Impact of Lifestyle on Mental Health in Pakistani Adult Population

By

NAILA ASLAM

Supervisor

Dr. Muhammad Tahir

Registration number

86FSS/MSPSY/F12

DEPARTMENT OF PSYCHOLOGY

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD

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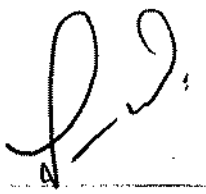
Naila Aslam

86-FSS/MSPSY/F12

Approved By

Supervisor



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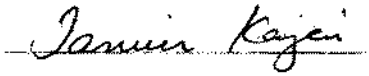

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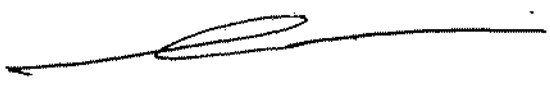

Dean Faculty Social Science

DEDICATION

I would like to like to dedicate my manuscript to my parents and my supporting siblings and everlasting cherished friends as they are sole reason of my quest and inspiration in my life.

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For Almighty Allah, the most Merciful and Beneficent, I present my modest praise, who blessed me with knowledge and support, strength and power of endurance to accomplish this task and enabling me to pursue activities and happenings of my life and all my respect for His last Prophet Hazrat Muhammad (PBUH), who blessed my conscience with the essence of faith in Allah.

It's hard to express my deepest and honest gratefulness to my loving friends and family, as without their prayers and support it would not have been possible to complete this journey. Research work cannot be so complete, comprehensive and fruitful without mutual exertion of mind and soul. The entire helping aids support me to complete my thesis at ease.

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ABSTRACT

The study aimed to explore the impact of lifestyle on mental health in Pakistani adult population. This study comprises of three phases, in first phase Health Promoting Lifestyle through HPLP-II translated into Urdu language. In Second phase psychometric properties were explored of the Health-Promoting Lifestyle Profile (HPLP-II) measureslifestyle and Self-Reporting Questionnaire (SRQ-20) measures mental health. Third phases consists of main analyses done by using SPSS to test research hypotheses.

In this study 300 Pakistani adults (150 male and 150 female) were approached by using purposive convenient sampling technique. Mean differences with respect to age, family system and gender were examined with study variables. Results shows that males scored higher on physical activity whereas females scored higher on interpersonal relationship and anxiety and depression with regards to age, older adults were on health responsibility and physical activity whereas Younger adults scored high on Interpersonal relationships stress management anxiety and depression and somatic.

Multiple regression analysis shows effect of life style on mental health among Pakistani adults. Results showed that mental health was significantly predicted by Heath responsibility, Physical activity, nutrition, Spiritual growth, interpersonal relationships, Stress managementand life style. The overall variance explained by model was 91.00%. Gender plays major moderator's role in lifestyle and mental health. All these findings and results were also discussed in the contexts of its significance and implementation. All these findings show how this study will help and contribute for future researches.

CONTENTS

List of Tables

List of Figures

List of Appendix

INTRODUCTION

Chapter-I

INTRODUCTION

A lifestyle is a way of life that reflects an individual's attitudes, values, morals, standards and world view. A lifestyle leads towards personal identity and distinctiveness through cultural symbols and self-awareness. Social and technical systems can compress the lifestyle choices that are available to the individual and the way a person interacts with the world. The new domain of health focuses on the possible linkage of styles of each day living patterns with the mental well-being. Subsequently, demonstrate the individual mental health with absenteeism of psychopathology, which is usually indicative of optimistic fitness or wellbeing. Disrupt individual lifestyles patterns and daily activities interfere with over-all mental, physical, emotional and social condition of individual.

In agreement with World Health Organization (WHO,2001) mental health comprises "personal welfare, recognized effectiveness, self-sufficiency, capability, intergenerational reliance, and self-actualization of one's logical and affecting prospective, along with others". WHO further states that the well-being of an entity is enclosed in the understanding of their capabilities, cope up with ordinary stress of living, fruitful effort and involvement to their society. On the other hand, intellectual differences, prejudiced assessments, and challenging practiced theories the entire influence how "mental health" is definite. Other factors on contrary low self-esteem, fabrication of reality, unease, depression and delicate biological reactivity can arise when mental health decline or effect (Sarason&Sarason, 2002).

Mental Health

Currently world health organization (WHO) establishes mental health is state of well-being in which person can realizes his abilities and cope with the normal stresses of his life and

work productively and fruitfully and competent enough to contribution in community (WHO, 2010). Mental health is as important as physical health for the adjustment in life because mind and body are not the distinct entities. Many physical conditions are rooted in a state of mind, or in a history of stress that has never been balanced. Personal relationship and work skills are affected by low mood, restlessness, or grieving (Hoang, Goldacre, & Stewart, 2013; Lawrence, Kisely, &Pais, 2010).

In general Mental health is the ability to cope with the problems, calamities, shocks, conflicts, and mortalities that anyone can meet in his life in an organized way that do not interfere the route of his progress and emotive firmness and to think sensibly and rationally. Mentally healthy individuals exhibit self-confidence, closer to substantiality , aware of consequences and limitations, inspect their duties, maintain healthy relationship, perform works according to their talents, cope with the challenges of life, and to make their lives valuable and accomplished (Hales & Hales, 1995).

Approximately half of the world's population is suffering from mental illness (WHO, 2009). Self-esteem, interpersonal relationships, and ability to do efficiently everyday life tasks also connected with mental health. Better mental health is linked with more life duration. Mental health can be measured by the actions of individual in their normal life and on the other hand when life conditions are improved poor life habits changes (Storrie, Ahern, &Tuckett, 2010). However, it has been frequently observed that commonly people have little or no basic understanding and information of mental illnesses (Thornicroft, Alem, Santos, Barley, Drake, Gregorio, Hanlon, Ito, Latimer, Law, Mari, Mcgeorge, Padmavati, Razzouk, Semrau, Setoya, Thara, and Wondiimagegn, 2010). In addition mostly professionals and academics have different opinion on mental illness and comprehension about it.. Until now, ways of

understanding and describing mental distress and mental health are consistently apprising. The unified explanation of mental health and mental illness is hard to explain. Poor mental health is well-defined by World Health Organization (2010) as lack of neutrally recognizable illness or in a Families. If disorders in parents left untreated that can cause impairment in children's intellectual, physical and emotional development, and subsequently can develop disorders in early age, and family diseases (Rutter& Quinton, 1984; WHO, 2010).

Mental illness inaugurates a tough row to hoe in term of pain, incapacity, and death, and pays significantly overheads to health and social care. Mental illness can effect economic productivity in the form of inability of people to carry out work, when individual get sick or have accident at work, absenteeism from work. Study done by Harris &Barraclough (1998) indicates that mental illness can also lead to poverty and loss of a main source of income for the dependent family and loss of production with untimely death of individual with mental disorders e.g. when people commit suicide or got physical disability. Intervention and treatment programs help to reduce mental illness.

Better mental health demonstrates when an individual knows his potentials and has courage to cope life challenges, and he can efficiently and constructively contribute in community. Mental Health Act (UK) defined mental disorder precisely as the inability or disorder of the mind. Basically Mental illness is not the lacking of the enhanced mental health. When an individual experience psychological distress after confronting a traumatic, hard, or shocking life events. There is a protective mechanism similar fight or flight, which cause our response to danger so that distressing feeling is normal. Common mental illnesses caused maladaptive reactions when this illness become severe in nature or continued for long time, and cause harmful effects.

Determinants of mental health. Mental health is influenced by several biological factors, psychological factors, social factors, and environmental factors that interact in complex ways (Mrazek&Haggery, 1994).

Biological contributors includes nutrition, infection in body, any physical trauma endocrine factors and genetic factors. Life Contributors involves at a structural level are living in a sound environment, occupational services, social class, education, grief, disturbance, and violence. Social contributors involves at a community level are how much individual have a social sustenance, individual's ability to uphold healthy interpersonal relationship, and how much he feel to belong with a society. Personal contributors involves at individual level such as poor or healthy coping skills and high or low self-esteem (Jenkins et al., 2008).

Theoretical perspective of mental health. Theoretical perspective on mental health are described below.

The object relation theory based on Sigmund Freud and his followers work, according to this theory, the determination of mental health and mental illness is based on the relationship with the objects and surroundings. These objects can be physical or nonphysical it is also important in which way an individual relates to things and the way people set a time for the future relations.

An individual passes through different series of stages which occur in a fixed sequence to become mature adult. Each stage consists of specific developmental tasks individual has to encounter and get mastery on these which provide groundwork for later growth on fixed sequence physically, socially, developmental areas and intellectual levels. There are many factors which can be interrupt individual growth process for example physical diseases,

emotional or social withdrawal, any life trauma, unhealthy eating habits and poverty they can cause failure in mastering and indicate developmental lag. A discrepancy between individual's behavior and his age appropriate behavior is called developmental lag.

According to Erikson's theory of psychosocial development mental health issues can occur when developmental tasks of different stages are not successfully mastered. It doesn't means that failure at any one stage cause mental illness, in-fact weak developmental foundation lead mental illness (Early, 2000).

According to behavioral theories, every individual develops his own process of learning by his behavior. A mature and responsible human being can be created by rewarding adaptive behavior and ignored or punished maladaptive behavior. Sometimes individuals learned mistaken behaviors. According to the theories mental illness can be defined as abnormal behavior which is a result of not rewarding or appreciating normal or adaptive behavior. Sometimes reinforcement of maladaptive behavior cause abnormal behavior (Early, 2000).

According to Neuro-scientific or biological perspective biochemical and electrical activity in the brain explain the main phenomena of mind and emotion. This theory based on the assumption that normal human brain requires normal neurophysiology and properly portioned brain chemicals. Neuroscientist researchers investigated various kind of mental illness which are accompanying with dissimilarities of normal conditions. Defect in the anatomy or chemical levels in the brain caused abnormal behavior and abnormal emotional states, they can be controlled by changing the brain anatomy and changing the chemical activity of the brain (Early, 2000).

In the view of Bio-psycho-social mental health problems cannot be restricted in a single domain. An individual's mental health influenced by biological factors, psychological factors,

and social or spiritual factors. If an individual is experiencing depression, it might be the result of a biological changes or medical states (e.g. cardiovascular problems), a psychological states (e.g. self-disapproval), or a social events (death of loved one). Whatever is the cause of the depression an individual also experience somatic problems (e.g. disturbed appetite), psychological issues (e.g. suicidal ideation), and social problems (e.g. isolation). Above all the depression can be treated by all domains through anti-depressants, cognitive behavioral therapy, and by social engagement of an individual these ways are equally effective in the treatment of depression (Dombeck&Moeren, 2006).

According to Psycho-dynamic perspective mental disorders occur when the ego is unable to create balance between id, superego and the reality. Individual behavior in mental illness is highly influenced by anxiety and unconscious anxiety (Early, 2000). According to humanistic perspective mental illness occur when an individual is unable to give meaning in life or failed in self-fulfillment which are inherent tendencies. Existential psychologist used to define mental illness arise when individual is unable to live his life as fully as possible. According to this perspective when individual have many restrictions in his life or lack of freedom which is imposed in modern society leads psychological disorders (Halgin&Whitbourns, 2003).

According to socio-cultural perspective social factors and cultural factors are very important in maladaptive behavior. In the lights of social psychology the main cause of maladaptation is social isolation and lack of social support (Sarason&Sarason, 2002). Study done by Halginand Whilbourns (2003) family dysfunctions and dysfunctions with society are associated with many mental illnesses.

Factors influencing mental health.Following are the factors affecting mental health

Healthy individuals are more autonomous and less depend on others as they are more independent to make decisions and face life challenges. They lived their lives with rules and values. They respect other's opinion and wishes it's not necessary to obey their views. Independent and autonomous people without losing their independence can work in others collaboration (Basavanthappa, 2007).

According to Maslow a healthy person has the ability to accept and own his nature without any changes. Without comparing his ideal image individual accept his own nature a mentally healthy individual is motivated towards growth in all aspects of life and self-actualization (Basavanthappa, 2007). Ideology of a well-adjusted individual is based on reality whereas vulnerability of mental illness is high when an individual is not realistic and he act accordingly (Taylor & Brown, 1988).

An individual can be defined as healthy when he has realistic image of his capabilities and restriction. It is approved by many researches that self-esteem is closely associated with mental health. An individual can deal his environment and also influence his environment in a capable way, competent behavior and creatively without being influenced from the conflicts and strains enforced by the environment (Basavanthappa, 2007).

Mentally healthy individual can properly deals with anxiety and life grieves and stressors without being influenced by them he acquire complete benefit with social support while dealing with life stresses and he believes that these stresses will never remain forever. Researches done by Cavigelli&Mcclintock (2003), and Korteet, al. (2005) indicates that active stress coping strategies are related with healthy life quality. It is indicated through many studies that passive and avoidant coping strategies are great impact on the stressful effects and mental health.

Individual's biological buildup, sense of synchronization in life, vivacity, capability to find significance of life, emotional flexibility, toughness, religiousness and optimistic distinctiveness. Study done by Shrieret, at. (2001) shows that risk factors can be related with some psychological difficulties include vulnerability, desperateness, negative self-appraisal, recurrent personal catastrophes, sleeplessness, poor attentiveness, indefiniteness, psychomotor disruption and drug mishandling can be established without reassuring individual factors.

Interpersonal functioning is also an important factor which affects individual's mental health. Effective communication skills and capability to help and understand others is a part of interpersonal functioning. Study done by Hernandez et al. (2005) shows that interpersonal functioning shields individual from depression problems, panic attacks, and substance missuses. According to Cox (2006) mentally healthy individual with good interpersonal functioning are intact as they are able to give love and understand others interest. These individuals have satisfactory interpersonal relationships, there are trustworthy, they accept others with their differences, they don't try to change others instead they adjust themselves with others.

Sociocultural factors consists of sense of being community, capability to access sufficient resources, and can intolerants and support different opinions among people. Rutter (2005) findings shows that dissonance family, deteriorate parenting, dysfunctional socialization enactment are indicators of mental disorders. It's also find that mental health can be seen when an individual through using positive thoughts, feelings and appropriate and congruent behaviors which are according to societal norms successful adapt internal and external environmental stressors.

Resilience consists of individual's ability of adaptation in difficult events and situations and effectively deal with the environment. According to Basavanthappa (2007) studies has been

done to find out why some individual are easily influenced from difficult situations. It has been proposed that there are some protective factors which helps individual in dealing problematic situations and these can also helpful in enhancing self-esteem and promoting self-efficacy with the help of compassionate relationships.

Freedomconsists to think and feel freely and express what individual actually think and feel rather what others expect him to think and feel, and individual can communicate his own demands rather obey others instructions (Basavanthappa, 2007). Freedom also refers to look forward and not stuck in the past. Maturity is the sign when individual didn't overwhelmed by his own guilt, own fears and own anger. Mature people openly accept their own attitude and others attitudes. They improve their straights instead of worrying for their weaknesses. They encounter difficult situations with skilled way and they respect others opinion (Cox, 2007).

Mentally healthy individuals always try to create balance in life. They strive to create balance the physical aspects, spiritual aspects, emotional aspects and social aspects through achievement of their objectives. They don't let one aspect to dominate on others which is dangerous for others. As Maslow elaborates this concept through the hierarchy of need, which consists of basic physiological need, need of safety and security, need of love and belongingness, these need must be fulfil before the need of self-esteem and self-actualization (Basavanthappa, 2007).

Individuals who are mentally healthy are also emotionally mature i.e. they can control emotions and they can also regulate their emotions in productive way. The mentally healthy individual can also control their feelings and can influence their life without influenced by others. These people pay more attention to their work and feelings. They are very concern about

their life activities and when they come across a difficult situation in their life, they don't let their emotions to overcome (Basavanthappa, 2007).

Life Style

Lifestyle unswervingly affect the overall domains of individual life but the factor of life styles can be controlled and altered according to the situation. While other inheritance factor cannot be altered but social and environmental factors can be alerted. As these social factors plays its significant role in maintaining the health status of each individual. As these social factors offer the individual the choices we make regarding our health can affect our health to a greater degree.

Lifestyle are way of manner of life living e.g., attitudes we hold, habits we have and behavior we develop in daily life events. Some components of life styles are controllable and some are not controllable it's all depend on manner of better adaptation abilities. Life styles affect the individual life in long and sometime in short manner. Lifestyle helps the individual to carry out daily life important task of life activities e.g., lesser burn out chances, relaxation, nourishment, and problematic resolving.

Lifestyle components create general types of behavior. Each individual develops a lifestyle largely by trial and error. People experience different activities, usually adopt the habits that they personally consider most successful and satisfying (Donatelle, 2009). These behaviors can be grouped into a number of structures that intersect and create the lifestyle components. Each component can trigger some effect on several dimensions of health of each person.

According to world health organization (1986) Health can be defined as a source of social, economic and personal development of an individual and a key element in quality of

life. In 1948, the world health organization defined health as a state of absolute physical, social, and mental well-being but not simply the absence of disease or illness. Although this definition has a lot of contradictions but many definitions of health still have strong belief in this respect.

Healthy lifestyle leads significant assistances to individuals, in the improvements of physical health, increase self-esteem, and also enhance quality of life (Deslandes et al., 2009). Additionally, some Healthy lifestyles are also neuro-protective and they help to reduce the risk of consequent age-related cognitive losses and conforming neural shrinkage (Hamer&Chida, 2009; Pagnoni&Cekic, 2007). Many Healthy lifestyles such as meditation, relaxation, recreation, and time in nature are enjoyable and may therefore become healthy self-sustaining habits (Didonna, 2009).

Gold and Miner (2002) described healthy lifestyle as a pattern of behaviors that maximize an individual's quality of life and minimize the vulnerability to negative outcomes. It is considered that individuals who are overweight or obese confronts more poor health outcomes include type II diabetes, hypertension, dyslipidemia, gallbladder disease, sleep apnea, musculoskeletal pain, and increased asthma symptoms (American Academy of Pediatrics (AAP), 2002; Bell et al., 2011; Carroll, Bhandari, Zucker, &Schramm, 2006; Castro-Rodriguez, Holberg, Morgan, Wright, & Martinez, 2001; Estrada, 2004; Kaechele et al., 2006; Stabouli, Kotsis, Papamichael, Constantopoulos, &Zakopoulos, 2005; Urrutia-Rojas et al., 2004). Moreover, obese individuals may also confront psychological distress, anxiety and depression as compare to normal weight individuals (Bell et al., 2011; Janicke, Harman, Kelleher & Zhang, 2008). They confront more difficulties with peer relationship and mood disorder is very common in obese and over weighted individuals and females (Bell et al., 2011; Sawyer, Harchak, Wake & Lynch, 2011).

Components of life styles

Lifestyle components are nutrition, physical activity, interpersonal relationship, stress management and spiritual growth. Each component can set off some effect on several dimensions of health in each person.Nutrition component involves healthy selection and consumption of foods that are essential for nourishment, health, and well-being of an individual (USDA, 1992).Nutrition factors have direct linked with different states of mental health (Go´mez-Pinilla, 2008).

Physical Activity component involves regular participation in light, moderate, and forceful activity which may occur within a planned and monitored program for the sake of fitness and health or incidentally as a part of daily life (Bouchard, Shepard, Stephens, Sutton, & McPherson, 1990). Physical activity reduce the risk of many mental health problems and help in recovering mental issues (Hamer&Chida, 2009; Sui, Laditka, Church, Hardin, Chase, Davis, & Blair, 2009)

Component of interpersonal relations involves communication to achieve a sense of intimacy and closeness in relationships with others (Walker, Sechrist, & Pender, 1987). Healthy interpersonal relationships are essential to physical and mental health. Rich interpersonal relationships can reduce the risk of mental illness and enhance life quality (Fowler & Christakis, 2008; Jetten, Haslam, &Branscombe, 2009).

Stress Management component involves the management of psychological and physical resources to effectively control or reduce tension (Lane, 1987). Stress management has very strong impact on physical health as well as mental health (Kuramoto, 2006).Spiritual Growth component focuses on the development of inner resources which may achieved through transcending, connecting, and developing (Walker, Sechrist, & Pender, 1987). Study shows

relationship between spiritual involvement and mental health (Koenig, McCullough, & Larson, 2001).

Theoretical Background of Life Style

Health promotion model. The theoretical base of health promotion comprises of borrowings from various fields like Behavioral Psychology, Social Psychology, Sociology, Anthropology, Community Organizational Practices, Communications and Social Marketing (Love, Davoli, & Thurman, 1996).The WHO regards the field of health promotion as a blend of economic, political, organizational and educational activities, designed with the participation of consumers to improve the health conditions by bringing positive behavioral, social, environmental and attitudinal changes (WHO, 1997). Though, most of health promotion theories and literature has excessively focused the health determinants. There are five distinctive factors that are considered to be vital determinants of life styles of (Downie, Fyfe &Tannahill, 1990) work on individuals include;

1. Biological factors includes genetics and ageing,
2. Lifestyle and behaviors
3. Environment also in terms of physical aspects
4. Economic and Social aspects
5. Access and use of health services.

Health promotion theory used to enhance lifestyle it has little or significantly less control over the ageing factor hence the objective of health promotion is to "delay the entry into the disability zone"(Evans & Rosenberg, 1992). The alterations in morbidity graph's survival curve

suggest that those above 70 years of age are expected to move slowly towards the 'rectangularization'.

Rectangularization is a phenomenon in which the morbidity curve becomes more rectangular when infirmity raises with respect to the average age healthy lifestyle habits increase the average age. Hence, 'Rectangularization of survival curve should be vitally considered while developing and formulating strategies of health promotion.

The 'rectangularization' is expected to result in 'compression of morbidity; while the data also indicates sluggish increase of life quality and prevention of physical and mental disease (Fries, 1989). Ecology model is a suggested method to be used for health promotion. This method recognizes the impact of environment factor on health and its associated behaviors. It assimilates the efforts of individuals for modifying the behaviors regarding health within a specific environment. The model concentrates on the environmental and individual interventions to improve the social and physical environment (Stokols, 1996). The model undertakes the lifestyle habits as result of the interdependence of eco system and individual (Green, Richards &Potvin, 1996).

The changes in environment are usually given significant weightage while assessing public lifestyle habits. However, improvements in living standards have considerably degraded the environment (Egger et al. 1990). On the other hand, some argue that individuals do not pose control over all of the factors. These factors include physical, social, ethnicity, socioeconomic status, gender inequalities, work environment safety and economic factors; which undermine the efficiency of this model (Colquhoun et al. 1997).

Generally most of unhealthy lifestyle components can be associated with the socio-political and structural factors of nation (Egger et al., 1990); thus government plays a critical role

in shaping or promoting health and healthy . It is the duty of governments to promote positive health factors in society to prevent disease and unhealthy trends (Downie, Fyfe, &Tannahill, 1990). The individuals also have a considerable level of control over the variables which are beyond the influence of ecological approach. The control that individuals pose is a resultant of behaviors and attitudes towards healthy and unhealthy life trends which individuals developed over the period of time. Like other behaviors, the healthy behaviors can also be associated with the apparent salient stimulus in environment of the individuals (Egger et al., 1990). Numbers of behavioral change models focus the components of behavior including values, attitudes, intentions and motives (Bunton, Murphy & Bennett, 1991). At individual level, adoption of health enhancing attitude depends upon the individual's skill and attitude towards the risk associated with health and knowledge (Egger et al. 1990).

Behavioral models. There are number of behavioral models which intend to study their impact of behaviors and attitudes on physical and mental health; these models also tend to identify practical implications for health promotion and education (Clark &McLeroy, 1995). The Social Cognitive theory, Freire's Psychological Model and Self-regulation model also lie in the same domain and integrate the fields of Sociology and psychology. Fishbein&Ajzen (1977) inspect the Planned Behavior by assuming that behavior is a predictor of intents; they propose that there exists a component of perceived behavioral control visible in our actions. The state further that perceived behavioral control might impact the intentions along with the normative and attitudinal elements; hence impacting the situations where individuals do not pose complete control over their behaviors (Godin, Valois, Jobin, & Ross, 1991). This model classifies change in attitudes as an important behavior. Four specific components of attitude are identified by Ajzen and Fishbein (1977):

1. Element of action (i.e. what should be done)

2. Element of target (i.e. in which direction behavior should be oriented)

3. Element of context (i.e. what is the context in which behavior should performs)

4. Element of time (i.e. the appropriate moment when behavior should perform)

(Downie, R.S., Fyfe, C., &Tannahill, A., 1990).

Attitudinal change is one of the major objectives of many healthy lifestyle promotion and education programs. This model can be applied by probing the four elements of attitude and observing their mutual relation with regards to behavior change. Modification in the attitudes can be brought by accosting knowledge or value base. The other way to modify or change attitudes is by changing behavior of people (Downie et al. 1990).

Model of health belief. This model was formulated in (1970) by Rosenstock. This is a behavioral model which holds the principle that the behavior of an individual is a result of the way he/she perceives the surroundings or the world (Egger, Sparks, & Lawson, 1990). In other words this model deals with the ways individual's worldly perceptions motivate the behavior he/she exhibits. Rosenstock's (1970) Health Belief Model holds some assumption reading changes in behavior. These assumptions are;

1. The individual is required to believe that his/her health is in risk of injury or loss.
2. The individual needs to perceive the degree of seriousness of his/her health with respect to pain, wastage of work time, economic hardships, and other difficulties.
3. After evaluating the conditions, the individual need to strongly believe and assume that the advantages that will be produced by adopting recommended behavior will overbalance the cost incurred and any inconvenience faced. He/she also must realize that the proposed recommendations are possible to execute.

4. The individual must also realize the need to carry out some behavioral changes, i.e., there needs to be "cue to action" (Green &Kreuter, 1991).

The element of fear or suspicion of illness or the degree of seriousness of such an illness is not adequate to ensure that an action will be taken (Friest& Brannon, 1988). The belief of suspicion and belief of seriousness of illness are two integral dimensions of Health model and these dimensions can be understood as fear of illness which by itself tends to be a strong motivation (Green et al. 1991).

Life Style and Mental Health

Healthy lifestyle components as nutrition particularly involves fruit and vegetable consumption up to eight portions a day can positively affect mental as well as physical health (White, Horwath, & Corners, 2013; Blanchflower, Oswald, & Stewart-Brown, 2012). Physical activity can also impact on mental wellbeing in expressions of mood, stress, self-esteem, anxiety, and depression (Edmunds, Biggs, & Isabella, 2013). Researchers have provided evidences that mental health interventions, which promote mental wellbeing encourage a healthy lifestyle and halt mental illness across the life course (Campion, & Fitch, 2012). Healthy lifestyle also offers secondary benefits to individuals such as improvements in physical health, self-esteem, and quality of life (Deslandes et al., 2009). Most of the healthy lifestyles such as relaxation and recreation are enjoyable and may lead towards better mental health (Hamer&Chida, 2009; Pagnoni&Cekic, 2007).

Researches on lifestyle has revealed that exercise releases chemicals in your brain that make you feel good from inside and outside and boosting your self-esteem, helping you concentrate as well as sleep, look and feel better. There are so many ways to be fit and active and

they can help to improve an individual's mental health. Taking part in physical activities can be a great source to meet people which offer a break from the hustle and bustle of daily life (Didonna, 2009). Leading a healthy and active life can help to improve an individual feelings of self-worth and advance confidence. Taking part in a form of exercise that you really like and enjoy can give you a goal and purpose. There are few benefits of exercise which includes less tension, stress and mental fatigue in daily life, a natural energy boost, improved sleep, a sense of achievement, focus in life and motivation, less anger or frustration, a healthy appetite, better social life and so many other health related benefits (Dakwar et al., 2012; Kilbourne et al., 2007; Simonelli-Munoz et al., 2012).

Poor dietary habits, non-physical activity and sedentary inactive lifestyle are independent cause of overweight and higher body mass index (BMI) among Pakistani primary school children (Mushtaq, Gull, Mushtaq, Shahid, Shad &Akram, 2011). Obesity increases the possibility of clinically diagnosed depression while on the other hand depression increases the risk of developing obesity. Subjects with depressive symptoms have a higher BMI than non-depressed participants. Although about 50% of patients who are seeking dietary treatment for obesity shows only some symptoms of depression. In addition, extreme obesity was found to increase the risk of depression (Lassenius, Åkerlind, Wiklund-Gustin, Arman, & Soderlund, 2012).

Studies shows that several organ system and levels can rigorously affected by prolonged stressors. Study by Dusek et al. (2008) indicated that stresses can affect individual from mental to physical to biochemical to genomic expression. Hence stress is a universal but some individuals are trained to handle it. Currently, people are facing unique stressors which they never experience in the past. Influence of unrelenting advertisement, media propagation of

models, and social support to respond incompetently and even self-damagingly to the stressors (Buss, 2000). There many stress management strategies are available which extending from changes in lifestyle to psychotherapy to self-organizing skills.

There are various stress management techniques and skills which include somatic, psychological, and meditative approaches. Firstly we will discuss somatic skills which covers both ancient Oriental and current Western techniques. In West, stress management techniques are associated with both physical and psychological benefits (Kuramoto, 2006). Stress management techniques are used for the treatment of anxiety and depression, and have various effects on psychosocial well-being of people and also eminent in the diverse quality of the trials (Wang et al., 2009).

Meditative skills such as contemplation, meditation and yoga are now practiced by hundreds of millions worldwide. Concurrently, meditation research has confirmed a wider range of effects which are psychological, therapeutic, neural, physiological, biochemical, and chromosomal and are associated more with any other psychotherapy. Research suggests that meditation can improve most commonly of stress-related psychological and psychosomatic disorders in both adults and children (Trakhtenberg, 2008; Manzoni, Pagnini, Castelnuovo, & Molinari, 2008).

Concurrently, stress management techniques research has confirmed a wider range of effects which are psychological, therapeutic, neural, physiological, and biochemical are associated more with any other psychotherapy (Walsh, 2011; Walsh & Shapiro, 2006). Research suggests that stress management techniques can improve most commonly of stress-related psychological and psychosomatic disorders in both adults and children (Arias, Steinberg, Banga, &Trestman, 2006; Black, Milam, &Sussman, 2009; Chiesa, 2009; Dusek et al., 2008).

Various studies, demonstrate that stress management techniques can ease stress measures in both clinical and normal populations (Chiesa&Serretti, 2009; Hofmann, Sawyer, Witt, & Oh, 2010). Stress management techniques can be beneficial and helpful in responsive psychosomatic disorders in medical illness, and chronic pain (Anderson, Liu, &Kryscio, 2008; Shapiro & Carlson, 2009). Responsive psychological difficulties include insomnia, anxiety, depressive, eating, can be reduced by stress management techniques (Didonna, 2009; Shapiro & Carlson, 2009).

Stress management techniques may also improve measures of psychological capacities, health, and maturity in adult (Walsh & Shapiro, 2006). Most important to health care professionals are findings that stress management techniques can enhance appreciated caregiver qualities such as empathy, sensitivity, emotional stability, and psychological maturity while reducing distress and burnout. Studies suggest that stress management techniques can also enhance some measures of cognition and may reduce age-related cognitive losses and related brain contraction (Shapiro & Carlson, 2009). Various benefits of lifestyle changes and stress management techniques for managing stress suggests that these skills deserve to be central component of health professionals' training and also for personal and professional practice (Pagnoni&Cekic, 2007; Xiong&Doraiswamy, 2009).

Religious and spiritual concerns are significantly important to most people and most clinical population. People get satisfaction by engage in religious or spiritual practices. Religious practices are a major source of coping with stress and illnesses (Koenig, 2002). Religious and spiritual practices have many influences on lifestyle and health; have impact on therapeutic relationships and effectiveness, and on the profound existential issues (Fowler, 1995; Koenig, 2009). There was favorable relationship between religious involvement and mental health. In

general, religious or spiritual involvement is most likely to be effective when it centers on themes such as love and forgiveness and is likely to be less effective or even harmful to mental health when themes of punishment and guilt dominate. Mental health benefits are most likely of enhanced psychological, relational, and marital well-being, as well as reduced rates of disorders such as anxiety, and depression. Religious involvement seems beneficial to both specific disorders such as hypertension and to distracted mortality rates (Koenig, McCullough, & Larson, 2001). Contemplative practices such as stress management techniques suggest further psychological, somatic, and spiritual benefits (Didonna, 2009; Shapiro & Carlson, 2009; Walsh & Shapiro, 2006).

Nutrition has been proven beneficial for our mental and physical health. Latest studies and evidences believe that nutrition offer valuable prevention against mental and physical diseases which means it has specifically prophylactic and therapeutic benefits for mental and physical health (Freeman et al., 2006; Sarris, Schoendorfer, & Kavanagh, 2009). Low nutritional habits was found to be associated with higher prevalence rates of mental disorders (Amminger et al., 2010; Freeman et al., 2006; Noaghiul&Hibbeln, 2003; Song & Zhao, 2007). Poor nutrition supplements "alleviate" the symptoms of depression, bipolar and psychosis. Several studies suggest associations of poor nutrition habits with cognitive impairment, depression, bipolar disorder, and somatic pains due to low nutrition. Better nutrition encourages good moods, supports healthy immune system and prevents depression (Cherniack, Troen, Florez, Roos, & Levis, 2009).

Physical activity has been quite useful and beneficial in gaining physical advantages to our body including different systems in our body. It has been proved to be very effective in reducing risks of various disorders, including different contagious diseases. According to

Khawet al (2008) exercises can be very useful in reducing the risks of multiple physical disorders/diseases including risks of diabetes, prostate cancer and even narrows down risks of cardiovascular problems/disorders (Khaw et al, 2008; Ornish et al, 2008). Surprisingly exercise proved to be very beneficial and preventive for not only physical body but also proved to be very healthy and productive for various psychiatric disorders. Harvard Mental Health Letter (The Therapeutic Effects, 2000, p5), ''explain physical exercise is an in-expensive and nourishing treatment for various physical diseases and also psychiatric disorders''. According to the research works and findings of Hamer and Chida (2009) and Sui et al., (2009), physical exercise proved to be preventive and risk reducing treatments for various mental/psychological diseases covering diseases of Alzheimer and Parkinson, depression and many other neuro-degenerative mental and psychological disorders. Looking at the therapeutic benefits, physical exercises found to be preventive for anxiety, somatic pain disorders (Smits, Stathopoulou, Berry, Otto, & Powers 2006; Deslandes et al., 2009; Daley, 2002; Colcombe& Kramer, 2003).

Additionally, physical exercise is most advantageous, effective and preventive against depression; from mild to moderate level (Sidhu et al., 2009, Dowd et al., 2004). Physical activity has been proved to be a valuable perhaps essential accessory being more effective and easy treatment for special persons including elderly people, children and females in their postnatal period (Larun, Nordeim, Ekeland, Hagen & Heian, 2006, Sidhu et al., 2009, Hamer&Chida, 2008). Expanding the benefits of physical activity, it happens to have anti-depressant effects to our psychological and physical domains, possible other mediating aspects. Physical activity improve sleep habits, changes and variations in mood and even improves cognition (Stathopoulou et al., 2006, Deslandes et al., 2009). Whereas mental and psychosomatic aspects include better self-esteem levels and improved effectiveness, reduction and stoppage of negative

cogitation and thoughts (Dowd et al., 2004), also the interruption in the chronic-muscular-tension-patterns that results in emotional conflicts that are the focus of psycho-somatic therapies/treatments (Smith, 2000). Discovery of the neural perspective and benefits of physical exercise were quite interesting. Physical activity happen to affect human brain directly by bringing about variations in its volumes; both white and grey matter, affecting flow of blood in human brain, improvements in vascularization and its functional measures (Cotman&Berchtold, 2002; Erickson & Kramer, 2009; Hamer&Chida, 2009). With keeping in mind such significant neural benefits, McMorris et al. (2009) also suggested physical activity also have significant cognitive benefits/factors (Christofoletti, Oliani, Gobbi& Stella, 2007; Deslandes et al., 2009; McMorris et al., 2009), ranging from improvements in youngsters' academic performances, assistance in recovering and reducing risks of brain-stroke, improvement in reduction of memory loss possibilities with growing ages, and improvements in reduced risks of dementia found in aged people (Hamer&Chida, 2009; Quaney et al, 2009).

Meta-analysis suggests that longer the duration of physical activity program, greater would be its benefit and result in improved psychological benefits. Researchers found a relationship between the duration of physical activity sessions with cognitive gains. Whereas cognitive gains can be increased via more strenuous activity (Colcombe& Kramer, 2003; Hertzog, Wilson, Lindenberger& Kramer, 2009). Patients can be motivated to involve themselves in physical activity even with a brief counseling (Long et al., 1996) ultimately reducing risks of various disorders. Despite the proved physical and psychological advantages of physical activity, few of the health experts/professionals suggest physical activity to their patients as a treatment (McEntee&Halgin, 1996).

Rationale

The physical effect of out of shape lifestyles are practiced from childhood and those specific life styles are practiced throughout the life. Moreover other features of this kind of uncertain life includes low economical class, lack of knowledge for lively behavior, inability to deal with the stress of life, all these factors contribute to unhealthy life pattern in stressful situation. Mostly individuals in Pakistani society are aware of importance of healthy diet with regular physical activity but are not actively engaged in arranging healthy dietary plans with healthy physical activity consequently making them vulnerable to stress and anxiety. Current data has recommended that the knowledge of health is helpful to achieve, comprehend and utilization of better health in life. (U.S. Department of Health and Human Services, 2000) Lack of understanding of healthy life style knowledge is totally linked with poor mental health (Berkman, Sheridan, Donahue, Halpern, &Crotty, 2011).

Positive life styles such as healthy interpersonal relationships, stress management and spiritual involvement leads to better emotional, social and psychological health. Whereas unhealthy life styles such as poor dietary habits, lack of physical activity patterns cause feeling of sadness, and anxious feelings. Prolong exposure to such distress feelings make each individual suffer from longer episode of depression and anxiety feeling with cognitive dysfunction and body aches throughout life issues.

Mostly mental health professionals in Pakistan have significantly underestimated the significance of lifestyle factors in treatment of depressive, anxiety, cognitive dysfunction and somatic pathologies. Although several researches (Brown et al., 2005; Haynes et al., 2005; Kang and Lee, 2010; Boden et al., 2010) have highlighted that healthy lifestyles are linked to mental health and balance emotional state of the individual. Other researches (Dixit & Crum, 2000;

Lasser et al., 2000; Patten et al., 2009; Roshanaei- Moghaddam et al., 2009) have highlighted the link the of poor mental health with poor life styles patterns like with obesity, daily smoking habit and unhealthy dietary habits (Rohrer, Pierce & Blackburn, 2005). Recent researches have highlighted that better life styles effect on better mental health (Deslandes et al., 2009; Hamer&Chida, 2009; Pagnoni&Cekic, 2007).

The present study is an effort to find out the relation of healthy lifestyle and mental health among the university students. Researches have highlighted the possible positive link between life styles and mental health (Druss, Zhao, Von Esenwein, Morrato, & Marcus, 2011). However, in Pakistani context majority of the population suffer from psychological illnesses related to unhealthy life styles and are mostly attributed to social, economic and genetic factor.

As in Pakistan lack of basic facilities of living, survival and safety are paying attention towards the difference between poor and better life style. This study is an attempt to gain insight into the factors of daily life style patterns used by Pakistani population. This study also attempts to explore the trends of the living styles which are linked with better well-being. As other researchers have highlighted that individuals with psychological disturbance experience significant functional impairment with poor physical activeness and have poorer dietary intakes compared to the general population. Poor daily living styles like poor dietary habits and low levels of physical activity are related to serious mental illnesses leads to the poorer overall health and early death and mortality.

As previous researchers in Pakistan have examined the high frequencies of diabetes, hypertension, obesity, unhealthy nutrition and lack of exercise among Pakistani outpatient population (Rafique&Khuwaja, 2003), some other researchers have explored the relationship of physical activity and psychological distress among students (Mushtaq et al., 2011). The previous

researches in Pakistan are carried out on life styles with other variables and mental health has been explored in other variables. As indigenous research by (Qidwai et al., 2013) have the idea that an unhealthy life style leads towards morbidity and death in Pakistan. This research has highlighted healthy lifestyle i.e., spiritual, physical, emotional, social, mental and financial styles, all these factors need to be balanced with the assistance of family in every part of life (Qidwai et al., 2013).

Having a look on other researches, this research is an attempt to explore the existing trends and hypothetical directions that exist in Pakistani culture in the possible link of life styles and mental health among students. The present study also attempts to explore the effect on age and gender in the adaption of better and poor life style patterns and mental health. As recent researches have highlighted that gender and age strongly influence the better and poor life style patterns and thus lead to better and poor mental health of the students.

The major part of the present research is that it guides the clinical psychologist in therapeutic interventions; it is also useful for health practitioners, researchers, students and people who are facing mental or physical problems. The objective of the current research is to guide in clinical intervention for mental and physical health issues, related to the variables of lifestyle. By having a look on the above abstract it is noticed that this research enhances the public strategy for balanced diet and physical activity for developing a preventive program. So it should be initiated by focusing the poor diet behaviors, non-physical activities and unhealthy lifestyles associated with obesity and other health factors found in the people of Pakistan.

METHOD

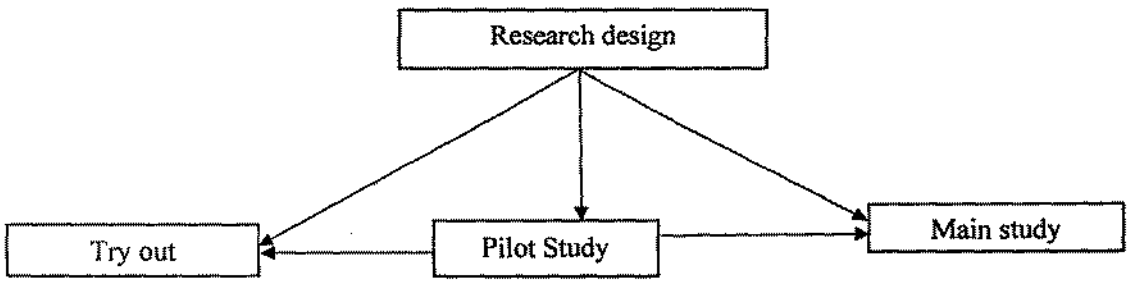
Chapter-II

METHOD

Research Design

In the present study the correlation research design was employed to explore the effect of lifestyle factors on perceived mental health.

The present study consists of three phases. In first phase, the expert opinion about the language, validity and reliability of the scales was obtained and administered on sample. In second phase, the trends of the data were checked on small group of sample. In the third phase, scales were administered on the selected sample to judge the impact of lifestyle on mental health.



The main objective of the pre-testing was to adapt the scales originally in English into Urdu language to make it compatible to cultural background and comprehensive. Language constrains, maintaining of the original items meaning, reduction of gender biases, calculation of reliability and validity and item sample suitability are some common procedural problems which were kept in mind during the adaptation of the scales.

In the first step Health Promoting Lifestyle Profile (HPLP-II) was selected to measure life style components (e.g., health responsibility, physical activity, nutrition, spiritual growth,

interpersonal relations, and stress management). Pre-testing was done by using Expert's opinion method.

Expert's opinion. The main purpose of the translation was to settle the instrument in a culturally applicable and maintaining meaning of the original items. The scale was initially modified. Then, the issues of cultural significance as well as language issues in items were addressed. The subject matter experts' (SMEs) opinions were taken regarding common methodological problems in the instrument. To translate the scale, experts' opinions were taken and then committee approach was used.

Procedure

In the initial step, the author of Health-Promoting Lifestyle Profile Mrs. Susan Noble Walker was contacted via email (see Appendix E) and she was entreated for the permission to use the instrument in the present research. The permission was granted from her along with other research material that could assist in the research.

After receiving the permission letter, the main procedure was carried out. Three SMEs were selected, who was fully trained. They were instructed to follow the guidelines for translating the items. These SMEs (subject matter experts) were well up in understanding of the language of the items; give a high probability of finding a readily accessible target language. They do not use alien term, and able to produce target language items readily understandable by the eventual set of respondents who are part of the present study.

Results

Each item was discussed and modified according to Pakistani culture. Some language problems were drawn attention to in health-promoting lifestyle profile. The prominence was given to conceptual equivalence to provide for common meaning and legitimate comparison between the original items of the scale.

PILOT STUDY

Pilot Study

Objectives

The key purpose of the pilot study was to look at the following objectives:

1. To explore the psychometric properties of the Health Promoting Lifestyle Profile (HPLP-II) and Self-Reporting Questionnaire (SRQ-20).

Sample

Purposive convenient sampling technique was used for this purpose. The sample comprises 100 Pakistani adult students. Data was collected from the International Islamic university Islamabad, Quaid-e-Azam University Islamabad, National University of modern languages, FAST University, and National University of Science and Technology. The age range of students was 20 to 30 or above. Out of 100 students 50 were male and 50 were female.

Demographic Sheet. In the present study the demographic sheet was used to get basic information which are relevant to the research (e.g., age, gender, marital status, education level, family structure, birth order) (see Appendix A).

Instruments

Following two instruments were used to check the psychometric properties;

Self-Reporting Questionnaire (SRQ). Translated version of SRQ was used it has been developed by the World Health Organization (WHO) and is widely being used as a screening tool for depression in Pakistan and other developing countries. It is a self-administered questionnaire including nine somatic and eleven psychological symptoms. All questions are dichotomous (Yes/No) for simplicity. A cut-off score 8/9 was employed since it provided a sensitivity of 80% and a specificity of 85.4% (Rahman, A., Iqbal, Z., Waheed, W., &Hussain, N., 2003) (see Appendix C).

Health-Promoting Lifestyle Profile II (HPLPII). The 52-item HPLPII is composed of a total scale and six subscales to measure behaviors in the theorized dimensions of health-promoting lifestyle (spiritual growth, interpersonal relations, nutrition, physical activity, health responsibility, and stress management). The alpha coefficient of internal consistency for the total scale was .94; alpha coefficients for the subscales ranged from .79 to .87 (Walker, & Hill-Polerecky, 1996) (see Appendix D).

Procedure

The procedure followed for the pilot study of present research is as follow:

Author's consent: In the initial step, the author of Health-Promoting Lifestyle Profile Mrs. Susan Noble Walker was contacted via email (see Appendix E) and she was entreated for the

permission to use the instrument in the present research. The permission was received from her along with other research material that could assist in the research. Self-Reporting Questionnaire (SRQ-20) is developed by World Health Organization (1994) and it openly assesses to use for research purpose.

Informed consent form was used to get respondent's approval of their willingness to have part in the research. The form portrayed the main purpose of the research and assurance of the participants information will kept confidential (see Appendix B).

After receiving the permission letter, the main procedure was carried out. Health-Promoting Lifestyle Profile II (HPLP-II) was translated into Urdu language by using committee approach procedure.

In present study, the relevant authorities of different universities e.g., The International Islamic university Islamabad (IIUI), Quaid-e-Azam University Islamabad (QAU), National University of Modern languages (NUML), FAST University, National University of Science and Technology (NUST) were personally approached for purpose of data collection. The authorities were debriefed about the objectives of the study in permission letter (see Appendix A) authorized by the respected university and also about the outcome of the study. The authorities were also informed about the time duration required for the data collection and for that purpose the inclusion and exclusion criterion of the students was also informed to the institutional authorities.

The criterion of selection of participants explained in the sample was followed. Those participants were only approached who showed their willingness and greed to the informed consent participated in the study. The students were approached individually; they were briefed about the purpose and objectives of the study. They were also assured about the confidentiality

of the data and that the information obtained would purely be used for research purpose. The participants were also be given general instructions to complete the questionnaires. The instruments from the participants were personally collected and they were thanked for their participation and cooperation. The instruments were checked for any missing items on all the instruments.

Results

The pilot study (Part II) was carried out to explore the psychometric properties of the instruments that were used in the present study to assess the lifestyle and mental health among the sample. For purpose of pilot study sample of 100 university students was taken with age range of 18-30 and above. The reliabilities of the scales were assessed by measuring the internal reliability of the subscales as computed by Coefficient Alpha (Cronbach, 1984). All the study scales showed good to excellent internal consistency (.77 to .97) as they exceeded .70 (as depicted in Table 1). The coefficient of alpha reliabilities calculated showed that the instruments have sufficient internal consistency for the present study sample. It was also decided that the alpha coefficient will be calculated again in the main study on larger sample with the assumption that the reliabilities may also change use the sample size.

Additionally, for evidence of the internal consistency of the subscale of the present study, the item total correlation of the scales was assessed (see Table 3-6). The item total correlation values of health responsibility ranged from (.60 to .83), the item correlation of the subscale of physical activity ranged from (.54 to .82), which is slightly less than the overall subscale item total correlation values but as the item total correlation value is greater than .30, it's a reliable

measure to assess the lifestyle. The subscale of mental health had item total correlation ranging from (.65 to .86) (see Table 3-6)

The correlation of subscales of health promoting lifestyle profile (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations and stress management), self-reporting questionnaire (e.g., cognition, depression &anxiety and somatic) was carried out by using bivariate correlation. These results are consistent with the concept that individual that score high on lifestyle are prone to experience more level of mental health. These findings are also in accordance with the theoretical background that participants who experience poor lifestyle habits are experience lower and higher level of depression and anxiety vice versa.

To recap the pilot study was carried out in order to examine the psychometric properties (e.g., Alpha reliabilities, inter-scale correlation) of the study instruments of the Health-Promoting Lifestyle Profile (HPLP-II) and Self-Reporting Questionnaire (SRQ-20). The pilot study was also intended to find the relationship between the study variables, lifestyle and mental health among the university students.

Reliability estimates of Health promoting lifestyle profile and self-reporting questionnaire

To check the internal consistency of Health promoting lifestyle profile and self-reporting questionnaire Cronbach alpha coefficient were calculated.

Table 1

Cronbach alpha reliability coefficients of the subscales of Health-Promoting Lifestyle Profile and Self-Reporting Questionnaire (N= 100)

Subscales	No. of items	Cronbach alpha coefficients
Heath responsibility	9	.79
Physical activity	8	.77
Nutrition	9	.55
Spiritual growth	9	.63
Interpersonal relationship	9	.69
Stress management	8	.40
Cognitive	3	.30
Anxiety and Depression	12	.80
Somatic	5	.67

Note.α= Chronbach's alpha

The alpha reliability of the subscale of the Health-Promoting Lifestyle Profile range from .55 to .79. The alpha reliabilities values showed that Health-Promoting Lifestyle Profile is consistent scale for measuring the life styles profiles among the student. Likewise the alpha reliability of Self-Reporting Questionnaire ranged from .30 to .80 showing that the measure is reliable for assessing the mental health among the students.

Relationship between study variable

Spearman correlation was figured to assess the relationship between lifestyle and mental scale with each subscale domain. The correlation was computed to explore the trend of existing relationships among the study variable. Result revealed Spearman correlation analysis which is as follows.

Table 2

Spearman Correlation between health-promoting life style profile and self-reporting questionnaire (N=100)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Heath responsibility	-	.51**	.56**	.27**	.15**	.48**	.37**	.56**	.27**	.15**	.67**
2. Physical activity		-	.43**	.41**	.14**	.51**	.33**	.43**	.41**	.14**	.69**
3. Nutrition			-	.30**	.23**	.46**	.47**	.56**	.30**	.23**	.66**
4. Spiritual growth				-	.50**	.59**	.37**	.30**	.44**	.50**	.68**
5. Interpersonal relationship					-	.29**	.29**	.23**	.50**	.56**	.50**
6. Stress management						-	.20**	.46**	.59**	.29**	.76**
7. Life style							-	.39**	.37**	.29**	.21**
8. Cognitive								-	.30**	.23**	.66**
9. Anxiety									-	.50**	.68**

10. Somatic	.50**
11. Mental health	-

**$p<.01$, *$p<.05$

Table shows Spearman Correlation between Life Style (Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relations, and Stress Management) Mental Health (Cognitive, Depression and Anxiety, Somatic). Correlation analysis shows that all the life style and its subscales are positively associated with mental health and also with its subscales.

Item total Correlation

In order to measure whether the item is reliable with the whole scale item total correlation were calculated.

Table 3

Item total correlations of health responsibility and physical activity subscale of health-promoting lifestyle profile (N=100)

Health responsibility		Physical activity	
Item number	Item total correlations	Item number	Item-total correlations
3	.41	4	.44
9	.48	10	.47
15	.50	16	.46
21	.50	22	.47
27	.46	28	.51
33	.48	34	.52
39	.36	40	.42
45	.33	46	.29
51	.40		

Table showed the Item total correlations of health responsibility and physical activity subscales of health-promoting lifestyle profile. The results showed that the values of subscales (health responsibility and physical activity) are above .3 which indicates that both scales are reliable to assess lifestyle.

Table 4

Item total correlations of Nutrition and Spiritual Growth subscale of health-promoting lifestyle profile (N= 100)

Nutrition		Spiritual growth	
Item number	Item total correlations	Item number	Item-total correlations
2	.39	6	.44
8	.24	12	.37
14	.32	18	.38
20	.46	24	.33
26	.46	30	.22
32	.34	36	.34
38	.40	42	.26
44	.44	48	.31
50	.44	52	.39

Table showedItem total correlations of nutrition and spiritual growth subscales of health-promoting lifestyle profile. Table exhibits mostly values of the subscale (Nutrition and Spiritual growth) are above than .3 that make both subscales reliable to measure lifestyle.

Table 5

Item total correlations of Interpersonal relations and Stress management suppression subscale of health-promoting lifestyle profile (N= 100)

Interpersonal relations		Stress management	
Item number	Item total correlations	Item number	Item-total correlations
1	.16	5	.23
7	.31	11	.51
13	.28	17	.27
19	.26	23	.44
25	.28	29	.44
31	.35	35	.47
37	.30	41	.32
43	.44	47	.34
49	.40		

Table presented Item total correlations of interpersonal relations and stress management subscales of health-promoting lifestyle profile. Table exhibits mostly values of the subscale (interpersonal relations and stress management) are above than .3 that make both subscales reliable to measure lifestyle.

Table 6

Item total correlations of cognitive, and somatic subscale of Self-Reporting Questionnaire (N= 100)

Cognitive		Somatic	
Item Number	Item total Correlations	Item Number	Item-total correlations
8	.50	1	.45
12	.36	2	.44
13	.42	3	.46
		7	.42
		19	.44

Table exhibited Item total correlations of cognitive and somatic subscales of self-reporting questionnaire. Values of all items are above .30 which indicates that both sub-scale are highly significant and reliable measures to evaluate mental health.

Table 7

Item total correlations of anxiety and depression subscale of Self-Reporting Questionnaire (N= 100)

Anxiety and depression	
Item number	Item-total correlations
4	.44
5	.38
6	.54
9	.47
10	.47
11	.49
14	.32
15	.46
16	.47
17	.43
18	.49
20	.48

Table exhibited Item total correlations of anxiety and depression subscale of self-reporting questionnaire. Values of all items are above .30 which indicates that scale is highly significant and reliable measure to evaluate mental health.

Main study

The main study (Phase- III) of current research was aimed to explore impact of lifestyle on mental health among Pakistani university students. The main study was completed in two steps. In (Step I) the psychometric properties of the Health-Promoting Lifestyle Profile (HPLP-II) and Self-Reporting Questionnaire (SRQ-20) which were used in the present research were analyzed. In (Step II), after the examination of psychometric properties, data was subjected to main analyses using SPSS to test the purposed hypotheses testing.

OperationalDefinitions

Lifestyle

A lifestyle typically reflects an individual's attitudes, values or world view. Therefore, a lifestyle is a means of forging a sense of self and to create cultural symbols that resonate with personal identity. Not all aspects of a lifestyle are voluntary. Surrounding social and technical systems can constrain the lifestyle choices available to the individual and the symbols she/he is able to project to others and the self (Spaargaren&VanVliet, 2000).

Spiritual growth.Spiritual Growth focuses on the development of inner resources and is achieved through transcending, connecting, and developing (Lane, 1987). In present study individual high score on the domain of spiritual growth will show tendency of more spiritual growth in individuals.

Interpersonal relations.Interpersonal Relations entails utilizing communication to achieve a sense of intimacy and closeness within meaningful, rather than more casual, relationships with others (Walker, Sechrist, & Pender, 1987). In present study individual high

score on the domain of interpersonal relationships will show tendency of better interpersonal relations in individuals.

Nutrition. Nutrition involves knowledgeable selection and consumption of foods essential for sustenance, health, and well-being (USDA, 1992). In present study individual high score on the domain of nutrition will show tendency of better nutritional habits in individuals.

Physical activity.Physical Activity involves regular participation in light, moderate, and/or vigorous activity. It may occur within a planned and monitored program for the sake of fitness and health or incidentally as a part of daily life or leisure activities (Bouchard, Shepard, Stephens, Sutton, & McPherson, 1990). In present study individual high score on the domain of physical activity will show tendency of physical activity tendency in individuals.

Health responsibility.Health Responsibility involves an active sense of accountability for one's own well-being. It includes paying attention to one's own health, educating oneself about health, and exercising informed consumerism when seeking professional assistance (Walker, Sechrist, & Pender, 1987). In present study individual high score on the domain of health responsibility will show tendency of better health responsibility individuals.

Stress management. Stress Management entails the identification and mobilization of psychological and physical resources to effectively control or reduce tension (Antonovsky, 1987). In present study individual high score on the domain of stress management will show tendency of better stress management tendency in individuals.

Mental health

The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community".

Cognitive. It comprises situational fluctuating association in such a way that there is modification in the emotional reaction to that circumstances (Gross & John, 2003).

Anxiety and Depression. Anxiety is considered as an involuntary arousal, emaciated muscle effects situational uneasiness and personal experience after anxious feeling experience. Depression is the feeling of self-deprecation and lack of interest dyphoria, uselessness, depreciation, have difficulty to participate in regular activities (Levibond&Levibond, 1995). In present study a high score on the anxiety and depression replicates high level of anxiety and depression.

Somatic. Physical illness that cannot be attributed to another psychological illness and cannot fully explained by any medical illness or effect of any substance use (APA 2000).

Objectives

1. The aim of the study is to examine the relationship between healthy lifestyles and mental health among adults.
2. To explore the gender difference on healthy lifestyles and mental health.
3. To investigate the effect of other variables i.e., (age, education, marital status, family structure, number of children, socio economic class, birth order) on healthy lifestyles and mental health.

Hypotheses

The hypothesis were computed in the present study to explore the effect of life style on mental health after literature review.

1. Health life styles positively correlate with mental health.
2. Male student are high on mental health as compare to female students.
3. Elder students are higher on mental health as compare to younger students.
4. Healthy life styles positively predicts mental health.
5. Gender moderates the relationship between life styles and mental health.

Sample

Purposive convenient sampling technique was used in the present study. The sample of the present study was comprised of 300 Pakistani adult student studding in different universities of Rawalpindi and Islamabad including 150 male and 150 female. Data was collected from different educational levels (Bachelors, Masters, MPhil and PhD) and different educational disciplines (Social sciences, Management sciences, Basic and applied sciences, Engineering and technology).The age range of students was 20 to 30 or above. Only those participants were included who are willing to participate.

Procedure

After receiving the permission letter, the main procedure was carried out. Health-Promoting Lifestyle Profile II (HPLP-II) was translated into Urdu language by using committee approach procedure.

In present study, the relevant authorities of different universities e.g., The International Islamic university Islamabad (IIUI), Quaid-e-Azam University Islamabad (QAU), National University of Modern languages (NUML), FAST University, National University of Science and Technology (NUST) were personally approached for purpose of data collection. The authorities were debriefed about the objectives of the study in permission letter (see Appendix F) authorized by the respected university and also about the outcome of the study. The authorities were also informed about the time duration required for the data collection and for that purpose the inclusion and exclusion criterion of the students was also informed to the institutional authorities.

The criterion of selection of participants explained in the sample was followed. Those participants were only approached who showed their willingness to participate in the study. The students were approached individually; they were briefed about the purpose and objectives of the study. They were also assured about the confidentiality of the data and that the information obtained would purely be used for research purpose. After the consent was taken, the students were requested to complete the written informed consent form. The participants were also be given general instructions to complete the questionnaires. The instruments from the participants were personally collected and they were thanked for their participation and cooperation. The instruments were checked for any missing items on all the instruments.

RESULTS

hapter-III

RESULTS

The present study was aimed to investigate the impact of lifestyle on mental health among Pakistani adult population. In addition the present study was also intended to explore the effect of different demographic variable e.g., age, gender, education, birth order, family structure. Firstly, the descriptive analysis of study variables (frequency, means, standard deviation, skewness, upper and lower limit) were assessed. After the descriptive analysis of study sample the alpha reliabilities of the all scale were again assessed on larger sample size was calculated. Further, for hypothesis testing the T-test, ANOVA and regression was carried out.

Item total Correlation

In order to measure whether the item is reliable with the whole scale item total correlation were calculated.

Table 8

Item total Correlation of Self-Reporting Questionnairefor Mental Health (N= 300)

Item no	*r*	Item no	*R*
Item 1	.45**	Item 11	.49**
Item 2	.44**	Item 12	.36**
Item 3	.46**	Item 13	.42**

Item 4	.44**	Item 14	.32**
Item 5	.38**	Item 15	.46**
Item 6	.54**	Item 16	.47**
Item 7	.42**	Item 17	.43**
Item 8	.50**	Item 18	.49**
Item 9	.52**	Item 19	.44**
Item 10	.47**	Item 20	.48**

**$p < .01$

Table 1 shows item total correlation of Health-Promoting Lifestyle Profile. Results indicated that all the items have significant positive correlation with total scale.

Table 9

Item total Correlation of Health-Promoting Lifestyle Profile for Lifestyle (N=300)

Item no	*r*	Item no	*r*
Item 1	.16**	Item 27	.46
Item 2	.39**	Item 28	.46
Item 3	.41**	Item 29	.51
Item 4	.40**	Item 30	.44
Item 5	.23**	Item 31	.22

Item 6	.41**	Item 32	.35
Item 7	.31**	Item 33	.34
Item 8	.24	Item 34	.48
Item 9	.48	Item 35	.52
Item 10	.47	Item 36	.47
Item 11	.51	Item 37	.34
Item 12	.37	Item 38	.30
Item 13	.28	Item 39	.40
Item 14	.32	Item 40	.36
Item 15	.50	Item 41	.42
Item 16	.46	Item 42	.32
Item 17	.27	Item 43	.26
Item 18	.38	Item 44	.44
Item 19	.26	Item 45	.44
Item 20	.46	Item 46	.33
Item 21	.50	Item 47	.29
Item 22	.47	Item 48	.34
Item 23	.44	Item 49	.31

Item 24	.33	Item 50	.40
Item 25	.28	Item 51	.44
Item 26	.46	Item 52	.40

Table 2 shows item total correlation of Self-reporting Questionnaire for Mental Health. Results indicated that all the items have significant positive correlation with total scale.

Descriptive Analysis and Skewness for Lifestyle and Mental health

Mean, standard deviation, minimum and maximum value of health promoting lifestyle profile and self-reporting questionnaire among Pakistani university students was computed. Furthermore, the skewness was examined to explore the normality assumptions in sample distribution.

Table 10

Descriptive and Skewness for the of Lifestyle (Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relationship, Stress Management) and Self-Reporting Questionnaire (Cognitive, Depression and Anxiety, Somatic) (N=300)

				Score range		
Scales	*N*	*M*	*SD*	Potential	Actual	Skew
Heath responsibility	300	18.37	4.73	7-35	4-54	.67
Physical activity	300	16.85	4.82	7-35	4-54	.32
Nutrition	300	20.51	3.99	7-35	4-54	.17
Spiritual growth	300	24.59	4.30	7-35	4-54	.31
Interpersonal relationship	300	25.00	4.18	6-42	4-54	-.09
Stress management	300	19.71	4.69	4-28	4-54	2.90
Cognitive	300	20.51	3.99	0-21	0-21	.17
Anxiety and Depression	300	24.59	4.30	0-21	0-21	.31
Somatic	300	25.00	4.18	0-21	0-21	-.09

Reliability Estimations

The alpha reliability was evaluated for the Lifestyle scale and scale for mental health and the subscale for each of these scales. The alpha reliability was valued for research sample of the university students using Cronback's alpha. The outcomes of the reliability assessments are mentions below.

Table 11

Cronbach alpha reliability coefficients of the subscales of Health-Promoting Lifestyle Profile and Self-Reporting Questionnaire (N=300)

Subscales	No. of items	α
Health Promoting Lifestyle Profile		
Heath responsibility	9	.76
Physical activity	8	.77
Nutrition	9	.58
Spiritual growth	9	.69
Interpersonal relationship	9	.66
Stress management	8	.52
Self-Reporting Questionnaire		
Cognitive	3	.77
Anxiety and Depression	12	.73
Somatic	5	.60

Note. α= Chronbach's alpha

The table 4 shows alpha reliability of the lifestyle scale and the scale for mental health. The reliabilities for the health responsibility, physical activity, nutrition, spiritual growth, interpersonal relationship, stress management, cognition, depression and anxiety, somatic are also shown in the table. These satisfactory alpha reliabilities indicate that health-promoting lifestyle profile and Self-reporting questionnaire are reliable measure for assessing lifestyle and mental health among Pakistani adults. All the scale reliabilities showed that the scales are reliable.

Relationship between Lifestyle and Mental health scale

Spearman correlation was figured to assess the relationship between lifestyle and mental scale with each subscale domain. The correlation was computed to explore the trend of existing relationships among the study variable. Result revealed Spearman correlation analysis which is as follows.

Table 12

Spearman Correlation between Life Style (Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relations, Stress Management) Mental Health (Cognitive, Depression and Anxiety, Somatic) (N=300)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Heath responsibility	-	.51**	.56**	.27**	.15**	.48**	.37**	.56**	.27**	.15**	.67**
2. Physical activity		-	.43**	.41**	.14*	.51**	.33**	.43**	.41**	.14*	.69**
3. Nutrition			-	.30**	.23**	.46**	.47**	.56**	.30**	.23**	.66**
4. Spiritual growth				-	.50**	.59**	.37**	.30**	.44**	.50**	.68**
5. Interpersonal relationship					-	.29**	.29**	.23**	.50**	.56**	.50**
6. Stress management						-	.20**	.46**	.59**	.29**	.76**
7. Life style							-	.39**	.37**	.29**	.21**
8. Cognitive								-	.30**	.23**	.66**
9. Anxiety									-	.50**	.68**
10. Somatic										-	.50**
11. Mental health											-

$^{**}p<.01$, $^{*}p<.05$

Table 5 shows Spearman Correlation between Life Style (Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relations, and Stress Management) Mental Health (Cognitive, Depression and Anxiety, Somatic). Correlation analysis shows that all the life style and its subscales are positively associated with mental health and also with its subscales.

Mean Differences on life Style, And Mental Health

Mean difference of demographic variables age, gender and family system were explored on study variables lifestyle (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) and mental health (e.g., cognitive, somatic, and anxiety and depression). T-test was applied on gender (male and female) and family system (joint and nuclear). To check the effect size Cohen's d was calculated. To see the age differences, there were three groups ANOVA was applied.

Gender differences on Lifestyle and Mental Health

Table 13

Mean, Standard Deviation, t value on life style and mental health among Pakistani male and female adults (N=300)

	Male (n = 150)		Female (n =150)				95% CI		Cohen 's d
Variables	*M*	*SD*	*M*	*SD*	t (298)	p	*LL*	*UL*	
Heath responsibility	18.62	4.43	18.11	5.01	.93	.35	-.56	1.58	0.05
Physical activity	17.70	4.58	16.01	4.92	3.07	.002	.60	2.76	0.18
Nutrition	20.69	4.18	20.33	3.80	.77	.43	-.54	1.26	0.05
Spiritual growth	24.67	4.47	24.50	4.14	.33	.73	-.81	1.14	0.11
Interpersonal relationships	24.24	3.88	25.76	4.34	3.18	.002	-2.44	-.57	0.08
Stress management	19.84	3.93	19.58	5.36	.47	.63	-.80	1.32	0.10
Cognitive	24.67	4.47	24.50	4.14	.33	.73	-.81	1.44	0.05
Anxiety and Depression	24.24	3.88	25.76	4.34	3.19	.002	-2.44	-.57	0.11
Somatic	25.16	4.16	24.82	4.21	.70	.48	-.61	1.29	0.08

Note. CI= Confidence Interval, LL = Lower Limit, UP= Upper Limit.

Table 6 shows Mean, Standard Deviation, t value on life style and mental health among Pakistani male and female adults. Results shows that males scored higher on physical activity $t(198) = 3.07$, p, .01, whereas females scored higher on interpersonal relationship $t(198) = 3.18$,

p , .01, and anxiety and depression $t(198) = 3.19$, p , .01. Cohen's d value indicated a larger effect in the comparison of male and female students.

Family Structure differences on Lifestyle and Mental health scales

Table 14

Mean, Standard Deviation, t value on life style and mental health among nuclear and joint living style of Pakistani adults (N=300)

	Joint (n = 150)		Nuclear (n = 150)				95% CI		Cohen's
Variables	*M*	*SD*	*M*	*SD*	*t* (298)	*p*	*LL*	*UL*	s *d*
Heath responsibility	18.50	4.38	18.22	5.10	.51	.60	-.79	1.36	.10
Physical activity	16.80	4.67	16.92	5.00	.21	.82	-1.22	.97	.35
Nutrition	20.62	3.91	20.38	4.09	.51	.60	-.67	1.55	.90
Spiritual growth	24.35	4.23	24.85	4.39	1.00	.31	-1.48	.48	.03
Interpersonal relationships	25.16	4.16	24.82	4.21	.70	.48	-.62	1.29	.36
Stress management	19.94	5.25	19.45	3.69	.89	.37	-.58	1.55	.05
Cognitive	20.62	3.91	20.83	4.09	.51	.60	-.67	1.55	.09
Anxiety and Depression	24.35	4.23	24.85	4.39	1.00	.31	-1.48	.48	.03
Somatic	25.16	4.16	24.82	4.21	.70	.48	-.61	1.29	.36

Note. CI= Confidence Interval, LL = Lower Limit, UP= Upper Limit.

Table 7 shows Mean, Standard Deviation, t value on life style and mental health among Pakistani adults belongs to nuclear and joint family system. Results show non-significant difference between students of nuclear and joint family system on all study variables.

Age differences on Lifestyle and Mental health scales

Table 15

Mean, Standard Deviation, F value of age on life style and mental health among Pakistani adults (N=300)

	20-25 (*n* = 229)		26-30 (*n* = 41)		30-35 (*n* = 30)			
Scales	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	□2
Heath responsibility	18.11	4.74	18.19	4.68	20.53	4.27	3.54*	.30
Physical activity	16.89	4.83	15.73	4.84	18.06	4.51	2.08*	.21
Nutrition	20.53	3.88	20.04	4.42	21.00	4.33	.50	.25
Spiritual growth	24.98	4.26	23.95	3.99	22.43	4.39	5.33*	.37
Interpersonal relationships	25.33	4.66	25.04	4.48	22.43	3.86	6.60*	.31
Stress management	20.05	4.92	18.00	3.66	19.46	3.66	3.43*	.27
Cognitive	20.53	3.88	20.04	4.42	21.00	4.33	.50	.25
Anxiety and Depression	24.98	4.26	23.95	3.99	22.43	3.99	5.33*	.37
Somatic	25.33	4.06	24.04	4.48	22.43	3.86	6.54*	.31

Table 8 shows Mean, Standard Deviation, t value on life style and mental health among male and female adults. Results shows that younger adults were higher on Interpersonal relationships $F(298) = 6.60, p < .01$, stress management $F(298) = 3.43, p < .01$, anxiety and depression $F(298) = 5.33, p < .01$, and somatic $F(298) = 6.54, p < .01$ whereas older adults were higher on health responsibility $F(298) = 3.54, p < .01$, and physical activity $F(298) = 2.08, p < .01$.

Table 16

Impact of lifestyle on mental health among Pakistani adults (N=300)

	Outcome: Mental health		
		95% CI	
Model	*B*	*LL*	*UL*
(Constant)	10.33*	4.14	16.52
Heath responsibility	1.10*	.92	1.28
Physical activity	1.11*	.94	1.28
Nutrition	.96*	.76	1.16
Spiritual growth	1.40*	1.20	1.60
Interpersonal relationships	.93*	.74	1.11
Stress management	.51*	.56	1.22
Life style	.69*	.23	.09
R^2	.910		
F	494.36*		

*p<.001

Multiple regression analysis shows effect of life style on mental health among Pakistani adults. Results showed that mental health was significantly predicted by Heath responsibility $B(298) = 1.10$, $p < .001$, Physical activity $B(298) = 1.11$, $p < .001$, nutrition $B(298) = .96$, $p < .001$, Spiritual growth $B(298) = 1.40$, $p < .001$, interpersonal relationships $B(298) = .93$, $p < .001$, Stress management $B(298) = .51$, $p < .001$ and life style $B(298) = .69$, $p < .001$. The overall variance explained by model was 91.00%.

Moderation Role of gender on Lifestyle and Mental health scales

To see the fluctuating effect of moderator on the relationship between given and outcome moderation analysis is carried out. The association between predictor and consequence can be effected by moderating factor (Baron & Kenny, 1986). Multiple regression analysis was carried out to explore the moderation effect of lifestyle component and mental health. The analysis was conducted to check the moderation effect.

Table 17

Moderating role of Gender between Life style on Mental health among Pakistani adults (N=300)

	Outcome: Mental health		
		95% CI	
Model	*B*	*LL*	*UL*
(Constant)	95.26*	77.50	113.02
Life style	.31	.16	.46
Gender	-72.91	-75.86	-69.96
Life style × gender	.58	.56	.60
R^2	.69*	.23	.09
ΔR^2	.920		
F	.909		
ΔF	976.36*		

*$p<.001$

Multiple regression analysis shows moderating role of gender between life style on mental health among Pakistani adults. Results showed that gender was significantly moderated the relationship

between life style on mental health $B(298) = .58$, $p < .001$. The overall variance explained by model was 92.00%.

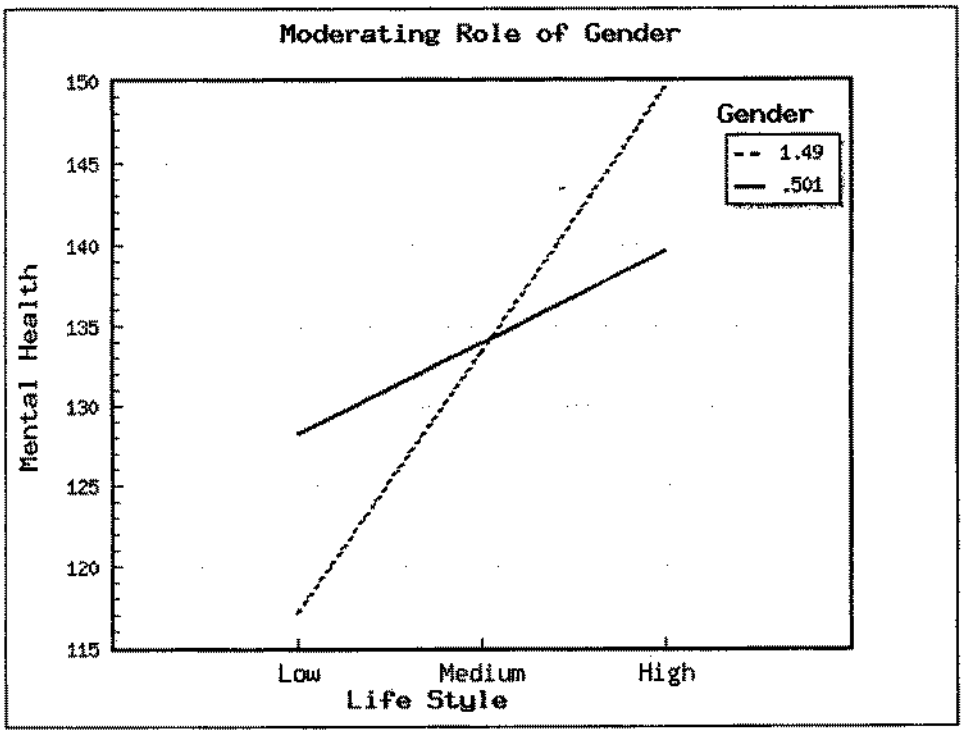


*Figure 1.*Moderating role of gender between life style on mental health among Pakistani adults

Figure shows the mod-graph there is a positive relationship between lifestyle and mental health.

DICUSSION

Chapter-IV

DISCUSSION

Healthy life styles strategies not only prolong life but help to enhance the quality of life. Better physical state and ability to regulate the life styles mechanism improve the overall mental health of the individual. Enchaining the life styles can alter the mental state and physical wellbeing of the individuals. Current study was aimed to search for influence of a person's lifestyle (including physical activities, health responsibility, nutrition intake, spiritual growth, stress management and interactive and social relationships) over person's mental health (including cognitive, somatic, anxiety and depression behaviors) among the local (i.e. Pakistani) adults and university students. Furthermore, study was carried out to conclude and decide the influence of various other factors i.e. gender, age and family system on individual's lifestyle and mental health.

First hypothesis, was to study and explore the relationship between an individual's life-style and mental health, where individuals are the university adult students. Analysis depicts a positive relationship between an individual's lifestyle and his/her mental health. As indicated in previous studies and researches that subscales of life-style, including physical activities, health responsibility, nutrition intake, spiritual growth, stress management and interactive and social relationships, have a direct positive affect on mental-health, including cognitive, somatic, anxiety and depression behaviors, (White, Horwath, & Corners, 2013; Blanchflower, Oswald, & Stewart-Brown, 2012). According to some researchers, mental health is improved by better lifestyle in general population (Pisinger, Ladelund, Glümer, Toft, Aadahl, and Jørgensen, 2009). Few other researchers found out that individuals' self-reported poor mental health is associated with high risks of death caused due to various diseases that are related with their lifestyle (Idler

and Kasl, 1991; Lee, 2000; McGee et al., 1999; Benjamins et al., 2004; Wilson et al., 2007). Hence, current data supported our first hypothesis; "Mental health is positively predicted by lifestyle amongst adult university students" (hypothesis no. 1).

Mentally healthy people can grasp anxiety and other life grieves & stressors in a better way without getting influenced by them as compared to those with poor mental health. Also such individual secure benefits from social support whilst dealing with life stressors and develop a believe that such stressors are not for ever (Cavigelli&Mcclintock, 2003; Korte et al., 2005).

Taking matter in to further depth, it is observed that mental & psychological wellbeing get enhanced amongst those with high scores on sub-scales of lifestyle (i.e. health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) with least levels of anxiety, and depression (Da Silva, Ravindran, &Ravindran, 2009; Kirkwood, Rampes, Tuffrey, Richardson, & Pilkington, 2005; Lipton, 2008; Pilkington, Kirkwood, Rampes, & Richardson, 2005). Nutrition's is observed to be beneficial for our physical as well as mental health. Some latest studies and research evidences' suggest that nutrition offer valuable tendency to develop prevention against various physical and mental diseases (Freeman, et. al., 2006; Hofmann et al., 2010).

Descriptive statistics were calculated for the scales and sub-scales of the study. The results for all scales propose that scores of HPLP-II and SRQ-20 were normally distributed.

Gender differences. The objective behind conducting and presenting this study was to study and explore gender differences lifestyles and mental health in Pakistani adults.

Our results showed that male students scored higher than female students on physical activities $t(198) = 3.07$, p , .01 whereas females scored higher on interpersonal relationship $t(198) = 3.18$, p , .01, and anxiety and depression $t(198) = 3.19$, p , .01. Many previous studies

also showed that higher levels of anxiety and depression is found in females than male individuals (Amminger et al., 2010; Freeman et al., 2006; Noaghiul&Hibbeln, 2003; Song & Zhao, 2007).

Weitzel (1989) and Lusk, Kerr and Ronis (1995) indicated gender to forecast health protective behaviors in their studies. Whereas, Bagwell (2000) discovered that females scored higher in interpersonal relationships than men. He also claimed that difference in scores of males and females was significant in inter-personal relationships where women also having higher mean score. Furthermore Pender (1990) found out higher degree of health-promoting lifestyle were observed and associated amongst female gender.

Within family structure, interpersonal relationships are integral and crucial element in Asian culture and is described as a strength of Asian Family Units (Hughes, Lerman, &Lustbader, 1996). Our data also supports that females showed high scores in interpersonal relationships. Lusk et al. (1993), Volden et al. (1990) and Weitzel (1989) also observed in their various studies that females report better interpersonal relationships. Duffy (1993) proposed that females report greater level of interpersonal relationships is due to the presence of sex-role socializing among women that encourage strong ties among women rather than men in their early life persisting into adulthood. It is also proposed that reason why men report poor interpersonal relationships can be a result of their involvement in community. Booth et al. (1991) and Küster and Fong (1993) also reported that females reported less physical activity behaviors than males.

Less involvement in physical activity by females is explained by Pinto et al. (1996) and Volden et al. (1990) to be due to the fact that females act primarily as or at least are expected for care providers within a family unit in general thus get little time for other such exercise. Pinto et

al. (1996) explained the same and suggested that due to reduction in physical activities among females in their adolescence that may extend through adulthood.

Other aspects of differences in lifestyles among young and adults was studied. Tables explained differences between young adults and adults within lifestyle (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) and mental health (e.g., cognitive, somatic, and anxiety and depression) among young and adult university students. Our research presents sample young adults were (n=229) and adults were (n=71). Our analysis revealed significant differences in lifestyle sub-scales (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) and mental health sub-scales (e.g., cognitive, somatic, and anxiety and depression).

Mental health perspective, highlighted that younger adults were higher on Interpersonal relationships $F(298) = 6.60$, p , .01, stress management $F(298) = 3.43$, p , .01, anxiety and depression $F(298) = 5.33$, p , .01, and somatic $F(298) = 6.54$, p , .01 whereas older adults were higher on health responsibility $F(298) = 3.54$, p , .01, and physical activity $F(298) = 2.08$, p , .01. These results show similarity to findings of various other researchers, having concluded that health promoting activities and behaviors are positively related with age factor (Pender, Walker, Sechrist, Stromborg, 1990; Duffy, Rossow and Hernandez, 1996; Akca, 1998; Wwang, 1999). Whereas, Weitzel (1989) concluded that age is not only positively related to exercise and health responsibility but also individual's nutrition. On contrary, Bagwell (2000) explored and reported no significant impact of age on total HPLP scores. Also, Tokgöz (2002) remained unable to find a significant difference among age and total HPLP scores or scores of any subscales. Whereas,

Volden (1990) studied and concluded that age can be accounted as a significant variable with gradual decrease in Interpersonal relationships, stress management.

After careful analysis, we found out that age was significantly and positively correlated with health responsibility and physical activity, therefore young individuals, they were more active to engaged in healthy eating pattern, had better interpersonal relations, coped better with stress. In contrast, however, as individual age their participation in physical exercise, spiritual growth, and feelings of ability to effectively manage their health decreased.

Multiple regression analysis established and explained effect of life style on mental health among university students. Results depicted that mental health was significantly impacted and predicted by Heath responsibility, Physical activity, nutrition, Spiritual growth, interpersonal relationships, and Stress management and life style. The overall variance explained by model was 91.00%.

Moderation was carried out to explore the relation between life style and mental health. As moderation helps to highlight the existing direction of relationship that exists between dependent and independent, similarly moderation can also alter the direction from positive to negative relationship between the variables (Kim, Kaye & Wright, 2001).

After a careful analysis and study we discover that our moderator (gender difference) effect on lifestyle components (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) and mental health factors (e.g., cognitive, somatic, and anxiety and depression). Moderation analysis was conducted in order to define the impact of moderator factor on to relation of lifestyle and mental health among Pakistani adult students. This analysis was conducted to explore the role of gender in lifestyle

and mental health. Hierarchical multiple regression was computed to study the moderating effects of gender with lifestyle on mental health. Results showed that gender (moderator factor) has significantly moderated the relationship between life style on mental health. The overall variance explained by model was 92.00%. The MOD graph figure also strengthens the conclusion that moderator factor – gender have a significant role in the relationship between lifestyle and mental health. As according to Baron and Kenny (1986) the moderating factors can affect the association between the predictor and the outcome variable.

A research conducted by Wardle, Williamson, Johnson, & Edwards (2006) indicates that gender play positive role as a moderator in the components of lifestyle (e.g., physical activity and nutrition) with mental health factor (anxiety and depression).

Conclusion

Present study was explored the impact of lifestyle (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) and mental health factors (e.g., cognitive, somatic, and anxiety and depression) in Pakistani adults.

Lifestyle are the attitudes we hold, habits we have and behavior we develop in daily life events. Some components of life styles are controllable and some are not controllable. Mental health is state of well-being in which person can realizes his abilities and cope with the normal stresses and productively contribute in community.

Life styles affect the individual life in long and sometime in short manner and mental health is as important as physical health for the adjustment in life because mind and body are not the distinct entities

Healthy lifestyle leads significant assistances to individuals, in the improvements of physical health, increase self-esteem, and also enhance quality of life. Many Healthy lifestyles such as meditation, relaxation, recreation, and time in nature are enjoyable and may therefore become healthy self-sustaining habits. Many physical conditions are rooted in a state of mind, or in a history of stress that has never been balanced. Personal relationship and work skills are affected by low mood, restlessness, or grieving. Lifestyle and mental health are interlinked with each other.

Health Promoting Lifestyle Profile was translated through committee approach procedure and Translated versions of Self-Reporting Questionnaire were used. Psychometric properties of the research instruments were calculated results indicated them as reliable measures for the study. Results shows lifestyle component positively related to mental health. individuals scores high on lifestyle component (e.g., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management) scores high on mental health factors (e.g., cognitive, somatic, and anxiety and depression).

Results of the study indicated that Gender played significant moderating role between lifestyle and mental health. Male adults are good at physical activity, whereas females on interpersonal relationships, and anxiety and depression. Older adults are good at health responsibility, and physical activity whereas Younger adults on Interpersonal relationships, stress management, anxiety and depression, and somatic, Study shows non-significant difference between students of nuclear and joint family system on all study variables.

Implementation

More often, the researchers have been conducted on physical activity and nutrition with anxiety and depression. Our current study helps to explore the more lifestyle components and their impact on mental health (e.g., cognitive, anxiety and depression, and somatic).

The importance of lifestyle for mental health has significantly underestimated by researchers and health professionals. Unhealthy lifestyle factors which are contributing to mental health issues and healthy lifestyles for treating multiple mental health issues are undervalued by them.

Limitations and suggestions

Although with best efforts to this research work, it cannot be without flaws. The current study carried out impact of lifestyle on mental health in Pakistani student's studying in different universities. Some limitations and suggestions are as follow:

1. The current study was done on normal student population and more sample groups have not been studied and variation in responses on lifestyle components and mental health.
2. Due to the current circumstances, the participants were selected from certain institutes. There were also securities concerns involved in it which effect data collection process.
3. Translated versions of both questionnaires were used which are somehow not culturally appropriate. There is a need to have culturally developed instrument to measure lifestyle component.
4. The current study suggested that if students are provided good knowledge of healthy lifestyle patterns and on effects of healthy lifestyle to improve mental health, then it will help to adjust healthy lifestyle in common.

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ANNEXURES

Appendix A

عمر:_____

جنس:_____

خاندانی نظام:_____

جماعت:_____

Appendix B

Inform consent

I am a student of Ms in Psychology at international Islamic university Islamabad. I am conducting a study on the impact of lifestyle on mental health among the university students in Pakistan. In this regard, I need your help through participating in my study by filling up this form. You do not need to mention your name. The entire information gathering by this form is solely for the research purposes and your information would remain confidential. You can withdraw from research at any point. The participation in this research is on the volunteering basis.

Thanks for participating in this study.

I agree to participate in this research without any pressure.....

Appendix C

	مندرجہ ذیل سوالات کا جواب ہاں/نہیں میں دیں-	ہاں	نہیں
1	کیا آپ اکثر سر میں دردیں رہتی ہیں-		
2	کیا آپکی بھوک خراب رہتی ہیں-		
3	کیا آپ کی نیند خراب رہتی ہے-		
4	کیا آپ با آسانی ڈر یا سہم جاتے ہیں-		
5	کیا آپ کے ہاتھ کانپتے ہیں-		
6	کیا آپ گھبراہٹ، ذہنی تناو یا پریشانی محسوس کرتے ہیں-		
7	کیا آپ کا ہاضمہ خراب رہتا ہے-		
8	کیا آپنا خوش رہتے ہیں-		
9	کیا آپ کو واضح سوچ بچار میں دشواری ہوتی ہے-		
10	کیا آپ کو اب بات بات پر رونا آتا ہے-		
11	کیا آپ کو روزمرہ کاموں میں مزہ مشکل سے آتا ہے-		
12	کیا آپ کو فیصلے کرنے میں مشکل پیش ہوتی ہے-		
13	کیا آپ کو روزمرہ کام میں حرج ہورہا ہے-		
14	کیا آپ زندگی میں مفید حصہ لینے کے قابل نہیں رہے-		
15	کیا آپ کی چیزوں میں دلچسپی ختم ہوگئی ہے-		
16	کیا آپ اپنے آپکو بے قدروقیمت محسوس کرتے ہیں-		
17	کیا اپنی زندگی ختم کرنے کا خیال آپکے ذہن میں آتا رہا ہے-		
18	کیا آپ اپنے آپکو ہر وقت تھکا تھکا محسوس کرتے ہیں-		
19	کیا آپ کو پیٹ میں بے آرامی یا تکلیف کا احساس رہتا-		
20	کیا آپ جلدی تھک جاتی ہیں-		

	ہدایات: یہ سوالنامہ آپکی موجودہ زندگی اور ذاتی عادات سے متعلق ہے- برائے مہربانی ہر شق کا جتنا ممکن ہو سکے درست جواب دیں اور کوئی شق نہ چھوڑیں- اپنے رویئے کے مطابق متعلقہ کیفیت پر دائرہ لگا کر جواب واضح کریں-	کبھی نہیں	کبھی کبھی	اکثر	باقاعدگی سے
1	میں اپنے مسائل اور پریشانیوں پر قریبی دوستوں سے گفتگو کرتا ہوں-				
2	کم چربی اور مناسب چربی اور مناسب کولیسٹرول والی غذا کا انتخاب کرنا-				
3	صحت میں کسی بھی معمولی علامات اور نشانات پر معالج یا صحت کے دیگر ماہرین کو بتانا-				
4	ایک منصوبہ بند ورزش کے پروگرام کو اختیار کرنا-				
5	بھرپور نیند لینا-				
6	محسوس کرنا کہ میں نشوونما پا رہا ہوں اور مثبت طریقے سے تبدیل ہو رہا ہوں-				
7	دوسروں کی کامیابی پر آسانی سے سرہانہ-				
8	چینی اور چینی سے بنی غذا کا محدود استعمال-				
9	صحت کی بہتری کیلئے پروگرام دیکھنا-				
10	ہفتے میں کم ازکم 3 بار 20 منٹ یا اس سے زیادہ بھرپور ورزش کرنا (جیسے تیز چلنا، سائیکل چلانا، ایرو بک، سیڑھیاں چڑھنا)-				
11	پرسکون رہنے کیلئے وقت مختص کرنا-				
12	یقین ہے کہ میری زندگی کا مقصد ہے-				
13	دوسروں کے ساتھ با معنی اور مکمل رشتے برقرار رکھنا-				
14	روزانہ 11-6 بار گندمی روٹی، چاول اور پاستا کھانا-				
15	صحت کے پیشے سے متعلق لوگوں سے انکی ہدایات سمجھنے کیلئے سوال کرنا-				
16	کسی ہلکے یا درمیانے درجے تک کی جسمانی سرگرمی میں حصہ لینا (جیسے ہفتہ میں 5 یا اس سے زیادہ مرتبہ 30-40 منٹ لمبی چہل قدمی کرنا)-				
17	اپنی زندگی میں ان چیزوں کو قبول کر لینا جسکو تبدیل کرنا میرے اختیار میں نہیں-				
18	مستقبل پر نگاہ رکھنا-				
19	قریبی دوستوں کیساتھ وقت گزارنا-				
20	روزانہ 4-2 مرتبہ پھل کھانا-				
21	ماہرین صحت کی ہدایت پر جب کوئی سوال ہو تو دوسری رائے لینا-				
22	فارغ اوقات میں (تفریحی) جسمانی سرگرمیوں جیسے (پیراکی کرنا، رقص کرنا، سائیکل چلانا) میں حصہ لینا-				
23	سوتے وقت خوشگوار خیالات پر توجہ مرکوز رکھنا-				
24	اپنی ذات سے مطمعین اور پرسکون محسوس کرنا-				
25	دوسروں کیلئے فکر مندی، محبت، گرمجوشی کے اظہار میں دشواری محسوس نہ کرنا-				

26	روزانہ 4-3 مرتبہ سبزی کھانا-				
27	اپنی صحت سے متعلق مسائل کے بارے میں ماہرین صحت سے گفتگو کرنا-				
28	ہفتہ میں کم از کم 3مرتبہ(stretching) ورزش کرنا-				
29	ذہنی دباؤ کو قابو میں رکھنے کیلئے مخصوص طریقے استعمال کرنا-				
30	اپنی زندگی کے طویل المیعاد اہداف کیلئے کام کرنا-				
31	جن لوگوں کی پرواہ کرتا/کرتی ہوں ان سے باہمی رابطے میں رہتا/رہتی ہوں-				
32	روزانہ 3-2 مرتبہ دودھ، دہی، اور پنیر کھانا-				
33	مہینے میں کم از کم ایک مرتبہ اپنے جسم کا معائنہ کروانا کہ کوئی ظاہری تبدیلی یا خطرہ کی علامت تو نہیں-				
34	روزانہ کی سرگرمیوں کے دوران ورزش کر لینا(جیسے دن کے کھانے کے دوران چہل قدمی، لفٹ کی بجائے سیڑھیوں کا استعمال، گاڑی کو اپنی منزل سے دور کھڑا کر کے وہاں تک پیدل جانا)-				
35	کام اور کھیل کے اوقات میں توازن رکھنا-				
36	ہر دن دلچسپ اور مقابلے سے بھر پور محسوس کرنا-				
37	گہرے تعلق کی تسکین کیلئے مواقع مل جاتے ہیں-				
38	روزانہ صرف 3-2 مرتبہ گوشت، مرغ، مچھلی، لوبیا، انڈے اور میوے کھانا-				
39	ماہرین صحت سے اپنی بہتر دیکھ بھال کیلئے معلومات لینا-				
40	ورزش کے دوران اپنی نبض کی رفتار چیک کرنا-				
41	روزانہ 20-15 منٹ تک پرسکون رہنے یا مراقبہ کرنے کی مشق کرنا-				
42	میں با خوبی آگاہ ہوں کہ میرے لئے زندگی میں کیا اہم ہے-				
43	مجھے خیال کرنے والے افراد سے مدد مل جاتی ہے-				
44	پیکٹ میں محفوظ کھانے پینے کی اشیائ پر لگے لیبل پر دی گئی غذائیت، چکنائی، اور سوڈیم کی تفصیل کو پڑھنا-				
45	ذاتی صحت کی دیکھ بھال کے بارے میں تعلیمی پروگراموں میں شرکت کرنا-				
46	ورزش کے دوران دل دھڑکنے کی رفتار کا مطلوبہ ہدف تک پہنچ جانا-				
47	تھکن سے بچنے کیلئے اپنی رفتار آہستہ کرلینا-				
48	خود کو اپنے سے زیادہ کسی اور قوت سے منسلک محسوس کرنا-				
49	دوسروں کے ساتھ تنازعات بات چیت اور مفاہمت کے ذریعے حل کرنا-				
50	ناشتہ کرنا-				
51	جب ضرورت ہو رہنمائی اور مشورہ لینا-				
52	نئے تجربات اور چیلنجوں کا سامنا کرنا-				

Appendix E

Walker, Susan Noble (swalker@unmc.edu) Add to contacts 3/20/2014

To: Naila Aslam Bhatti

You have my permission. Best wishes with your research.

Susan Noble Walker, EdD, RN, FAAN

From: Naila Aslam Bhatti [hazard.eyes@hotmail.com]
Sent: Thursday, March 20, 2014 2:52 PM
To: Walker, Susan Noble
Subject: permission to translate Health Promoting Lifestyle Profile II it into Urdu language.

Dr. Walker
I am a MS student at International Islamic University, Islamabad, Pakistan. My research plan is to explore the associations between the presence of lifestyle factors and perceived mental health issues in adult population. Use of your Health Promoting Lifestyle Profile II would benefit my study immensely. I am writing to ask your permission to translate it into Urdu language.
It'll be very kind of you.

Regards

Naila Aslam