1994; Whitson & Galinsky, 2008). Defense mechanism has been defined as a mental mechanism that alters veridical perception (Freud, 1936). The source of that anxiety either could be the perception of a disturbing external event or the presence of a disruptive internal psychological state. However, a coping strategy also plays the same role, thereby questioning the concept of superstitions as a defense mechanism. Defense mechanisms and coping strategies are terms that have been used interchangeably by researchers; however, they are not the same. Both functions are aroused due to psychological disequilibrium and are also similar in their approach toward problem solving, therefore making it difficult to distinguish between coping and defensiveness (Hann, 1977). Coping takes place when a conscious purposeful effort has been made to deal with a problem situation, whereas defense mechanisms operate at an unconscious level. Furthermore, defense mechanisms aim at altering the internal psychological state but may have no effect on external reality, hence leading to non-veridical perception, i.e. Distortion of reality (Phebe Cramer, 1988). Haan is also of the opinion that, “Coping involves purpose, choice and flexible shift, adheres to inter-subjective reality and logic and allows and enhances proportionate affective expression, whereas, defensiveness is compelled, negating, rigid distorting of inter-subjective reality and logic.”

Taking consciousness as a basis, superstitions can be classified as a coping strategy; since indulgence in a ritual is possible only when one consciously chooses to do so; whether it is about taking two steps back when one sees a black cat crossing, whether it's performing sacrifice, carrying a lucky charm or performing a ritual before a match. The author suggests that superstitions are an outcome of a faulty cognitive style since information is not processed based on facts and evidence. They are based on assumptions where individuals try to find a pattern in places where a pattern does not exist by forming non-scientific cause and effect relations. Individuals further use these assumptions to make future judgements. Therefore, it can be claimed that the choice made has no rational or logic on which the user (of superstition) basis his/her choice. Furthermore, superstitious beliefs like defense mechanisms are aimed at altering internal psychological states and have no direct impact on external reality. In cases where there is a conscious intent, defense mechanisms can be classified as coping strategies. Conclusively, superstitious behaviour by athletes who do so consciously in order to cope with stress and anxiety are using superstitious beliefs as a coping strategy and not as a defense mechanism. The author has laid emphasis on the classification of superstitions either as a coping strategy or a defense mechanism in order to determine the true nature of the problem, and in-turn help in providing a reasonable solution.

Freud has correctly stated that defense mechanisms help deal with anxiety, stress and at the same time also helps maintain a positive self-image. Nevertheless, defense mechanisms can be overused. An over-dependence on defense mechanisms hampers the well-being of the individual’s life. Hence, this becomes an important issue to address.

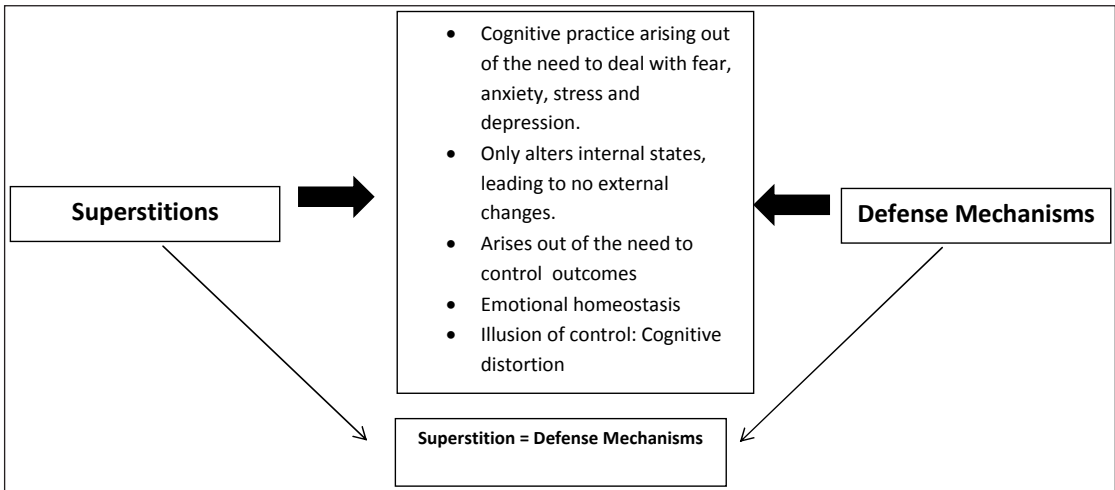


Fig. 1: The Link Between Superstitions and Defense Mechanisms

Defense Mechanisms and Cognition

As mentioned earlier, defense mechanisms help in dealing with anxiety and stress, in other words, it can be said that defense mechanisms help individuals in maintaining emotional homeostasis. Intelligence plays an important role in amplifying emotions providing more extensive and intensive unconscious and conscious activating appraisals, this is the reason also why we have been described as the most emotional creatures of all (Hebb, 1949). Another contribution of human intelligence is the facilitation of the process of repetitive thinking. Repetitive thinking of circumstances contributes to the emotional responses we experience, thereby making the experience of stress and anxiety more grave, leading to hampered functioning. And as mentioned earlier, defense mechanisms help in dealing with these by-products of intelligence.

Superstitions can be classified under the class of *Cognitive Distortions* of psychological defense mechanisms because individuals who undertake this mechanism demonstrate an ‘illusion of control’, even when the outcome is not entirely based on the response (i.e. No logical connect between cause and effect). Research explains these cognitive illusions as a self-enhancing attribution cognitive style (Tiger, 1979). Defense mechanisms are relatively unconscious; are adaptive as well as pathological (Vaillant, 1994).

When individuals store information in their memory, the amygdala associates memories with emotions. Loftus, Elizabeth (1993) suggest that if the emotion is a negative one, the brain tries to suppress these

memories. Freud's early work on psychoanalysis suggests that suppression of the memory leads to transferring the piece of information into the sub-conscious. It may be assumed that since an individual is not consciously aware or consciously recollects this information, it may not impact his/her explicit behaviour. However, implicit memories have an impact on explicit behaviour and are capable of causing anxiety and stress among individuals (Schacter, 1987). Schacter, also suggests that implicit memory helps people performing certain tasks without conscious awareness of these previous experiences. Furthermore, Ivan Pavlov suggested that human intelligence also facilitated the process of classical conditioning; it is a process of learning which a major component in shaping human behaviour is.

Therefore, it can conclusively be said that automatic human behaviour is influenced by classical conditioning as well as past experiences stored in implicit memory, that is, these processes also govern problem solving and decision making behaviour. How superstitions impact decision making has been discussed further in the following section. Lastly, it can also be said that, in order to deal with anxiety and control outcomes, individuals automatically take to forming cognitive illusions.

Role of Superstitions in Decision Making: Locus of Control (LoC)

Decision-making is based on two major parameters such as internal locus of control and external locus of control. Superstitions can be classified as an outcome of the cognitive process of external locus of control, since superstitious individuals do not take responsibility for their own actions and rather blame their circumstances. Large numbers of people indulge in superstitious behaviour in order to increase the incidence of Luck. This gives individuals the ability to deal with anxiety and fear of uncertainty by providing a certain sense of control over their lives and outcome of their actions.

However, Richard Wiseman (2003), through his research implied that a change in thought and behaviour can lead people away from the idea of luck as magical thinking and can help individuals indulge in a process that is directed towards a rational view of 'luck'.

From the aforementioned arguments it can be suggested that, the need to find pattern; to draw a cause and effect relationship in order to make sense of the world; to judge present situations based on past experiences, are the factors facilitating superstitious behaviour. The aforementioned method proposed by Wiseman has proven to change people's lives, but only in terms of thoughts and behaviour. In order to bring about a long term change, the focus must be on changing deep structures and attitudes. Mindfulness is one of the techniques that help in alteration of deep structures; this is discussed in the following section.

Mindfulness

Mindfulness as a practice to cope with superstitious beliefs in the long run has been taken into consideration since mindfulness as a means to enhance perception is an intervention that is gaining popularity and recognition in the field of psychology. Mindfulness has not yet been proved to be a cognitive ability or coincides with one; it is suggested to share characteristics that cognitive abilities possess. According to Sternberg (2000), mindfulness, like cognitive styles, is at the interface between

cognition and personality. Since the author has suggested superstitions to be a faulty cognitive style, one way to combat it is, to replace it with a better (non-faulty) cognitive style, the cognitive style being mindfulness. However, in order to do so, it also becomes imperative to classify superstitious beliefs as mindlessness. Furthermore, in order to make the aforementioned claims, it is also imperative to first classify/prove mindfulness as a coping strategy.

The word mindfulness originally comes from the Pali word ‘*sati*’, which means having awareness, attention, and remembering (Bodhi, 2000). Bishop *et al.* (2004) has focused on two factors of mindfulness. First is the non-judgemental nature of mindfulness that enables individuals to make observations without over-identifying in order to develop an attitude of acceptance which further leads to greater curiosity as well as better self-understanding. This also results in disengaging individuals from habitual patterns and therefore helps in providing a more reflective response to problematic or difficult situations. The other factor that has been focused on is the present centred nature of mindfulness. This factor is also aimed at the de-automatization of habitual judgemental tendencies that limits us from attending to what is happening in the moment. According to Langer and Moldoveanu (2000), mindfulness is characterised as creation of new categories; openness to new information; and awareness of more than one perspective. In other words, mindfulness can be understood as the process of drawing novel distinctions; the distinction will be called novel as far as what is noticed is new to the viewer. As a result of indulgence in this process an individual does not rely on categories and distinctions made in the past, but individuals take an action based on the present context. Therefore, mindfulness is characterized by dwelling in the present.

Mindfulness: A Coping Mechanism

Cramer (1988), defines coping as a mechanism that involves conscious, purposeful effort, with the intent of managing or solving a problem situation. Furthermore, coping also involves a flexible shift that abides by intersubjective reality and logic (Haan, 1977) with the aim of not only solving a problem situation but to return to baseline functioning as quickly as possible (Aldwin, Sutton & Lachman, 1966). In addition, coping strategies also focus on reducing negative effect by addressing the issue head on and aims at bringing a change in external reality rather than just altering internal states to deal with anxiety. Lastly, the basis of coping is intentional rational decision making and therefore automatic behaviours and habitual coping do not classify as coping.

Ronald D. Siegel (2014), Mindfulness is claimed to be a deceptively simple way of relating to experience. An individual relates to an experience by way of perception. Mindfulness, as discussed earlier, is an approach based on rationale and logic that is focused on problem solving, by way of altering ones perception, action and behaviours. Since this method of problem solving involves consciously and intentionally changing and altering the aforementioned cognitive and behavioural mechanisms, it can be said that mindfulness is a coping mechanism.

Mindlessness

Langer (1992), in multiple ways has explained the concept of mindlessness, it is as follows- as opposed

to mindfulness, and mindlessness is defined by behaviours that are governed by rules and routines that are created in the past and not by elements in the present situation. Mindless behaviour is automatic and a mindless individual also does not consider the intake of new information. Mindlessness in other words can be understood as a rigid frame work and lack of openness to new information due to prior conditioning, hence, can also be defined as the inability to vary the previously learnt information.

As mentioned earlier, in order to prove that mindfulness can help cope with superstitions, it is imperative that we first establish that superstitious behaviour is mindless in nature. For establishing the aforementioned, the author has decided to study the undermining determinants and framework of both phenomenon (mindlessness and superstitions).

The nature of superstitious beliefs and its functionality as discussed in detail in the previous section states that superstitions are a form of defense mechanism, and these mechanisms when not used in moderation reduce an individual's ability to sustain attention, observe and be open to new information, experiences and perspectives. Mindlessness is also characterised by an over reliance on categories and distinctions of the past, furthermore, they are also triggered in situations of uncertainty and under the pressure to resolve problems. Since superstitions are also triggered by the same determinants as that of mindlessness; this enables us to suggest that superstitions fall under the ambit of mindlessness behaviour.

Mindlessness, Superstitions and Automatic Behaviour

Since, superstitious behaviour is an outcome of the processes of classical conditioning, it can be suggested that superstitions are a part of automatic processes. According to Langer (1989 p.16), repetitive behaviour or pairing of the response-stimuli, can be characterized as mindless behaviour, however, it can also arise instantaneously. Therefore, though mindlessness can be characterized by rigid conditioning, it is not necessarily classified as an automatic behaviour. Therefore, the question that then arises is, whether superstitions are mindlessness or merely an outcome of automatic processing. If a link between mindlessness and automatic processing is established; it would support the argument that superstitions are or can be termed as mindlessness.

Prior practice and familiarity are the elements that play an important role in determining if the mode of processing selected is automatic or controlled; whereas, mindfulness and mindlessness is making a distinction based on categorization of information and this process takes places before information is processed as automatic or controlled (Langer, 1992. p. 289). This implies that both, mindlessness/mindfulness and automatic/controlled process serve different functions where on one hand controlled process would include consciously processing information and where mindfulness is consciously being aware of the larger context through which information is understood. On the other hand, mindlessness is characterized by interpretation of information irrespective of the context and automatic process involves processing this information unconsciously. Nevertheless, both automatic processing and mindlessness operate at a level that is inaccessible to the consciousness, and this is the commonality that helps establish a link between the two phenomena. Therefore it can be concluded that automatic behaviour is to a certain extent mindless.

Furthermore, Langer (1992, p. 301–2) also suggests that information can be processed in a controlled but mindless manner and automatic but mindful manner. For example, by way of controlled processing, one may learn to write the letter “I” and with practice over time typing “I” occurs automatically. However, if one is aware that the symbol “I” may be understood as a letter and as well as a number, once can be said to be mindful. This means automatic behaviour is not always mindless. Superstitious individuals fail to take into account that the same environmental stimuli can be processed in different ways based on the context. This inattention to contextual differences of stimuli is characterized as mindlessness by Langer (1992, p. 301-2). This inattention leads to forming generalizations, thereby leading to the inability to develop novel distinctions.

So is Superstition Mindlessness?

The aforementioned arguments help us come to a conclusion that superstition can be characterized as mindlessness on the basis that, both superstitions and mindless behaviour stem from rigid frameworks created in the past and completely disregard the consideration of novel information. In addition, Superstitions like any other mindless behaviour also takes place at an unconsciousness level. Mindlessness is also characterized as a state in which an individual has lost perception of control (Geer, Davison, & Gatchel, 1970; Langer, Janis, & Wolfer, 1975).

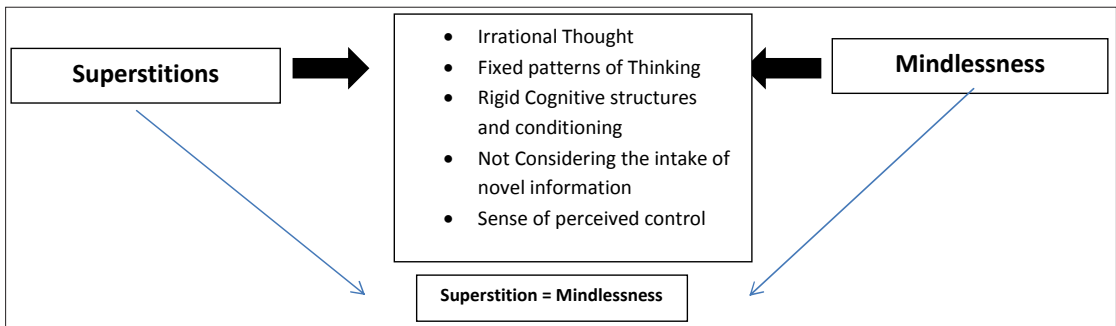


Fig. 2: The Link Between Superstitions and Mindlessness

On the contrary, superstitions are a tool that provides perceived control to individuals in events of stress and unrest. Researchers have also stated that the perception of control rather than objectively viewed control, that is a significant variable. Therefore, researchers such as Alexander, Langer, Newman, Chandler, Davies (1989), conducted studies that proved that increased control had positive effects on patients undergoing stress and other. Hence, on the basis of this it can be contested that superstitions may not be mindless, since they provide perception of control and therefore could be used as a tool for mindfulness. However, this argument can be challenged; firstly, superstitions as stated by research, is more often than not activated in events of stress and uncertainty and hence is considered as a defence mechanism; which when used excessively, is detrimental to an individual’s well-being, unlike mindfulness techniques in general. Secondly, superstitions unlike mindful behaviour stem from rules

based on past experience and are also outcomes of generalized stimuli, and an outcome of failing to acknowledge the novelty of situations. Lastly, superstitions have been defined as a result of ontological confusions of core concepts not taking place at a conscious level whereas mindfulness techniques take place very consciously. Furthermore, it is a skill that helps individuals react and respond to situations in a more informed manner rather than handling situations based on blind faith and luck as it is in the case of superstitious beliefs. Therefore, even though superstitious beliefs on the surface may seem to be a tool for mindfulness since they provide a sense of perceived control, they do not otherwise fit into the framework of mindfulness. From the above discussion, superstitious behaviour can be classified as mindless behaviour.

Mindfulness and Cognitive Processes: Mindfulness a Coping Strategy

Mindfulness is characterized by elements such as awareness, attention and remembering (Bodhi, 2000). It has also been referred to as a state of mind that helps individuals to be more aware of our own assumptions, ideas, and emotions; and of the selective perception, attribution, and categorization that individuals adopt (Thomas, 2006). Coping strategies have been discussed in detail in the previous sections; based on that discussion and considering the nature and functions of mindfulness, it is suggested that mindfulness can be classified as a coping strategy. Based on the premise that superstitious beliefs are a mindless phenomenon, mindfulness and its various techniques in the opinion of the author can be used to cope with the social issue of superstitious beliefs.

We create mental maps over a period of time based on our experiences, to which we adhere automatically while making any decisions. Therefore, very often we automatically adhere to strong beliefs created due to certain experiences and we fail to consider fresh information. According to Thomas (2006), mindfulness techniques help us seek out for fresh information that helps us in altering our mind maps. Following are the cognitive processes that underlie mindfulness. These cognitive functions will help individuals to indulge in rational thinking, therefore, safeguarding individuals from falling into the trap of superstitions.

Mindfulness and Meta cognition

Morck, (2009), Mindfulness and metacognition are very often used anonymously since both include increasing awareness about one's thoughts as well as the surrounding, and are aimed at enabling change in thoughts and emotions by facilitating detachment. However, these concepts though related, have different deep structures and differ in functionality as well. Meta cognition is concerned with *what* an individual is thinking and Mindfulness is concerned about *how* you think. Research indicates that mindfulness activates and strengthens meta-cognitive mode of information processing and facilitates cognitive restructuring (Wells, 2002).

Furthermore, research by Jankowski and Holas (2014) also suggests that mindfulness depends on/can be attained when there is interplay of three metacognitive processes namely, Metacognitive knowledge, experiences, and skills. Metacognitive knowledge refers to the awareness and understanding of detaching

one self, for example, to understand - “I am aware and the observer of my depressive thoughts as opposed to, “I am depressed.”

Metacognitive processes such as increased alertness and sustained attention help in developing the skill of mindfulness, (Jankowski & Holas, 2014). Researchers further state that alertness has a direct relation to meta-experiences related to feelings of novelty and curiosity; alertness and meta-experiences are reciprocal functions. Sustained attention, inhibition and task- switching are other meta-skills that help in being mindful because, they provide the ability to become aware and stop engaging with such mind wondering (inhibition) and switching attention to earlier mode of mindfulness are necessary skill that are required for successful mindfulness practice.

A question that may have come to your mind is, why is there a relationship being established between mindfulness and metacognition, when meta-cognition exists as an independent successful domain! Research suggests (Jankowski & Holas, 2014), that meta-level cognition can most often take place at an implicit level. Metacognitive monitoring may be partially unconscious but higher level of Meta cognition such as mindful meta-level is always conscious. Only conscious intended processes classify as coping; mindful meta-level hence is discussed as a cognitive process here.

Jankowski and Holas (2014), suggest that very often when individuals are recording experiences by meta-cognition and this recording is distorted at the object-level due to some interference transitional dissociation takes place. Defense mechanisms are an example of translational dissociation, because they are characterised by motivated misinterpretation as a result of inconsistency in meta-knowledge with actual experience. An outcome of this is hampered memory, misattribution and maladaptive self-regulation. Information distortions can be reduced by inducing mindfulness- that is by increasing alertness. Hussain (2015), says, “Such metacognitive insights play vital role in the process of disengagement from the negative automatic thought patterns and facilitates adaptive coping abilities.” Conclusively, it can be stated that; mindfulness meta-cognitive processes can help in combating superstitions.

Situated Cognition: Superstitions and Mindfulness

Aydede & Robbins (2009), explain situated cognition as a theory which suggests that people’s knowledge is constructed within and linked to the activities that they indulge in. In simple terms, the context, culture and environment as a whole play an important role in the process of learning. Therefore, planned alterations in the environment and controlling situational For example, in a corporate; policies, regulations and the working environment must promote increased awareness, open-mindedness, chance to voice opinion and facilities to reduce stress. Similarly, in the domain of education, contexts influenced by the concept of mindfulness, must be introduced. This has further been discussed in the paper.

Intuitive Thinking Style and Superstitious beliefs

Messick (1976), defined cognitive styles as stable attitudes, preferences, or habitual strategies that determine individuals’ modes of perceiving, remembering, thinking, and problem solving. Research by

Aarnio & Lindeman, (2005), Epstein, Pacini, Denesraj & Heier, (1996), has suggested that superstitious behaviour and intuitive cognitive style are related concepts since both are void of scientific thinking. This implies that a superstitious individual makes decisions based on faulty perceptions and based on magical thinking. In order to solve this issue, the most apparent approach to make would be shifting from the intuitive cognitive style to a more critical or analytical thinking style.

Mindfulness practices as a tool for Analytical Thinking

This section focuses on how mindfulness will help develop analytical thinking. In order to influence the decision making process, an individual's perception and the manner in which they observe needs to be altered. Mindful observation has been suggested to lead to effective decision making since it involves processes such as observing, describing, interpreting-and suspending evaluation; rather than just engaging in a snapshot and making a decision (Toomey, 1999, p. 269). The aim of this process is to help individuals first observe attentively all the elements of the situation, then mentally describe what is observed and then generate not one, but multiple interpretations. Furthermore, Toomey suggests that one needs to acknowledge and accept that certain elements in the situation are in sync with one's beliefs, whereas there are some which or not aligned to our beliefs and hence must be interpreted contextually rather than merely adding those elements to existing categories in the mental mind maps that we have created.

Integration of Mindfulness in Academics among School Children

Formal education has been suggested as a key solution to most of the issues that have been faced by humankind. However, this section focuses on why formal education cannot help combat the issue of superstitions. Developmental psychology states that children understand the world using three core knowledge concepts related to physics, psychology and biology. Core knowledge is not taught learnt without instruction (Goswami, 2002, Wellman & Gelman, 1992, 1998). Knowledge of physics helps understand the concepts of volume, space in terms of object/material (Carey & Spelke, 1994, Spelke, 2000, Wellman & Gelman, 1992, 1998).

Psychological entities inculcate knowledge to differentiate between material objects and objects of the mind such as thoughts, symbols, beliefs and desires. Biological phenomenon help understand the notions of contamination and healing. Core knowledge plays an important role in survival and avoidance of illness (Wellman & Gelman, 1992). Ontological confusion is when an individual applies core knowledge of one domain to another without rational backing; this categorical mistake (or ontological confusions) give rise to superstitions and other similar beliefs (Lindeman, Aarnio, 2006). Example, Hitler's personality can spread to his sweater (Nemero & Rozin, 2000; Rozin, Millman, & Nemero, 1986), similarly, one might believe that particular clothing is lucky. As mentioned earlier, since these core concepts are learnt without instruction, education is not a solution to this issue. Therefore, learning that helps an individual make a more conscious, aware and informed decision could help in coping with this issue.

Furthermore, the author proposes that, MBCT and other mindfulness practices must not be only initiated as an intervention to help individuals who are superstitious, but the practice should also heavily be focused on the prevention of the formation of a faulty framework. Between the age of 5-7 children start developing the aforementioned operational skills (Piaget, 2000). It is between these ages that children also start developing their thinking styles, therefore, this period seems to be a suitable age for engaging children in mindfulness practices which help in developing a healthy cognitive framework and conclusively raise individuals who are far less inclined towards superstitious beliefs. A study conducted by Lisa Flook (2010), suggests that Mindful Awareness Practices (MAP) has a positive effect on elementary functions (EF) among school children. An improvement in EF scores suggests improvements in processes such as reasoning and problem solving, among other cognitive processes. MAP has not only proven to be effective in increasing EF scores but also has improved behaviour outside the school setting, that is, has enhanced executive functioning and a child's socio-emotional development. These improvements suggest an improvement in cognitive control and conclusively suggest a development of a healthy cognitive framework; leading to children being less inclined towards superstitious beliefs and the like.

Another study by Meiklejohn, Phillips, Freedman, Griffin, Biegel, Roach, Frank, Burke, Pinger, Soloway, Isberg, Sibinga, Grossman & Saltzman (2012), has also suggested that integration of mindfulness training in the academic field has leads to improvements in emotional regulation, self-esteem, that is has indicated improvements in mood, decreases anxiety, stress, and fatigue; all of which would help in preventing the development of and combating superstitious beliefs. Furthermore, not only students but also teachers benefit since research indicates and increase in self-efficacy of teachers which enhances their ability to manage classroom behaviour and establish supportive relationships which enhances the process of development of the students (Meiklejohn, Phillips, Freedman, Griffin, Biegel, Roach, Isberg, 2012)

Lester and Gorfalo (1986), through their research acquaint us with role metacognition plays in education. Metacognitive development leads to students developing the ability to self-reflect and self-regulate. Research shows that there is a positive correlation between self-regulation and learning, as well as the ability to learn (Bouffard, Boisvert, Vezeau & Larouche, 1995; Pressley, Borkowski & Schneider, 1987; Zimmerman, 1994; Czerniawska, 1999). Besides this, cognitive processes were also regulated which led to students taking responsibility of their own actions and did not indulge in the practice of blaming others or relying on luck for their success. If students are conditioned to the aforementioned type of cognitive processing, the incidence of irrational thought would be reduced. Aforementioned arguments help us conclude that, mindful metacognitive practices will have positive impact on learning.

The author suggests the inculcation of mindfulness practices in the domain of formal education but not only in the form of meditation but should be induced in school going children as a part of problem-solving, decision-making and other such activities. In addition, the environment made available to the students and the rules and regulations put down by the institution should lead individuals to inducing in mindful-living. A disconnect between the teaching and the rules, regulation, the structure and the environment may confuse students, thereby hampering growth instead.

Discussion

One of the emerging trends that author notices is that, individuals these days have started to be more analytical about their own feelings and their behaviours. In addition, due to the development of scientific inquiry among the common population, individuals are also trying to explore the underlying determinants of their behaviour. Furthermore, they are also trying to use this knowledge in their best interest-thereby indulging in coping strategies, which were earlier characterised as defense mechanisms, as they were unconscious processes. For example, athletes and other individuals indulge in superstitious practices, knowing the fact that they do so just to feel calm (i.e. Change the way they feel).

Nevertheless, ultimately users are indulging in magical thinking, since there is not an established scientific connect between their actions and its effect (that is a cause-effect relationship is missing). As mentioned in Wiseman's paper, 'The luck factor', techniques needs to be developed to educate individuals regarding the underlying mechanism of such magical thinking. This objective can be achieved by taking to mindfulness techniques. Researchers must take advantage of the new emerging trends that has been mentioned above.

Lastly, few researchers have also spoken of certain side-effects that come along with the practice of mindfulness. Miguel Farias (2013-2015) has said, "A technique that lets you to look within and change your perception of yourself has to have potential adverse side effects." David Shapiro (1992), in his study has mentioned the following negative side effects of mindfulness practice- panic, depression, and anxiety amongst other things. In some other cases it has also proved to be ineffective, for example, dealing with aggression. Others have also suggested that, as people become more aware of themselves, the more sensitive they get and can feel a lot of mixed emotions. The author argues that the aforementioned could have been due to lack of training of the practitioners. Nevertheless, there is ample scope to explore this in this regard.

Conclusion

In conclusion, according to the author, mindfulness would help combat superstitions because, mindfulness practices are aimed at being more aware of oneself and that of the environment, and also enables individuals to observe better that leads to more rational decision making. Furthermore, since it makes individuals more self-aware, it also provides a sense of control over oneself; enables them to deal with confusion and anxiety in a calm manner. A relaxed mind is more capable of dealing with problem situations and therefore helps individuals disengage in habitual superstitious beliefs.

Prevention is always better than cure. Therefore, the author suggests that mindfulness practices must be introduced in the educational domain so as to facilitate rational thought and thereby avoid formation of irrational beliefs. Most of the research conducted in the domain of education speaks of mindfulness largely in terms of meditation. In the opinion of the author, the focus must now therefore be on mindful-metacognitive practices and also designing policies and a learning environment that is established on the principles of mindfulness.

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