Left-handed People in a Right-handed World: A Phenomenological Study

Yusra Masud and M. Asir Ajmal

Government College University, Lahore

The purpose of this research was to explore the experiences of left-handed adults. Four semi-structured interviews were conducted with left-handed adults (2 men and 2 women) about their experiences. After transcribing the data, interpretative phenomenological analysis (IPA), which is a qualitative approach, was utilized to analyze the data. The analysis highlighted some major themes which were organized to make a model of life experiences of left-handers. The highlighted themes included Left-handers' Development: Interplay of Heredity Basis and Environmental Influences, Suppression of Left-hand, Support and Consideration, Feeling It Is Okay, Left-handers as Being Particular, Physical and Psychological Health Challenges, Agonized Life, Struggle for Maintaining Identity and Transforming Attitude, Attitudinal Barriers to Equality and Acceptance. Implications of the research for parents, teachers, and psychologists are discussed.

Keywords: Left-handedness, suppression, discrimination, IPA

Right-handedness or dexterity (from Latin word "dextra", meaning right) is an estimable trait very different from being left-handed or sinister (Latin "sinistra", left). Left-handedness is a tendency to use the left-hand more proficiently than the right-hand. A person can be thought to be a left-hander when he/she attains better results with the left hand, as well as when he/she gives preference to the left hand in activities which need strength, good co-ordination and accuracy (Meyer, 1998). As universally known, generally people use right hand overwhelmingly than the left and the population which is more agile with the left hand is comparatively small, i.e., about 10-15%.

For centuries, individuals' have been in search for the answers that why people have a preference for left-hand over the right and why the left hand is chosen in such a minority (Franklin, 2008). The evidence for the determination of left-handedness has been attributed to heredity, environment, or to the brain functioning and data of various sorts have been used in attempts to establish one fact or another.

Left-handedness in Different Cultures and Religions

In determination of hand preference, culture, and religion also play their role. The difference between left and right-handers in different cultures and belief systems focuses on the likelihood that left-handedness may be a sign or an indicator of some pathology, problem or evil. Supporters of this perspective have suggested that these problems have been noticeable enough to work their way into folk psychology. The traditions from numerous disparate cultures reflect the underlying assumption that right-handedness is allied with normality and left-handedness stands for abnormality or pathology.

Stan Gooch (as cited in Crabtree, 2002a) highlights the fact that in vast majority of cultures, from every continent like Africa, Asia, Australasia, Europe, and America, the "left" is normally associated with femininity and the "right" with masculinity.

Left-handedness is extremely disapproved in most cultures. Ancient Greeks and Romans considered the left side as imperfect and blasphemous. In Nigeria, people are inclined to view left-handedness as worst as a sign of evil or at best an expectantly curable adversity. About half a century ago in Japan, left-handedness in a wife was thought to be more than enough for divorce. Only a decade ago in Taiwan, left-handed people were highly supported to swap to being right-handed or at least to write with the right-hand (Dada, 2000; Handedness, 2009; Kalafut, 2008).

In South America, the right is regarded as good, life and divine but the left as bad, evil and morose. Similarly, among North American Indians the right stands for bravery and virility but the left indicates death and interment (Crabtree, 2002b).

Mandal and Dutta (2001) establish in a series of studies that about 10% of humans are left-handed, though the prevalence rate varies due to sex, age, and cultural geographical locations. Investigations disclose that the frequency of left-handers is greater in Euro-American than in Oriental (India, Japan, and China) cultures and restrictions on using left-hand are ingrained in the belief system and social interpretation in a given culture.

Although left-handedness is not thought to be good in most cultures and societies, there have been some exceptional cases contrary to this pattern. The left-handers are respected and honored by Incas and in Zuni tribe left-handedness indicates good luck. They consider left-handers older and wiser. Despite the fact that left-hand shakes are a sign of disregard all over the world, the official handshake of the Boy Scouts is left-handed that is a symbol of courage and bravery (Mc Namara, 2006).

These are just few of the biases found in cultures. There is also an ample hand bias in religion which is strongly inclined towards the right-hand. For thousands of years, Devil has been linked with the left-hand in a variety of manners and is normally depicted as being left-handed in pictures and other figures. Several superstitions and myths regarding "left-hand side" are associated with evil. It was believed in the seventeenth century that the Devil baptized his partisans with his left-hand (Left-Handed Myths and Misunderstandings, 2000).

The left-hand is much criticized in myths and fables. In medieval times, left-hand was linked with the witch-crafts, wizards, black arts, and sorcery. Even nowadays in Christian marriages, the wedding band is tied on the ring/third finger of the left-hand because this is considered a "charm finger" of superstition and a valuable metal ring on this finger would increase the power to protect against black magic (Flatt, 1999).

Some of the aversion related to the left-hand is due to its association with the sanitary habits of primitive man and of the Arab world. Muslims disapprove the use of their left-hand for most daily

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Yusra Masud and Dr. M. Asir Ajmal, Government College University, Lahore.
Correspondence concerning this article should be addressed to Yusra Masud, Government College University, Lahore.
Email: yusramasud@hotmail.com

activities. They use right-hand for eating while the left is used to clean after defecation. It is prohibited among the Muslims to touch any holy scripture with the left-hand. This approach towards the left seems to be quite universal as it is not only an Eastern concept but can be found in most religions and cultures all over the world (Pervert, 2006).

It is in the Quran and also in the Christian Bible that the God's chosen people and favorites sit on its right-hand side and the ruined on its left. Monotheistic religions are not only the ones who exclusively denounce the left-hand. Even a philosophical belief system like Buddhism is critical of the left. The left-hand path directs to perdition while the right guides to enlightenment (Crabtree, 2002a; Pervert, 2006).

Despite the cultural and religious customs and beliefs, general population attributes some positive traits or characteristics to the left-handers. For many years, researchers have also attempted to determine whether or not the left-handers in the human population have any special or good qualities that might be considered as an advantage of sinistrality.

Characteristics of Left-handers

A widespread idea exists that left-handed individuals are more intelligent and creative than right-handed people. The supporting data for cognitive skills performance of left-handers are intricate. In a study it was found that on average the left-handers show lower performance in high school (Williams, 1987). While other studies have established the contrary results that left-handers are significantly more intelligent than the right-handers (Faurie, Vianey-Liaud & Raymond, 2006; Ghayas & Adil, 2007).

Left-handers learn foreign languages better and quicker, have stronger spatial perception, are more creative, their visual memory is more developed and they often exhibit fighting nature (Kopiez & Sommer, 1999; Kõve, 1997).

Left-handers are somehow more flexible than right-handers. They appear to be capable of switching over their hand for performing tasks more easily than right-handed people. They think more quickly when playing computer games or sports, which is the reason they are considered better player than right-handers (Pawlik-Kienlen, 2008).

With all these attributes, even if life has become slightly better for left-handers since man progressed from caverns to cars, living in a world planned and particularly designed to match the needs of advantaged majority (i.e., the right-handers) it is still problematic.

Problems Faced by Left-handers

The left-handers have to put in great effort even for simple tasks of life contrary to their natural tendencies and face problems in the use of tools for routine chores. Some of the evident challenges for left-handed individuals include school desks that are unworkable, vegetable peelers that are of no use, pens that spread ink and make writing unreadable and computer mouse that cause spasms of hand (Flatt, 1999).

Additionally, left-handers experience more learning difficulties (related to reading, writing and to comprehend other school subjects) than right-handers, more than half of whom are boys (Kansanen & Lauerman, 1993). Handwriting can also put forward a special obstruction for left-handers (Lance, 2005).

Suppression of Left-hand

With these problems faced by left-handers in their everyday life, they also face suppression for left-hand use by right-handed people. Forcible change of handedness makes what psychologists describe as a "misplaced sinister" and these downhearted people have miserable childhoods. In the earlier periods, left-handers were usually forced to change into right-handed people. This conversion was sometimes supported by thrashing the left-hand. Even nowadays, teachers and parents usually try to compel children to use their right-hand for writing (Crabtree, 2002b).

Porac and Buller's (1990) findings disclose that one of the important features of right-hand shift was the change to right side initiated in early years of life by parents or teachers. Moreover, Teng, Lee, Yang, and Chang (1976) established that social pressure was useful for eating and writing with right-hand but did not have a great influence on hand preference in other tasks.

In the early periods of investigations related to dyslexia, some educators suggested to restrain activities performed by left-hand with the intention to establish the brain's left hemisphere dominance. Tonnessen, Lokken, Hoien, and Lundberg (1993) found that left-handedness has an imperative association with dyslexia and immune disorders.

On the other hand, Johnson and Duke (1935) analytically studied sixteen cases in which there appeared to be an indication of a temporal relation between changes in handedness and onset and disappearance of stuttering.

With suppression, like several other minority groups, left-handers have also been subjected to degradation, prejudice, and discrimination merely on the basis of the left-hand that is used by its members for daily activities such as eating, cutting food, or writing.

Discrimination against Left-handed People

Today, social psychologists use the terms discrimination, prejudice, and stereotypes to refer to our behavioral, affective and cognitive biases respectively (Franzoi, 2006). Different researches have shown that minority individuals are highly stigmatized and face multiple forms of prejudice and discrimination due to their physical characteristics, e.g., height (Isaac, 2009), weight (Puhl & Heuer, 2009), and color (Rogers & Prentice-Dunn, 1981).

Right-handed people might think that words like "discrimination" used with reference to left-handed individuals are a bit overdone or overdramatic. But it is clear that most of the people do have a set of often unacknowledged attitudes toward left-handers that express themselves in disdain and even scorn.

Discrimination against left-handers can be seen in the form of direct discrimination while most of the times they encounter indirect or subtle discrimination. Subtle discrimination is far more common and is often worse than open discrimination. Generally, discrimination is based on prejudice or stereotypes. It is evident that prejudice and stereotypes can result in negative outcomes and takes its form in discriminatory behavior (Discrimination, 2008).

For proof of prejudice and negative stereotypes related to left-handers we need to go no further than having a look at different languages of the world. The tendency appears to be universal that the words for "left-handed" in different languages mostly mean negative trait. Oxford English Dictionary defines the term left-handed as "crippled," "defective," "awkward," and "illegitimate". The French gauche means "crooked" and "ugly"; in Italian, the word for left-hand is mancino, which means "disfigure" or "dishonest" (Coren, 1992).

Some other languages include German which uses linkisch for left meaning "awkward" ; na levo in Russian means "sneaky"; zurdo in Spanish means "malicious" and in Romanian bongo is used for left which means "crooked" or "evil". Thus our languages declare that we believe that the left-handed people are not a very noble group of people and definitely they are wrong in many ways (Rights for the Left Handed, 2001).

Coren (1992) found in an experiment of interpreting the meaning

of "left-hander" that 91% students interpreted this word as "clumsy," "rude," "socially inept" and related adjectives. The other 9% declared it meaningless or required more information for interpretation. There was not even a single positive interpretation.

Discrimination can also have enormous effects on left-handers. The principal effect could be social isolation when the left-handers may be avoided by friends and acquaintances and in the family where the person may be forced to eat and write with the right-hand. They may also isolate themselves to avoid others and to avoid uncomfortable situations such as being shunned or becoming the subject of gossip. They may become introvert and feel unworthy or guilty leading to lack of self-worth and depression.

People are gradually becoming more aware of laterality and the related issues in Western countries. Although the situation is getting better, this area needs to be explored and investigated especially in Pakistan. There is an obvious lack of knowledge about the issues and problems faced by left-handed individuals. The basic need is to increase the awareness about it and this research is designed to enhance the same among people. In addition, insight into these problems, difficulties, and their management is an imperative issue for the adjustment of left-handed people in the society as well as in their own lives. This understanding of parents, teachers, significant others, and psychologists would be useful in order not merely to reduce or eliminate the problems but in addition would be beneficial in the development, teaching, and treatment of left-handers.

Research Questions

Following questions were devised for the present research:

1.   What are the experiences of left-handed individuals?
2.   What sort of discriminatory experiences are faced by left-handed individuals?
3.   What do individuals experience regarding suppression of left-hand use?
4.   What other types of problems do left-handers face in their daily lives?

Method

The research presented specifically examines the experiences of left-handedness in a detailed and contextualized way. This qualitative examination of participants' accounts better enable us to understand left-handedness in our society by tackling it from various dimensions. The investigation does not begin from any specific theoretical framework, since this would be against the IPA methodology that is primarily adopted for this research. IPA was used because it is concerned with trying to understand lived experience and with how participants themselves make sense of their experiences (Smith, Harré, & Van Langenhove, 1995; Willig, 2001).

Sample

Case studies of four adult left-handed individuals were conducted by the researchers. As the left-handed population is uncommon, purposive sampling was the best option to locate and recruit them for the study. Purposive sampling was carried out to target left-handed people in order to know about their similar and unique experiences of life. Their age ranged from 20-60 years.

Procedure

Participants for the case study were contacted, who agreed to talk about their experiences of being left-handed and participated in a fully informed way. Information was gathered from each participant about their life experiences (from childhood to the present age) using semi-structured interview. Some of the questions asked were "What does it mean to be a left-handed person", "What are the good things about being left-handed", "Have you been treated differently during your brought up", "What are the experiences of being a left-handed person", "What barriers have you encountered being a left-handed person in daily life activities", "Have you ever experienced suppression of left-hand" and "Have you ever experienced discrimination due to being left-handed". Semi-structured interview enabled the participants to provide a fuller and richer account and allowed the researchers considerable flexibility in probing interesting areas which emerged. Interviews were recorded and subsequently were transcribed.

Data Analysis

The data from the semi-structured interviews was analyzed using Interpretative Phenomenological Analysis (IPA) in an idiographic and systematic manner. This approach was preferred with the intention of developing thick descriptions that helped to closely examine and illuminate the experiences of left-handed individuals. Transcripts of interviews were reread in order to become familiar with the account. Then the researchers documented the emerging themes for each paragraph of the whole transcript.

The next stage was to produce a list of themes ordered coherently. Thus, the above processes identified some clusters of themes which captured most strongly the respondents concern on the topic. The clusters themselves were given a name and represented the subordinate themes.

Results

Findings of this study gave a comprehensive model for understanding the life experiences of left-handed people. Themes and group of sub-themes emerged in the model and can be seen in the form of boxes in Figure 1. The first theme as the starting point is left-hander's development: heredity basis and environmental influences. Following route 1, the group of subthemes in different boxes indicates the experiences of suppression; sources of suppression, factors of suppression, ways to suppress, suppressed activities and the consequences of suppression. The dotted lines leading from or to other boxes show the seldom occurring occasions. It includes vicarious experiences, (in) significance of gender and resistance to change. Route 2 highlights the experiences of support, its sources and effects. The last one, route 3, indicates the experiences of discrimination, its sources, types and effects.

In the brief model (Figure 2), the ten major themes can be seen constituting all groups of subthemes. The first major theme is left-handers development: interaction of heredity basis and environmental influences. It leads towards environmental influences which include three major themes: suppression of left-hand, support and consideration and left-handers as being particular. Suppression leads towards physical and psychological challenges which in turn make their life, an agonized life. With that left-handers face many other problems in their daily lives and they try to manage them. The dotted arrow in the Figure 2 shows occasional efforts of left-handers to maintain their identity and to transform this suppressive attitude. The support and consideration which they get from their environment helps to give them a feeling that it is okay to be a left-hander. When left-handers are considered being particular it creates attitudinal barriers to equality and acceptance which also contributes in making life an agonized one.

Discussion

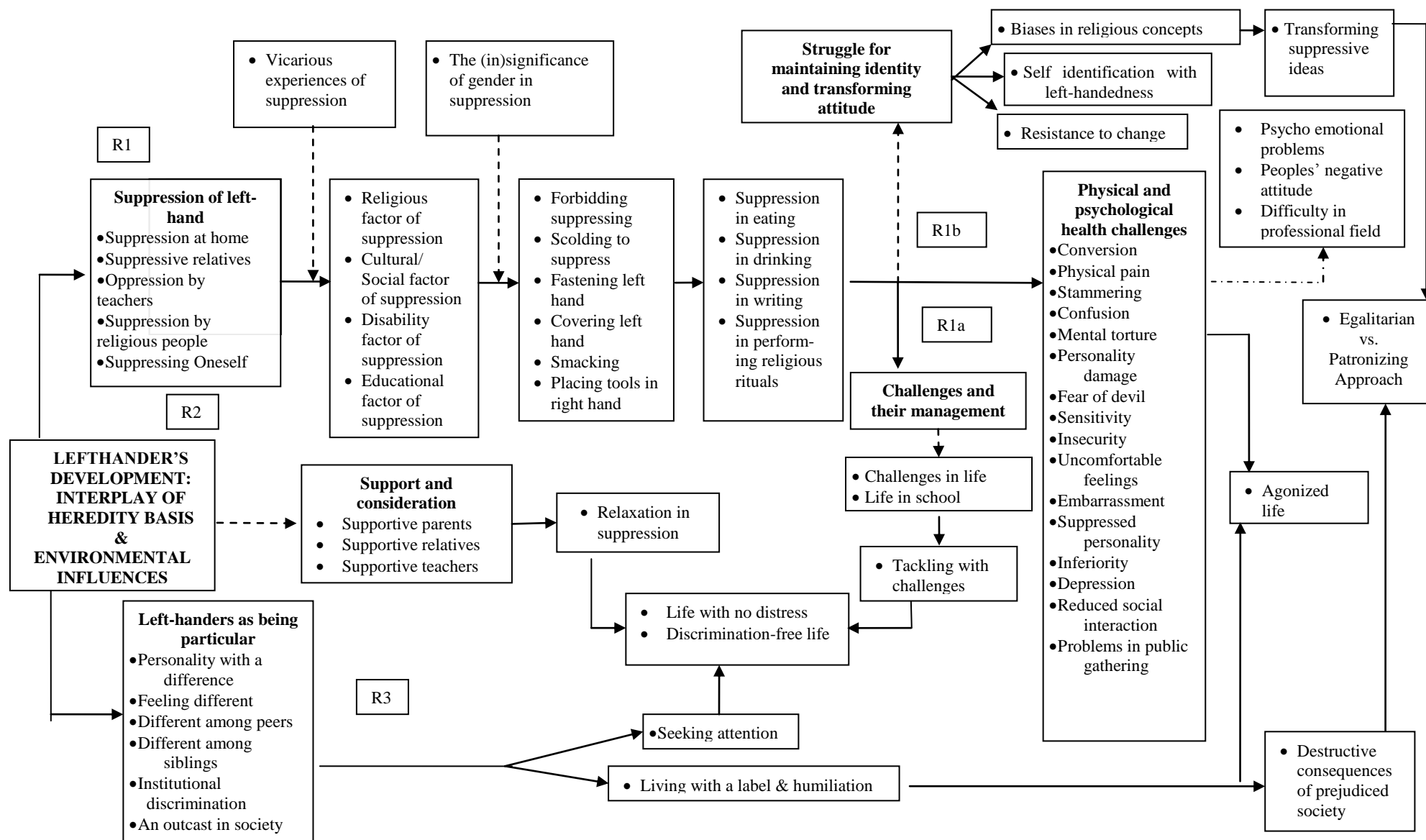The aim of this research was to gain a detailed understanding and

- Vicarious experiences of suppression

- The (in)significance of gender in suppression

R1

Suppression of left-hand
- Suppression at home
- Suppressive relatives
- Oppression by teachers
- Suppression by religious people
- Suppressing Oneself

R2

- Religious factor of suppression
- Cultural/ Social factor of suppression
- Disability factor of suppression
- Educational factor of suppression

- Forbidding suppressing
- Scolding to suppress
- Fastening left hand
- Covering left hand
- Smacking
- Placing tools in right hand

- Suppression in eating
- Suppression in drinking
- Suppression in writing
- Suppression in performing religious rituals

Struggle for maintaining identity and transforming attitude

- Biases in religious concepts
- Self identification with left-handedness
- Resistance to change

- Transforming suppressive ideas

R1b

R1a

- Psycho emotional problems
- Peoples' negative attitude
- Difficulty in professional field

Physical and psychological health challenges
- Conversion
- Physical pain
- Stammering
- Confusion
- Mental torture
- Personality damage
- Fear of devil
- Sensitivity
- Insecurity
- Uncomfortable feelings
- Embarrassment
- Suppressed personality
- Inferiority
- Depression
- Reduced social interaction
- Problems in public gathering

Challenges and their management

- Challenges in life
- Life in school

- Tackling with challenges

LEFTHANDER'S DEVELOPMENT: INTERPLAY OF HEREDITY BASIS & ENVIRONMENTAL INFLUENCES

Support and consideration
- Supportive parents
- Supportive relatives
- Supportive teachers

- Relaxation in suppression

- Life with no distress
- Discrimination-free life

- Egalitarian vs. Patronizing Approach

- Agonized life

Left-handers as being particular
- Personality with a difference
- Feeling different
- Different among peers
- Different among siblings
- Institutional discrimination
- An outcast in society

R3

- Seeking attention

- Living with a label & humiliation

- Destructive consequences of prejudiced society

Figure 1: Comprehensive model indicating subthemes of life experiences of left-handers.

Note. Themes are in bold. The arrows show often occurring strong relationship of experiences, the dotted arrows show the seldom occurring experiences or weak relationship and "R" shows the route to follow.
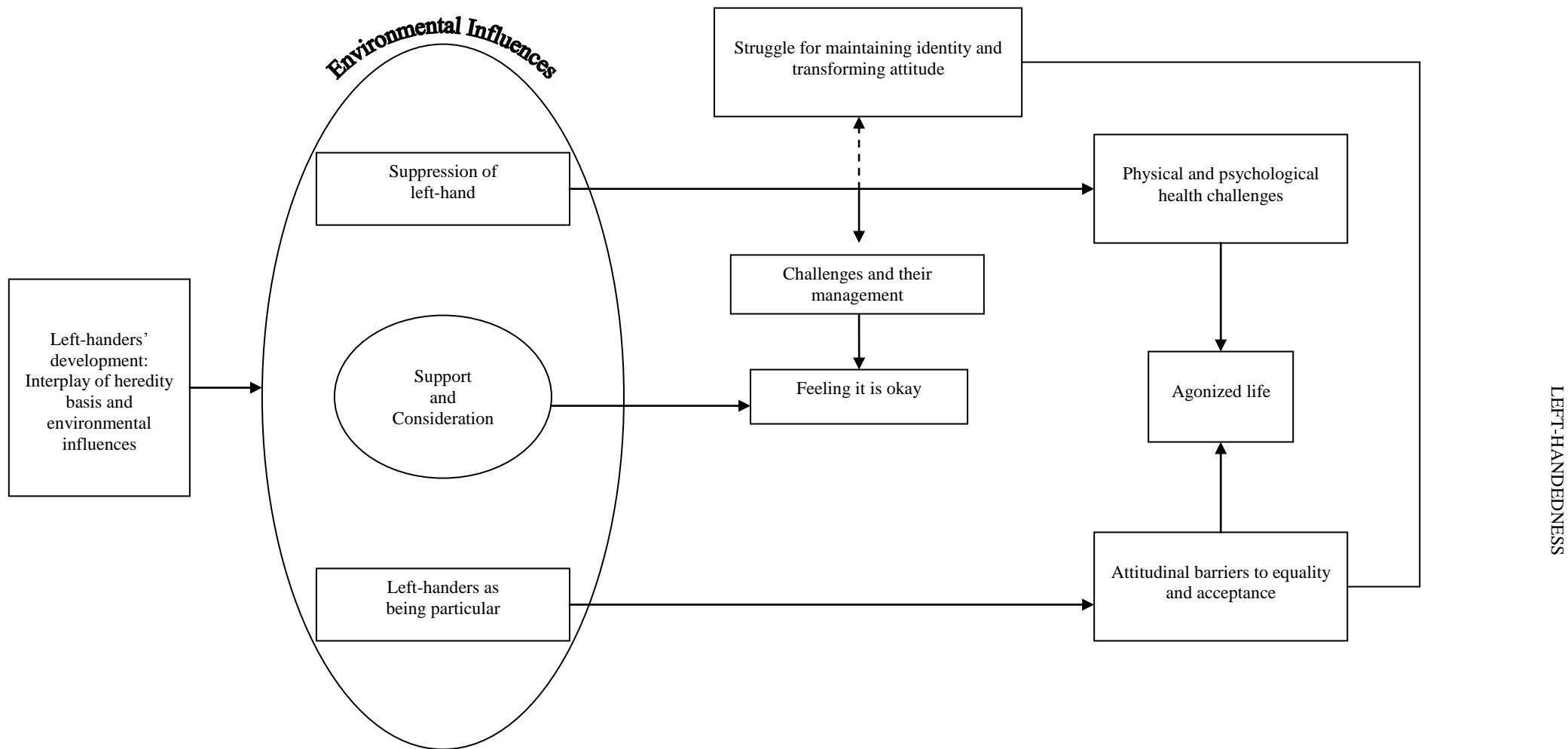
Figure 2: Brief model indicating major themes of life experiences of left-handers.

in-depth knowledge of experiences of left-handed people in this right-handed world. Results revealed themes related to problems faced in life, suppression, discrimination, and experiences of the participants.

Left-handers emphasized on the biological and environmental factors in development of their personality. They were aware that primarily there is a genetic cause of left-handedness and is more related to the cerebral dominance of right hemisphere. A participant reported,

"The doctors relate left-handedness with brain areas that their right side of the brain is more developed".

Similarly, in a study, Besrukih (2000) anticipated that the dominance of the brain's right hemisphere results in left-handedness. In addition to the biological factor, environment also had a strong influence in determining their personality.

Left-handers being a minority group usually faced both suppression and discrimination in their lives but also had supported network side by side. A participant stated,

"I think if you get a very supportive environment, then the left-handers may not feel different or that there is something wrong. But if people of the environment discourage and suppress left-hand, then more or less it will have a negative effect".

Suppression of left-hand was one of the experiences of left-handers. Several sources of suppression were identified. 'Suppression at home' was experienced as the main source. Left-handers experienced this suppression from their parents equally, i.e., in some cases it was the mother who suppressed her child's left-handedness while in other cases it was the father who did not like the left-hand use and wanted his child to convert. Participants stated,

"My mother forced me to use the right-hand".

"My father was strict (in the sense) that children should follow manners and every thing should be accurate..... When I started writing with left-hand, my father said that whoever sees her using left-hand, even the younger siblings should slap her hand so that she learns to write with her right-hand".

Another identified source was the 'suppressive relatives'. The experiences of left-handed individuals showed that several relatives like aunts, uncles, grandparents and brother-in-law also did not like left-hand use and suppressed it. Participants reported,

"My grandfather used to tie my left-hand and he strictly said to my father that she should not be allowed to use left-hand."

To be left-handed was not considered by the left-handers themselves to be very much odd; instead it was the discouraging and desperate responses in form of suppression chiefly from parents and relatives at home that made it atypical. The suppression by adults might be explained as an outcome of rigidity in their attitudes and beliefs.

Left-handed people also faced 'oppression by teachers'. Some times this oppression was basically the suggestion of parents but in most cases it was teacher's own effort to convert the child into a right-hander. The left-handers commented adversely on teacher's suppressive attitude in the class. For example, a participant stated,

"I never got heavenly teacher who did not ask me to do the work with right-hand. I had to tell everyone that it is easy for you to do work with your right-hand but not for me".

The reason for suppression by teachers might be that teachers continue to use methodology of teaching and writing suited only for right-handers, thus they oppress the left-handers to follow the same or manage on their own. Due to this reason, left-handed child might become the one from the risk group who could experience problems in academics.

The results of a study investigating left-handedness in pre school and primary school children of Singapore also revealed that local teachers appeared to be ignorant of the problems left-handers faced and made few provisions in their teaching for them (Gan, 1998).

In addition, 'suppression by religious people' was also reported by the left-handers. Non- acceptance by religious minded people is one of the bitter realities which directs to 'patronizing approach'. A participant said,

"People who are more religious say that we should do every work with the right-hand and if it does not happen in the way they want, they really mind it".

In some cases the left-handers started 'suppressing oneself' when he/she saw that everyone else is a right-hander. A participant reported,

"I felt it a lot because every one used to say that left-hand is not good because it is the evil hand and things like that. After that I tried to participate in all the activities from right-hand and improved myself in writing".

Mostly all the left-handers sometimes started suppressing themselves. 'Self-suppression' might be the result of unconscious worry that they will look awkward among right-handed people. Self-suppression by left-handers is, or can be, taken as trying to be like other people (right-handers), while suppression by others is probably to be interpreted as unsympathetic and uncaring attitude.

With all these sources of suppression, sometimes 'vicarious experiences', e.g., of siblings, relatives or friends also played role in suppressing a left-hander. A participant stated,

"My younger brother is a left-hander and due to the fear that elder sister was beaten (for using left-hand), he did not show his left-handedness at home".

Knowing from these vicarious experiences they become able to think about the reactions of people around them and the serious consequences for using their left-hand.

The suppression left-handers mainly faced was due to the 'religious factor'. Right-handed people actively dissuade left-handers to use their right hand because of the negative connotations especially in Muslim rites associated with the left hand. Participants stated,

"He (uncle) associated it with evil and used to say that it is a devil's hand".

"We are Muslims and this (right) is the actual hand for us, means that it is said that working with right is Sunnah and also we are asked to hold Quran with right".

It may be difficult to address such perceptions because sensitivity about left-handedness is linked to the religious beliefs and traditions. It is likely that such religious beliefs will also be difficult to change because most of the priests and other religious people hold such beliefs.

Cultural/social factor was also significant for suppression of left-hand. As majority use right-hand, people consider it a norm. Its use is considered bad and is thought as a dirty hand due to its use after defecation. Participant stated,

"Just a simple fact that the majority is right-handed, so I think that defines a culture in a certain way. You follow norms and religion has sanctified some of these norms".

It is the conventional wisdom to use right-hand for activities and left-hand use is not acceptable in our society as well as in other societies as one participant stated that,

"I have done my inter-graduate from France and it was a bit surprising for me, there was also a culture of enforcing right-handedness like people do here. There were only few lefties but not that much".

In relation to 'socio/cultural factor of suppression', some researches show that cultures which have a permissive attitude towards left-handedness are believed to exhibit a greater incidence of left-handedness than the cultures being more restrictive (Coudé´, Mignot, Lyonnet, & Munnich, 2006; De Agostini, Khamis, Ahui, & Dellatolas, 1997; Leask & Beaton, 2007; Medland, Perelle, De Monte, & Ehrman, 2004).

The people of this right-handed society gave another reason to

suppress left-hand. It is the disability factor of suppression that explains that in certain instances left-handedness is viewed as a handicap. There is a general perception of difficulty that a person will face in life being left-handed. A participant reported,

"Right-handed people think that it is a handicap for us to be a lefty. They don't take it as a normal thing. Majority thinks like that".

An additional factor that was highlighted by left-handers was 'educational factor of suppression'. They disclosed that right-handed individuals have a feeling that left-handedness might affect the educational abilities, e.g., left-hander will not be able to perform better in studies or it effects writing and results in bad handwriting. So they suppress left-hand to make it better. Participant stated that

"My father genuinely wanted me to write with right-hand and often used to say that I should write with my right-hand and i will have neat hand-writing".

On the contrary to this educational factor of suppression, in a study Smith (1950) found that those who had a change of handedness more often experienced reading difficulties.

Others suppression of left-handedness is influenced by 'perceptions of religious, social or handicap factors and right-handers may sometimes harness fears of bad educational performance to encourage suppression. External attributions and superstitions are the basis in these factors and are a common feature of our society than the Western counterpart where several studies have been conducted to explore left-handedness and the related issues.

Beside all that, the '(in) significance of gender in suppression' was also present. This factor is not very much common but sometimes specific gender (men/women) is subjected to suppressive experience whereas in other cases it does not have much importance. Participants reported,

"(Use of left-hand) is considered very bad in our society. It might be more for women because people will say that this girl is not taught (basic manners)."

It was observed that the suppression was slightly biased towards women, with social restriction more related to women and practical disadvantage more related to men. The participants responded in ways that were quite consistent with traditional gender stereotypes.

"Might be (suppressed) for the reason that he (left-handed brother) was a boy, and he has to enter into practical life and would not find any problem".

Different practices or ways for suppressing left-hand were brought to light by left-handers which varied from verbal to physical. 'Forbidding' and 'scolding' were common practices for suppression. Forbidding was used at home and outside the home while scolding was particularly used for suppression at home by parents or by relatives. Left-handers identified many other practices including 'fastening left-hand', 'covering left-hand', 'smacking' and 'placing tools in right-hand'. A participant reported,

"(Father) asked my mother to make a pouch and cover my (left) hand with that. When I used to come home from school, my hand used to be covered with a pouch by them so that I would not use that hand for writing or for any other activity".

The variation in practice or ways of suppression from verbal (forbidding or scolding) to physical (covering left-hand or fastening) shows the intensity of imposing the idea to switch to the other hand. Verbal ways definitely have lower intensity as compared to physical ones. More intense the way of suppression, the more effect it will have.

Usually left-handers experienced suppression in daily life activities. Suppression in 'eating', 'drinking' and 'writing' were most commonly practiced to make left-handers switch to their right hand. In addition, they faced 'suppression in performing religious rituals' with left-hand due to the significance of right in religion. A participant stated,

"Since childhood all the family members used to ask me that you have to write and eat with the right-hand".

Generally, eating and writing are considered important tasks to be performed with the right-hand. Usually, religious factor becomes dominant for suppression of left-hand for eating, drinking, and performing religious rituals while educational factor provides the weak evidence for not writing with left.

The left-handers described that they had to face 'physical and psychological health challenges' as a negative impact of suppression. The largest impact was 'conversion' which was the ultimate goal of the right-handers and due to all the strictness and stress most of the left-handers gave in. During all this suppressive process left-handed individuals faced the 'physical pain' as a result of trying to use right-hand for activities. It was stated by a participant that

"There was a restriction that you have to eat and write with the right-hand and now I eat and write with the right and do rest of the work with left-hand".

Another devastating impact of suppression was 'stammering'. There was a left-hander interviewee who was subjected to suppression and he started stammering as a consequence. Stammering further had huge negative effects like 'psycho emotional problems', 'people's negative attitude' and 'difficulty in professional field'. He reported,

"My stammering problem started when I was in class three. At first, I used to talk fluently but this problem started later during conversion. People might have not humiliated me due to left-handedness as they did when I stammered".

However, being suppressed could also involve psychologically destructive experiences. 'Personality damage', 'mental torture' and 'confusion' were the psychological impacts experienced by left-handers. Participant stated that

"I think when we exercise this type of oppression on left-handers; we automatically are trying to make them realize that you are a bit abnormal".

They also described that being suppressed for using left-hand caused 'fear of devil', 'sensitivity', 'insecurity', 'uncomfortable feelings' and 'embarrassment'. Continuous suppression also led to 'inferiority feelings' and towards 'depression'. A participant stated,

"When I was a child I used to read the story of an ugly duckling and in conversion phase I used to feel myself as an ugly duckling".

Psycho-social impacts of suppression like 'reduced social inter-action' and 'problems in public gathering' were also expressed. Almost all left-handed people experienced problems in everyday lives related to work and relations purely because of their left-handedness. Sometimes people around them appeared to turn their back on them. They feared and faced rejection from family and friends. As a result, many people chose to change their handedness or convert for the fear of the possible consequences. A study conducted by Meng (2006) on innately left-handers showed that 59.3% of left-handed children were forced to convert to right-hand and parents with less education forced more.

Many physical, psychological, and psychosocial impacts were identified by left-handers in this study. Through researches it is proved that children who have been converted from their preferred hand might suffer from negative consequences, such as stuttering, unnecessary pressure on hand, motor clumsiness and so on (Ballard, 1912; Bishop, 1990; Lewis, 1949; Meng, 2000; Porac & Searleman, 2002). In other studies by Gaddes (1985), Meyer (1998), and Paul (2002) it was found that change in laterality (conversion) might cause serious problems in development of speech and personality.

Self-suppression seems easier for the left-handers to cope emotionally than suppression by others. This might be the basic reason why they showed negative reactions or effects of suppression when they are suppressed by others as compared to themselves.

One important major theme that emerged was 'agonized life'. The negative impacts of suppression had devastating effects on personality and life of left-handers and made it an agonized life. The left-handers faced strictness, intolerable pressure, and had to bear unreasonable suffering in their lives. They called their life experiences as tough, painful, and intricate. Participants reported,

"When Allah has not given power to the right-hand and that power is in the left-hand, it is not a person's fault who is given punishment for being left-handed".

"Whatever types of experiences an individual has in life, its effects do appear. I have also faced tough experiences in my life. At that time I had the feeling that I am trapped in an unfinished problem".

The life of the left-hander was, on the whole, seen as life with more negative or to some extent no positive experiences. While going through the bitter experiences of suppression and discrimination, they had the feelings of suffering, torture, and punishment for being left-handed.

There was a major theme regarding 'challenges and their management' in the life experiences model of left-handers which included three subthemes: 'challenges in life', 'life in a school' and 'tackling with challenges'. Along with suppressive activities, left-handers also faced some other challenges or problems in their routine life. Their left-handedness brought confusion in hand use, difficulty in using desk chairs in schools and colleges, and problems in using computer mouse and scissors. A participant stated,

"I often got confused that which one is my left-hand and which one is the right. Due to this reason, it felt really difficult to wear socks and shoes".

Left-handedness sometimes created problems in handling professional tools and became barrier in professional life as well. A left-handed dental surgeon described his positions during treatment as:

"Every position is reverse for me. If its 3 o' clock position (on central unit for treatment) for any dentist, for me its 9 o' clock position for every patient. 12 remains the same, 4 becomes 8, 5 becomes 7. So it's totally change, it's a 180° turn".

Studies related to left-handed surgeons showed that they usually had lack of access to instruments for left-handers while training, faced difficulty handling some instruments, received little mentoring considering their left-handedness and were more likely to have needle stick injuries as compared to their right handed colleagues (Schott & Puttick, 1995; Schueneman, Pickleman & Freeark, 1985).

These kinds of experiences and challenges were an inconvenience for the left-handed people. A big challenge which left-handed individuals faced in early school life was of mirror writing. Two types of writing were reported which occurred exclusively in left-handed children; inverted writing and mirror writing. It seems that inverted writing is a stylish and smart adaptation of the left-handers to the standard writing style of the right-handers whereas mirror writing looks as if it is a reversal.

"When I was learning to write, aaaa..... whenever I was writing, e.g., English, I moved my hand away from my body so I would be writing backward and for Urdu writing it was the other way. It took quite a bit of effort for me to learn to write in a conventional way".

The lack of awareness of others appeared to be a major hurdle for left-handers in their efforts to keep their writing straight or in right position.

The common people around the left-handers have little information about them and sometimes their special needs related to handedness are not fully understood. A way to describe the obstacles left-handers had to overcome is to think of them as intrinsic biases (related to physical attributes). It means that a tool has built-in advantage for the right-hand over the left. The majority of tools, utensils, musical instruments, or sports equipments in any society are designed for right-handers.

For all these problems, left-handed people used some strategies for 'tackling with challenges'. Some of these were basically the personality traits that helped them to overcome the obstacles they faced. They tackled life challenges by being confident, creative, intelligent, daring, and by thinking differently. It was reported by a participant that

"If you give a test to 10-12 people, the left-hander among them will do it in a different manner and will try to make something new".

The common strategy for tackling with physical challenges by left-handed people was the ambidextrous approach in which they utilized their both hands for performing the activities. It was stated that

"In surgery, I do preparation with the right-hand and do the remaining with the left-hand; filling, soldering, extracting etc".

Further they employed problem solving strategies such as tactics for remembering left or right-hand for the management of problems they faced. Participants reported,

"My tactic is that the hand that makes L from your thumb is a left-hand".

"I learned a tactic that the hand in which I hold a pen, I don't have to hold spoon in that".

The common strategies adopted by the left-handers in managing challenges of life were in order to avoid problems. The personality characteristics used by left-handers to describe themselves for coping these problems were very positive. The left-handers' positive self-conceptions were probably crucial for their attitude towards their left-handedness and management of problems due to left-handedness.

The experiences of left-handers portrayed that daily life difficulties encountered by them and the efforts for their management was not fully realized by the right-handers. Basically, they tried to deal with this ever-present right bias in two ways: by learning to use the tools or utensils in a right-handed way, or by learning to hold them backwards so that they can be operated with their left hand. It seems to be one of the reasons why left-handers usually are more flexible in their use of hands than right-handers.

Most of the left-handers faced physical and psychological health challenges but some of them refused to give in by struggling to maintain identity and transforming attitudes of right-handers. They showed 'resistance to change' because of 'self identification with left-handedness' and felt that this particular trait had become a constructive part of their identity. One participant said that

"I can't imagine myself being a right-handed person. You know there is something very basic about you, then it won't be you".

Left-handers considered left-handedness as the indispensable and major component of their personality. It appeared that having a strong sense of connection with left-handedness was a dimension of left-handed identity that may play a vital role in maintaining high self-esteem, better psychological health and in managing different forms of problems. In comparison to young adults, the older adults to a greater extent appeared to have incorporated left-handedness into their lives and identity.

Additionally, due to 'biases in religious concepts' related to left in general and left-hand in specific, left-handed people engaged in 'transforming suppressive ideas'. They considered their left-handedness as Allah's will and His creation. According to left-handers right-handed individuals showed pick and choose in religious concepts. A participant said,

"People do pick and choose, they use right while eating, in Wuzu, in Namaz (prayer) they lift the Shahdat (index) finger. Tell me, when we start Namaz we say Takbeer, Allah-o-Akbar and in Ruku we use both hands. If it (left-hand) is so dirty then it should not be used".

They resisted because to them there were no religious restriction in left-hand use in all activities. They felt insignificance of conversion suggestion and showed no consideration or attempt of conversion.

Due to these factors, left-handers made efforts for transforming suppressive ideas. They felt that there is a need for overall change in the society about left-handedness and despite suppressing it they should focus on other personality aspects of left-handers. A participant stated,

"Attention should be given to personality grooming rather than making him depressed by forbidding (for using left). If family is not co-operative, outsiders will humiliate him. The child will go outside in depression and teacher and society will also forbid. Hence, overall change is needed".

They were critical of suppression and saw no reason for suppression. It is a way for the left-handers to normalize their situation by looking upon left-handedness as something very natural. They quoted several damaging effects of strictness. They felt a need for overall change in society about left-handedness and that despite suppressing it they should develop other personality aspects of left-handers.

In left-handers' life sometimes they had the 'support and consideration of their left-handedness' which became a fresh air in the congested suppressive environment. Left-handers commonly mentioned about supportive environment either at home in the form of supportive parents or in academics in the form of supportive teachers, which partially or completely supported their left-handedness. Participants stated,

"My father has been very kind to me. He asked me to eat with my right-hand, other than that do whatever is convenient for you. There was always a support for me".

"Regarding my writing in right direction, my uncle and aunts helped me. So despite my teachers, they spend the entire summer with me, trying to make me write in the right direction".

This support network brought to some extent 'relaxation in suppression' by facilitating left-handers and giving permission for specific activities to perform with the left-hand. With that education was considered as one of the factors that to some extent provided relaxation. Participant stated that

"I think since the late 50's or 60's at least in our educated class and in overseas as well it was relaxed a little bit that had a huge effect on us (left-handers) as well".

This support led to relaxation in suppression by giving permission for specific activities to perform with left-hand. Education was also considered one of the basic factors that to some extent provided relaxation.

Left-handers tried to 'tackle their life challenges', in their own way and consequently led to 'life with no distress. Further, they had the same feeling as a result of support and relaxation. They had no odd feelings, no embarrassment or shame, no regrets, and led a normal life which made it feel okay. Participants reported,

"All the people around me are so co-operative that I have never felt anything wrong."

"This (left-handedness) is so normal for me that I am never bothered what people say. It is as normal as day, as night, as wind, as clouds as anything else".

Through the experiences of left-handers it was explored that the right-handers and even they themselves viewed left-handers as being particular. Left-handers as being particular, means being different or special and it describes the experiences of left-handers related to discrimination. This particularity or discrimination came when they thought that they have a 'personality with a difference' and started 'feeling different' when they encountered right-handed people. Left-handed people described that several traits or characteristics made them dissimilar from right-handers and made a personality with a difference, e.g., unique, genius, and multi-talented. Participants said,

"It is unique, it is not common. It feels really good when people are discussing. Civic is common, BMW is not. So people notice and talk about BMW, it doesn't mean that it is bad".

"It's always about being different, you see in this life everyone wan-

ts to be different and in this thing (handedness) I did not have to put in effort and I'm different".

Left-handers feelings of being different in this right-handed society, actually describes the self-perception of being different. It can be seen as an idea integrating the bio-psycho-social aspects of the left-handed identity. One can presume that the left-handers' self-conceptions of being different were formed by the experiences of living with left-handedness.

Sometimes as a result of this self-discrimination an individual may feel guilty or unworthy, leading to lack of self-esteem and self-worth which may also cause depression and abnormal behavior such as avoidance behavior, self-isolation, and introversion. A participant said,

"In school, children used to say that I am the only left-hander and we all are right-handers. This brought a little inferiority complex. Due to this reason, I decided that I should also become a right-hander".

They also got the impression of being 'different among peers', 'different among siblings' and sometimes encountered 'institutional discrimination' as well. A participant said,

"In school, in my class I and hardly one or two were lefties. Children used to say that I am working with left-hand, how will i do a proper job as i am a lefty. The same was in college and in professional life as well".

Siblings and peers are an integral part of one's social world. They usually witness the discriminatory treatment of members of their own family or society so they start accepting the difference by the elders and in this way participate in discrimination by gradually joining the group.

Institutional discrimination was faced by left-handers in academic settings by teachers and class fellows and in professional settings by colleagues. Prior research indicates that when teachers devalue adolescents of minority groups or do not care and respect them as individuals; this may increase the probability of negative academic and socio-emotional consequences (Goodenow & Grady, 1993). Similarly, in the work place the experiences of discrimination adversely affect work satisfaction and work performance (Salgado de Snyder, 1987).

As the left-handed population is perceived different from the right-handed people they are considered as an outcast in society. A participant stated,

"Our all right-handed people especially religious people and priests, everyone makes fun in one way or another".

Left-handers were taken as an outcast in the society and mostly it was the discrimination by religious people. Left-handedness is perceived as handicap and as abnormality by right-handers. Society seems to discriminate against left-handers simply due to prejudice against left-handedness. This discrimination is the result of norms internalized by right-handers about left-handedness. Left-handers' preference to discriminate themselves from other members of the community sometimes seems justified, because discrimination by community members becomes more painful to bear. It appears that roots of this discrimination are tailored in the local context of society and social system.

All the sources of discrimination led left-handers either towards 'seeking attention' or 'living with a label and humiliation'. When they get positive response from the right-handers and seek their attention, it directs them to live a discrimination-free life. Participants stated,

"It is with me right from the childhood, when I started writing I got a lot of appreciation from the family that I am a lefty".

"I have never faced discrimination".

The extra attention that left-handedness involved could be experienced as quite agreeable. Although the data from interviews disclosed mixed thoughts and more negative experiences about being left-handed, there was at the same time an attribute of toning

down or reducing the negative consequences and experiences of being left-handed. Sometimes it feels that it is the information which is directed to the researchers, while at other times it seems that they wanted to ensure themselves that it is not that bad to be a left-handed person.

On the contrary, they faced humiliation, sarcastic remarks, labeling and bad attitude of right-handers just because of their left-handedness. For example, a participant said,

"It is obvious we are living in a same world so students' who are junior their way of saying will be a bit different but the sense and concept behind remains the same. When elders say, they say it in a more taunting, humiliating and embarrassing way. Friends or age fellows say it in a more frank way".

The fundamental cause of negative discrimination by the right-handers was the belief that the left-handed people possess negative trait. They magnified or accentuated the difference and this led to dislike and discriminatory behavior. Discriminatory behaviors communicate that left-handers are different and not from "in-group", i.e., right-handers. This type of discrimination shows how deeply rooted our biased thoughts and behaviors towards the outgroup really are. Sometimes this discrimination is direct while at other times it is subtle, indistinct and of border-line acceptability. Many discriminated people usually try to cope with this negative behavior when they have been discriminated.

The left-handed participants experienced different consequences of discrimination which affected their psychological and social life negatively. Link and Phelan (2001) found in a study that stigmatizing processes can affect different areas of peoples' lives. It probably has a dramatic impact on multiple domains as earnings, health, criminal involvement, and life itself. Moreover, the correlation studies of personal experiences of African-American and Hispanic adults suggest that ethnic discrimination is associated with poor mental health, which includes feelings of anger and depression (Jackson etal., 1994; Salgado de Snyder, 1987).

The negative discrimination leads to 'agonized life' of left-handers and 'destructive consequences of prejudiced society'. If the society keeps on suppressing and discriminating the left-handers it would produce serious results. A participant stated,

"I think if you have an intolerant society for left-handed people, its going to be a repressive society anyway. Then there is going to be some other forms of intolerance also. So you will have more dysfunctional people, probably more violence, and more anger in the dysfunctional people and towards the dysfunctional people".

Cultural taboos become obstacles to be a left-handed person and as a result they are discriminated and highly rejected by the society. When the society keeps on suppressing and discriminating against the left-handers it would produce serious results.

Almost all left-handers had neutral opinion about right-handers and felt that there was no difference in the qualities and capacities of left and right-handers. They had 'egalitarian approach' towards right-handers and wanted the same attitude from them. They wanted right-handers to accept them as the members of their society and give them equal rights which would help in constructing discrimination-free society. A participant reported,

"Like you give equal rights to people of every color, race and language, left-handers are also humans. Don't give them any special rights but at least what you can do is to give them equal rights".

Left-handers experienced that generally our society shows lack of acceptability, lack of co-operation, and inflexibility. On the other hand, in recent years, greater tolerance of left-hand use in different countries is seen by researchers (Pia, Borelli, Vannucci, & Rocchetti, 2001).

Left-handers emphasized that right-handed people should show flexibility in their attitude, show new horizons to the left-handed individuals by appreciation and help in confidence building. A participant said,

"With the trait with which he/she is in this world, people should show him/her new horizons. We should show some flexibility in these things. Let him/her do things with his/her left-hand".

It seems that religious people hardly make active efforts to refute rigid ideas. History teaches us that the negative stereotypes, prejudicial attitudes, and discrimination that dominant groups develop about those they oppress serve to justify their continued oppression (Frederico & Sidanius, 2002; Sidanius, Levin, Liu, & Pratto, 2000). They should be a part of the solution instead of part of the problem. This will influence the possibility of encouraging religious people to act as advocates for reducing suppression and discrimination.

Implications

This qualitative research has enhanced the knowledge of left-handedness. This research was probably the first one of its type to investigate in-depth experiences of left-handed people. This information has important implications primarily for parents, teachers, and psychologists.

Parents of left-handed children face problem in their bringing up. Usually they keep on suppressing and discriminating them without realizing the impacts it will bring. So this study would be helpful in educating parents, who generally occupy the position of greatest responsibility in child care and development and, therefore, play an important role in the development of their children's' personalities and their lives. It will help them to know that they should support their left-handed children and should try to make things easier for them.

Teachers play an important role in creating supportive learning environments for students in school. There is very little information available to teachers about left-handers. The negative attributions to left-handed children can be changed in a positive direction by bringing awareness to teachers. This vital information can help teachers better understand their left-handed students' problems and hence teach them more effectively.

Developmental and clinical psychologists will have better insight to the developmental pattern a left-handed child may have and the possible problems he/she may encounter at home, school or anywhere in society and may find remedies for it.

For social psychologists, this research highlights different types of discrimination and suppression faced by left-handed minority which was probably not considered earlier.

Conclusion

This research attempted to gain an understanding of experiences of life brought to light by left-handers in this right-handed world in detail. They discussed their daily life problems which they encountered in using tools and utensils which are basically designed for right-handed people. The experiences of suppression and negative discrimination brought negative impacts on their personalities and made their lives agonized. The support networks which facilitated them and provided relaxation led them towards blissful feeling and resulted in happy and psychologically healthy life.

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