Chapter – V

Discussion
The objectives of the present investigation were to explore the attributional style and anxiety sensitivity among asthmatics. In view of the objectives certain research hypotheses were formulated. The results of the present study are discussed in the light of the ‘attributional style’ concept as evolved in the reformulated model of learned helplessness (Abramson et al., 1978) and termed as explanatory style by Peterson and Seligman (1984) and the anxiety sensitivity concept as presented by Reiss and McNally (1985). Abramson et al. (1978, 1980) proposed that causal attributions can be classified along internal-external, stable-unstable and specific-global dimensions. Attributions to these dimensions have implications for future expectations of noncontingency and symptoms of helplessness. Abramson et al. (1978) provided evidence of a depressive attributional style. These authors suggested that the particular attribution that depressed people choose for failure is probably irrationally distorted towards global, stable and external factors. Large number of studies indicated that internal, stable and global attribution to negative events and external, unstable and specific attribution to positive events (pessimistic attributional style) is a risk factor for various disorders. While the reverse (optimistic attributional style) is related to good health and psychological well-being (Khan and Jahan, 2006).

Our first hypothesis stated that asthmatics would have an attributional style different from non-asthmatics. It was observed that for positive events on Attributional Style Questionnaire (ASQ), asthmatics
obtained significantly lower composite score as compared to non-asthmatic norms. They also attributed positive events to more external rather than internal causes. For negative events, however, asthmatics obtained significantly higher composite score and attributed them to more global than specific factors.

Our findings are corroborated by the results of the earlier studies. Peterson (1988) found that a dimension that combines stable and global attributions was a better predictor of physical health than the internal dimension. Dua (1994) also found that of the attributions for good and bad events made along three dimensions, global attributions for bad events were the best predictors of self-reported emotional and physical health.

Peterson (1995) suggested biological, emotional, behavioural and interpersonal pathways between explanatory style and health. At the biological level the uncontrollability may compromise the immune system. At the emotional level the route between explanatory style and physical well-being runs through a wide range of negative feelings. At the behavioural level, explanatory style is associated with health relevant behaviour. Individuals with a pessimistic explanatory style do not do the sort of things that lead to long term well being. Unlike their more optimistic counterparts, they smoke, drink, and refrain from exercise (Peterson, 1988), when they happen to fall ill, they respond in a passive and helpless manner (Lin and Peterson, 1990). In contrast, individuals
with a more optimistic explanatory style take active steps in order to feel better (Peterson et al., 1992). As regards interpersonal pathways Peterson (1995) discusses that those with a pessimistic explanatory style are more likely to experience loneliness (Anderson and Arnoult, 1985) as they initiate fewer attempts to be friends with others.

Our second hypothesis that the patients with different duration of illness differ in their attributional style was only partly confirmed. Though the three groups (1 year or less, 1 to 5 year and above 5 years illness) did not differ significantly from each other on composite scores on ASQ for positive events, yet some differences appeared on internal-external and stable-unstable dimensions. Patients with 1 year or less duration of asthma were more external and stable for positive events, while patients between 1 to 5 year history of asthma made more internal attributions. Patients with above 5 year history of asthma onset made internal (scoring highest among three groups), but unstable attributions for positive events. Patients, in their earlier phase of illness, have more external and stable attributions for positive events. While the chronic patient’s attribution for positive events is more internal but remains unstable.

For negative events of ASQ the three groups differed significantly from each other depicting the highest composite score for 1 to 5 year illness duration group and lowest for 1 year or less illness duration group. Illness duration of 1 to 5 year group also made global attributions for
negative events while more than 5 year asthma duration group was both stable and global for making attributions to negative events.

Most researches evidence that stable and global attributions for negative events is the characteristic of depressive persons (for example, Sweeny et al., 1986). Researches also reveal that negative affects particularly depression cohere the asthmatic symptoms. Hence, the results of the present investigation suggest that as asthma prolongs/persists, it may make the patient more vulnerable to depression. Therefore, probably, patients with the longest duration of illness show the depressogenic attributional style.

Our next hypothesis was that patients of different age groups would exhibit different attributional style. The results did not reveal any significantly different attributional style for 12 to 20 years age group while for the group of 20 to 35 years significantly positive attributional style emerged. They made internal and stable attributions for positive events and unstable attributions for negative events. However, the age group 35 to 50 years had more negative attributional style specifically attributing negative events to stable causes. The present findings have some support from the results of an earlier longitudinal study conducted by Peterson (1995), which indicated that pessimistic attributions for negative events had strongest relationship with health-related problems at age 45 and above. He found that optimistic explanations for bad events at age 25 were related to good health and pessimistic style was unrelated to
health at age 30 to 40 years. But, thereafter a relationship emerged, reaching its most robust level at age 45 showing marked deterioration in their health.

A comparison of male and female asthmatics also revealed significant differences, leading to the acceptance of the hypothesis regarding gender differences. Asthmatic males obtained higher composite score for positive events, particularly attributing positive events to internal causes.

On the other hand, female asthmatics as compared to male asthmatics scored significantly higher composite score for negative events, especially attributing negative events to internal and stable causes. This showed that female asthmatics as compared to male asthmatics have more maladaptive attributional style.

One significant finding that the present investigation revealed is that asthmatic males did not differ from non-asthmatic normal males in terms of their attributional style. While, on the other hand, asthmatic females significantly differed from non-asthmatic normal females, particularly on attribution for positive events. Asthmatic females obtained significantly low composite score for positive events and made more external and unstable attributions. Whereas, for negative events no significant difference emerged on internal-external, stable-unstable or global-specific dimensions except composite score. These findings
suggest that though attributional style plays a significant role in women's asthma, it is, perhaps, not relevant for explaining asthma among males.

Another variable of the present investigation was anxiety sensitivity. Anxiety sensitivity as conceptualized by Reiss and McNally (1985) in their expectancy model is the fear of anxiety related thoughts and bodily sensations based on belief that they will be harmful. It is a cognitive risk factor/pattern of thinking that can affect health, "Just having this type of thinking pattern puts a person at greater risk for developing physical or mental impairment" (Schmidt, 1998). High anxiety sensitivity has also been a predisposing factor in the development and maintenance of anxiety disorders and has a strong relationship especially to panic disorder (Schmidt, Lerew and Jackson, 1997). The result of the present study also insonance with the earlier findings. It was hypothesized that asthmatics and non-asthmatics would differ in the level of anxiety sensitivity. The results obtained were in accordance with the hypothesis as asthmatics were found to have significantly higher level of anxiety sensitivity when compared to non-asthmatic normal group. The present results are endorsed by the findings of a pilot study carried out by Khan and Jahan (2005) which found that asthmatics show higher level of anxiety sensitivity when compared to nonasthmatics. Asthmatics also scored high on lower order factors, pointing to high level of physical, mental incapacitation as well as social concerns. The same findings were obtained when comparisons between asthmatic and normal males, and asthmatic and normal females were made. These findings were partly supported by the
findings of earlier studies (Carr, Lehrer, and Hochron, 1995; Carr, Lehrer, Rausch and Hochron, 1994, Khan and Jahan, 2005) conducted on asthmatics, which found anxiety sensitivity to be significantly related to panic disorder among asthmatics. They also found that cognitive variables predicted both illness specific panic fear and generalized panic fear.

Keogh and his associates (for example, Keogh and Cochrane, 2002; Keogh, Ellery, Hunt and Hannert, 2001) on the basis of their extensive and intensive researches on anxiety sensitivity and pain postulated that anxiety sensitivity is a trait susceptibility associated with the fear of anxiety related sensations. The reason why such fears exist may be because of the cognitive/information processing, such as attentional bias and interpretative bias. Those high in anxiety sensitivity selectively attend toward such sensations (for example, physical or social) and they have a tendency to misinterpret ambiguous events and sensations in a negative manner. Evidence exists that anxiety sensitivity is associated with both attentional and interpretative biases. Negative emotions such as anxiety and depression are characterized by negative processing biases. The biased cognitive processing not only helps in maintaining such mood states in the clinical group but also makes the nonclinical persons to be vulnerable for negative emotions. They further argued that as pain patients often report high level of anxiety and depression, it is likely that they will also exhibit cognitive processing biases. The cognitive processing biases mediate the anxiety sensitivity-pain relationships.
Borden and Lister (1994) had also suggested that individuals with high levels of anxiety sensitivity believe the experience of anxiety as harmful and monitor their physiological responses by focusing attention to their internal stimuli.

The same explanation seems to be true for asthma condition. Given that patients with asthma also report negative emotional states like depression and anxiety (Bennett, 1994; Goldney et al., 2003; Kashani, Konig, Shepperd, Wilfley and Morris, 1988; MacLean, Perrin, Gortmaker and Pierre, 1992, Opolski and Wilson, 2005) it is likely that they will exhibit biased cognitive processing. Asthma is a chronic lung disease characterized by recurrent breathing problems and symptoms such as breathlessness and chest tightness, together with cognitive dyscontrol (for example, dizziness and nervousness). These symptoms vary over times, and also differ in severity. Asthma often leads to hospitalization, missed work, school absenteeism, limitations on physical activities, sleepless nights and in some cases even death. Therefore, asthmatic is expected to be highly attentive toward those visceral/bodily cues which occur prior to and during an asthma attack. Anxiety sensitivity amplifies attention to fear related physiological sensations through a process of vigilance and hypervigilance. This in turn leads to increased anxious behaviour among high anxiety sensitivity patients and thus it makes a vicious circle.

It was also hypothesized that asthmatics with different durations of the disease would exhibit different levels of anxiety sensitivity. The results of
the present study confirmed the hypothesis, as patients with the longest duration of illness, that is more than 5 years, reported the highest level of anxiety sensitivity. These findings were obtained by Khan and Jahan (2005) is a pilot study, indicating that patients with different illness duration (that is less than 1 year, 1 to 5 year and more than 5 year) vary in their anxiety sensitivity. It was observed that anxiety sensitivity was high in the beginning, followed by a decrease, and again an increase in its level. They also reported high mental incapacitation concern followed by social concerns. Conversely, patients with illness duration of 1 year or less as compared to other groups had the highest level of physical concerns and the least mental incapacitation concerns. However patients with illness duration of 1 to 5 year reported/exhibited the lowest level of anxiety sensitivity.

Our next hypothesis stated that patients in different age groups would differ in their level of anxiety sensitivity. The hypothesis was only partly confirmed as patients in different age groups did not differ in their total anxiety sensitivity score. Yet they were significantly different on lower order factors. 12 to 20 years age group as compared to other groups had significantly highest level of physical concerns, significantly lower social concerns and least mental incapacitation concerns. 20 to 35 years group did not differ significantly from 35 to 50 years group. But as compared to 12 to 20 years group, 35 to 50 years group had significantly lowest physical concerns, but highest mental incapacitation and social concerns.
The above findings get support from earlier studies which reveal that mental incapacitation concerns had the strongest positive linear relation with depressed mood (Schmidt, Lerew and Joiner, 1998; Taylor, Koch, Woody and McLean, 1996) while physical concerns showed the strongest positive relation with panic related phenomena (Zinbarg, Brown, Barlow and Rapee, 2001) — fear responses to hyperventilation challenge and 5.5% CO₂.

It seems that during early phase of the illness the patient reacts panic related symptoms to asthmatic attack with panic like symptoms and, therefore, show more physical concerns. As duration of illness increases and asthma becomes chronic, affecting the person’s almost all life activities, it leads to depression and therefore the patients in the later stage of life with long standing problem of asthma experience highest level of mental incapacitation concerns.

Our next hypothesis concerned the gender differences and it was expected that male and female asthmatics would differ in their level of anxiety sensitivity. The results of the study confirmed the hypothesis revealing significant differences between the two groups on anxiety sensitivity. Asthmatic females as compared to asthmatic males scored significantly higher on Anxiety Sensitivity Index. Same finding was also observed by Khan and Jahan (2005), revealing that female asthma patients reported grater anxiety sensitivity than male asthma patients. Though males scored a little higher on physical concerns, the difference between the means
was not statistically significant. On the other hand, females expressed significantly higher mental incapacitation as well as social concerns.

The results of the present investigation are partly supported by the anxiety sensitivity-pain relationship studies conducted by Keogh and associates (Keogh and Birkby, 1999; Keogh, Hamid, Hamid and Ellery, 2004). They found that both anxiety sensitivity and gender were related with the experience of pain. Females high in anxiety sensitivity were found to report greater sensory pain compared than females low in anxiety sensitivity. Anxiety sensitivity was, however, not found to significantly mediate the sensory pain responses of males.