A STUDY OF BREAST CANCER TREATMENT ON QUALITY OF LIFE ISSUES AND PSYCHIATRIC MORBIDITY

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TAMIL NADU

I, **Dr. T.R.Sridhar** solemnly declare that the dissertation titled "**A STUDY OF BREAST CANCER TREATMENT ON QUALITY OF LIFE ISSUES AND PSYCHIATRIC MORBIDITY**" has been prepared by me under the able guidance and supervision of **Dr. V.K.SAMILAL M.D., D.P.M.,** Professor and Head, Institute of Psychiatry, Madurai Medical College, Madurai, in partial fulfillment of the regulation for the award of **M.D. (PSYCHIATRY)** degree examination of The Tamil Nadu Dr. M.G.R. Medical University, Chennai to be held in September 2006.

This work has not formed the basis for the award of any degree or diploma to me, previously from any other university to any one.

Place: Madurai

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CERTIFICATE

This is to certify that this dissertation entitled "**A STUDY OF BREAST CANCER TREATMENT ON QUALITY OF LIFE ISSUES AND PSYCHIATRIC MORBIDITY**" is a bonafide record of work done by ***Dr. T.R.Sridhar***, under my guidance and supervision in the Institute of Psychiatry, Madurai Medical College, Madurai during the period of his Postgraduate study for M.D. Psychiatry from 2003-2006.

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TABLE OF CONTENTS

INTRODUCTION

Cancer, a word which even today elicits, fear, horror, revulsion and profound sorrow to those afflicted from it. Throughout the history of mankind, certain diseases have gained prominence in societies and cultures at particular times. Their vicissitudes may or may not have been felt globally but in the minds of laymen they get imbued with almost mystical qualities. This may relate to the fact had the causative factors were undefined and the treatment modalities available at the time were ineffective. Diseases were thought to be result of sinful activities, and one who has transgressed the accepted social and religious norms. Today cancer seems to occupy such a place in spite of the fact that there a number of other diseases that are far more lethal in effect.

Despite recent advances in securing remission and possible cure, cancer has remained a disease equated with hopelessness, pain, fear and death. Its diagnosis and treatment often produce psychological stress resulting from the actual symptoms of the disease, as well as patients and family's perception of the disease and its stigma.

Breast cancer is one of the leading cancers in the world and in India it has overtaken cervical cancer as the leading type in some parts of the country.

Despite the quality of life being increasingly recognised as an important outcome of cancer therapy along with the conventional assessment of tumour

response and disease related survival, very little published literature is available regarding the psychosocial impact of cancer breast which may occur, especially in the Indian scenario. In developing country like India, very little attention has been paid to this issue. Because of poor infrastructure and lack of proper treatment facilities at most centres, there is poor survival rates and hence much emphasis is on attaining quantity of life rather than quality.

Majority of patients present with advanced disease in developing countries which is usually managed by combined treatment modalities, which duly interferes with the general health related parameters and the social life of these patients, thereby adversely affecting QOL.

Psychiatric morbidity in the cancer patients is a reality but is often underdiagnosed and undertreated as there is a tendency to explain away the symptoms experienced by the patients. The need of the hour is to develop proper guidelines to explore, assess and to delineate psychiatric morbidity in this vulnerable population and to help them deal with enormous physical, psychological and emotional burden and to bring hope and happiness to their lives.

The higher prevalence rate of carcinoma breast and paucity of Indian research in this field prompted this exploratory study of psychiatric morbidity and QOL in patients with breast cancer.

REVIEW OF LITERATURE

BREAST CANCER – AN OVERVIEW

EPIDEMIOLOGY

Breast cancer in the most common cancer found in women in Europe and US, Australia and many Latin – American countries. It is exceptional before 20 yrs, rare before 30 yrs but incidence rises steadily up to 50 yrs. Mortality rates for breast cancer in Western Europe and North America are of the order 15-25 per 100, 1000. Incidence rates are 50-60 per 100,000.

Breast cancer in India

Breast cancer is the second most common form of cancer in females in India (Gajalakshmi CK et al, 1997). However in metropolitan cities like Mumbai, Bangalore and Delhi the incidence of breast has overtaken that of cervical cancer.

Based on population based cancer registries under National Cancer Registery Programme of ICMR (1997), Women

Rank	Bangalore	Bhopal	Chennai	Delhi	Mumbai	Barshi (Rural)
1	Breast (14)	Cervix (12.7)	Cervix (23.6)	Breast (19.8)	Breast (20.6)	Cervix
2	Cervix (13.8)	Breast (12.3)	Breast (21.4)	Cervix (15.8)	Cervix (12.1)	Breast (8.8)

Figure in parenthesis are the grade incidence rates per 1,00,000.

The average annual world standardised age adjusted rates (AAR) per 1,00,000 for breast cancer is 21.7 (Shanta 1994).

The five year survival rate for female breast cancer was 46.8% in Bangalore, 49.5% in Chennai and 55.1% in Mumbai.

A paper by Bhalla et al (1990) which examined the hospital statistics retrospectively, announced that breast cancer is emerging ahead of cervical cancer in Punjab. In a not so recent study that examined Bombay cancer registry for cancers among parsis and sindhis observed low risk for cervical and high risk for breast cancer (Jassawalla et al 1980).

RISK FACTORS for BREAST CANCER

Multiple risk factors associated with an increase in breast cancer have been identified. However despite recognition of these risk factors approximately 50% of women who develop breast cancer have no identifiable risk factors beyond being female and aging.

1. Genetic & familial factors

Genetically transmitted breast cancer should be suspected in women with multiple relatives with breast cancer especially if the disease occurs at young age or when history of other cancers especially ovarian is present.

The risk of genetically transmitted breast cancer varies with age of onset of the disease with 33% of women diagnosed before age of 30 estimated to carry an abnormal gene, compared with 13% of women diagnosed between age 40-49, and only 1% of women aged 80 years and older. Risk increases 1.5 to 3.0 times if mother or sister has the disease.

Breast cancer susceptibility genes

BRCA 1 - located on chromosome 17q21 – is associated with 50% risk by about age 45 and an 85% life time risk.

BRCA 2 – chromosome 13 – Identified to be associated with early onset breast cancer but not ovarian cancer, level of breast cancer risk with mutations of BRCA 2 are similar to that of BRCA 1.

Familial syndromes associated with breast cancer include Li fraumeni – syndrome, Cowden's syndrome, Muir syndrome, Ataxia Telangectasia and Peutz Jeghers syndrome.

2. Hormonal factors

The dramatic slowing of rate of rise in the age specific incidence curve suggests that ovarian activity plays a major role in causing breast cancer. Age at menarche and establishment of regular ovulatory cycles seem to be strongly associated with breast cancer risk.

Age at menopause is another factor in breast cancer risk. The Relative Risk of developing breast cancer for a women with natural menopause before age 45 is half that of a women whose menopause occurs after 55. **Nulliparous** are at a greater risk to developing breast cancer than parous women with a Relative Risk of 1.11.

3. Dietary factors

Epidemiological studies of fat consumption and breast cancer have produced inconclusive results. Multiple studies suggest association between a alcohol intake and breast cancer risk. A meta analysis of 12 case control studies demonstrated relative risk of 1.4 for each 24 g of alcohol consumed.

4. Benign breast disease

Non Proliferative disease is not associated with an increase in breast cancer whereas Proliferative breast disease without atypia results in small increase in risk (RR – 1.5-2.0.). Atypical hyperplasia in associated with greater risk of cancer development (RR 4 – 5).

5. Environmental factors

Exposure to ionizing radiation, either secondary to nuclear explosion or medical and diagnostic procedures increases breast cancer risk. A marked increase risk of breast cancer development has been reported in women who received mantle irradiation for treatment of Hodgkin’s disease before 15 year of age.

NATURAL HISTORY OF BREAST CANCER

Histiogenesis:

The neoplastic transformation occurs mainly in the terminal ductal/lobular unit of the breast. Certainly, in great proportion of cases, the invasive character appears very early in the development of the cancer process.

It has also been suggestible that some modification of the biological behavior of breast carcinoma (e.g. sudden rapid tumor growth) may be due to the failure of the immune defense mechanism in the host.

Local development-

Spreads initially by infiltrating the surrounding breast tissue. Local spread may also occur with intraductal extension and this extension may occasionally represent the exclusive or major component of the proliferative process.

Very often the spread may occur by direct permeation of lymphatic spaces, giving the clinical aspect of skin edema and extensive inflammatory carcinoma.

Metastases

Breast cancer metastasizes to axillary nodes with a frequency that varies according to its size and its histological and biological characteristics. Higher incidence in observed in tumors in outer upper quadrants.

The axillary L/N. are subdivided into 3 levels.

Level - I Node external to lateral margin of pectoralis minor.

Level – II Node posterior to the muscle.

Level – III Nodes that are medial to the muscle.

If level I is positive then chance of metastases to level II and level III is high (40%).

It also involves the internal Mammary Nodes and information regarding this is of considerable importance as a prognostic factor. Distant spread most commonly occurs to the lungs, the bones, liver and brain.

Pathological types

Modern classification of breast cancer attempts to recognize morphologic patterns that reflect both the Histiogenesis of malignancy and its biological behavior and prognosis. Malignancies of the breast are broadly divided into epithelial tumors of cells lining ducts and lobules and non-epithelial malignancies of the supporting stroma.

STAGING AND CLASSIFICATION SYSTEMS OF BREAST CANCER

The most widely used system is the one adopted by both the (UICC) Union International Contre le Cancer and the American Joint Committee (AJC) based on the Tumour Node Metastases (TNM) System (Hermank and Soibin 1987) and was agreed by both organisations in 1987.

TNM classification of Breast cancer

Tx – Primary tumor cannot be assessed

To – No evidence of primary tumor

Tis - Carcinoma in situ: Intraductal carcinoma or lobular carcinoma in situ or Paget's disease of nipple with no tumor.

T1 – Tumor 2 cm or less in greatest dimension

T1a – 0.5cm or less in greatest dimension

T1b – more that 0.5 cm but no more than 2 cm in the greatest dimension.

T2 – Tumor more than 2cm but no more than 5 cm in greatest dimension

T3 – Tumor more than 5 cm in greatest dimension

T4 – Tumor of any size with direct extension to chest wall or skin

T4a - Extension to chest wall

T4b - Edema (including peau-d- orange or ulceration of the skin of the breast or satellite skin nodules confined to same breast.

T4c - Both (T4a & T4b)

T4d - Inflammatory carcinoma

Nx – regional lymph node cannot be assessed (for example previously removed)

No – no regional L/N metastases

N1 – Metastasis to movable ipsilateral axillary node (s)

N2 – Metastasis to ipsilateral axillary node(s) fixed to one another or to other structures.

N3 – Metastasis to ipsilateral internal mammary L/N.

M – Distant Metastases

Mx – Presence of distant metastases cannot be assessed

Mo – No distant metastases

M1 – distant metastases (including that to supraclavicular lymph nodes)

STAGE GROUPING OF BREAST CANCER

Stage 0	T1S	N0	M0
Stage 1	T1	N0	M0
Stage IIA	T0,	N1	M0
	T1,	N1,	M0
	T2,	N0,	M0
Stage II B	T2,	N1	M0
	T3	N0	M0
Stage III A	T0,	N2	M0
	T1	N2	M0
	T2	N2	M0
	T3	N1	M0

	T3	N2	M0
Stage IIIB	T4	anyN	M0
	Any T, N3		M0
Stage IV	Any T, Any N,M1		

TREATMENT OF BREAST CANCER

SURGERY

The first objective of treatment of breast cancer is loco- regional control of disease. All patients must, in principle be considered. Potentially curable with loco- regional treatment and must benefit form a treatment that assures a maximal local control of the disease.

1. Halstead radial mastectomy

The type of operation most extensively applied to breast cancer patients during 1st half of century done first by Halsted in 1822. Involves en bloc removal of breast, the nipple area of complex, both pectoral muscles, all contents of axillary fossa.

2. Modified radical mastectomy

Removes all breast tissue, nipple areola complex, skin and level I and level II axillary lymphnode.

3. Total (simple) mastectomy and axillary dissection

Patey in Great Britain introduced this less mutilatory operation in 1948 preserving the major pectoralis muscle and its neovascular bundle.

4. Extended simple mastectomy

Removes all breast tissue, the nipple – areola complex, skin and the level I and level I axillary modes.

5. Qudrantectomy

An operation which involves the removal of a quadrant of the breast including skin and the fascia of the major pectoralis muscle. The aim of this operation is elimination for the primary carcinoma, by its removal with a margin 2-3cm of normal breast tissue.

6. Lumpectomy:

Removal of tumour mass with a limited portion of normal- tissue (1cm). Generally considered as a debulking operation to be followed by radiotherapy.

B. NON SURGICAL BREAST CANCER THERAPIES

1. CHEMOTHERAPY

Adjuvant Chemotherapy was introduced to treat locally advanced breast carcinoma in combination RT with / or surgery. Neoadjuvant Chemotherapy was able to reduce tumor mass to allow radical surgery in cases which appeared to be inoperable at the original examination.

Table 1

Active drugs commonly used in treatment of disease

Cyclophosphamide	5flouro uracil
Adriamycin	Paclitaxel
Methotrexate	Epirubicin

2. RADIOTHERAPY

Radiotherapy to the chest wall and lymphatic pathways reduces the risk of loco regional recurrence. Radiotherapy in associated with its own risk or morbidity in terms of chest wall fibrosis arm swelling and reduced arm mobility. Radiotherapy palliates a high proportion of patients with symptoms of bone and brain metastases. Based on patient self assessment, up to 80% of women get some relief of bone pain ad 30% - 40% get complete relief of bone after a conventional course of palliative treatment viz 30 Gy in ten daily fractions.

3. ENDOCRINE THERAPY

Normal concepts related to increasing knowledge of endocrine-dependent growth regulatory mechanisms and new endocrine agents have increased and considerably changed available hormonal treatment. Breast cancer is, in fact responsive to a variety of endocrine agents via a poorly understood mechanism.

4. ANTIHER 2/neu ANTIBODY THERAPY

The determination of Her 2/ neu expression for all newly diagnosed patients with breast cancer is now recommended. It is used for prognostic purposes in node- negative patients. Patients with cancers that over express HER/ neu may benefit if Trastuzumab is added to paclitaxel chemotherapy.

The type of therapy offered to a breast cancer patient is determined by the stage of disease.

Breast cancer prognosis

Survival rates for women diagnosed with breast cancer between 1983 and 1987 have been calculated based on surveillance, epidemiology and end results (SEER) program data. The 5 year survival rate for stage I patients is 94%, for state II a patients 85%, and for stage II b patients 70%, while for stage III a 52% stage III b – 48%, stage IV – 18%.

PSYCHOSOCIAL ISSUES

1. Psychological reactions, adjustment and Coping Strategies

The stress of cancer is a threat to survival and to self. Cancer threatens not only the patient's health but also their physical well being (Abraham 1995)

Psychological adjustments to cancer will depend on how patients cope. This adjustment comprises of (i) approval – how patients perceive the implications and (ii) the reaction – what the patient think, feel and do to reduce the threat posed by he disease (Greer et al 1989).

Stedeford (1992) on studying Psychological problems of the dying said that there is a core group of reactions to loss, even in the anticipated loss of one's own life, as seen in cancer patients which enable a patients to functions and adjust to cancer. They are shock, emotional numbness, denial, anger, grief, anxiety, resignation, acceptance and ambivalence.

Four important coping strategies that have been identified especially form breast cancer patients are (1) denial (ii) fighting spirit (iii) fatalism/stoic acceptance and (iv) helplessness /hopelessness (Greer, et al 1979). The current available evidence though not conclusive, suggests an association between mental adjustment to cancer and subsequent disease out come in certain patients with early stage, non-metastatic cancer (Moorey et al 1989).

Several studies have identified specific attitudes that frequently accompany good or poor prognosis amongst people who already have cancer. Of these, the most frequently sighted have been fighting sprit versus helplessness / hopelessness, and the expression versus repression of emotions.

McCaul et al (1999) examined possible predictors of adjustment to breast cancer in 61 women. The most consistent predictors of distress was avoidant coping. Woman who reported more avoidant copying were more distressed.

Latha (1996) in an article stated that in India, because of the absence on known cause or complete cure our people believe that this disease is due to

some supernatural or spiritual forces. They even considered cancer as a punishment for their past deed or karma. Unlike the west in India cancer patients were found to accept the disease and its consequence easily because of belief in theory of karma. Their emotional problems were mainly related to adjustment to their changed circumstances. A study in Regional Cancer Centre, Trivandrum by the above author in breast cancer patients showed that 53% of patients considered it as a punishment for past deeds and 45% considered the disease as contagious.

Studies by Latha (1985) revealed the breast cancer patients immediate thought when they hear about cancer is fear of pain (62%) , fear of recurrence (62%) fear of treatment (80%) fear of death (64%) and fear of physical dependence. Depression (95%) and uncertainty about illness and their future (70%) are important reactions to the illness.

Like diagnosis, treatment for cancer also produces psychosocial morbidity in a significant number of patients in the form of affective distress, impaired role functioning, disrupted social integration and support, aversive somatic symptoms. Unmet potential needs and increased financial burden. Treatment usually starts soon after the diagnosis and the patient has to bear the difficulties of two together. Cancer patients generally follow the treatment regime reasonably well because of this deep rooted wish for survival. Studies carried out at memorial sloan Kettering cancer centre showed that following

radical mastectomy, women had significant post operative depression, anxiety, poor self esteem and impaired physical and sexual function (Craig 1974).

Some reasons why patients could develop clinically significant psychological distress are

1. Stress related to the diseases / treatments or related to psychosocial issues.
2. Poor social supports
3. inadequate / inappropriate knowledge of the cancer.
4. inadequate / inappropriate coping styles.

Adjustment refers to the psychological processes that occur over a period of time as the individual and those in their social world, manage, learn from and adapt to the multitude of changes which have been precipitated by the illness and its treatment.

While studying hope and coping strategies as predictors of adjustment 1 year after breast cancer diagnosis Annette et al (2002) found that coping through active acceptance at diagnosis predicted more positive adjustment over time, and active avoidance oriented copying predicated greater fear of cancer recurrence.

2. Psychiatric morbidity in Cancer

Common psychological problems include depression, anxiety, delirium, adjustment problems and sleep disturbances (Kumar 1996, TsatsuoAkechi, 2001).

Early psychological studies carried out showed that following radical mastectomy, women had significant post – operative depression, anxiety and poor self esteem (Schottenfield et al 1970). Depression has been reported at a prevalence of 11-50% in terminal ill. The varying prevalence depends on nature and state of cancer and the methods of assessment used (Joffe et al (1986), Davies et al (1986).

25% of breast cancer patients have been found to experience clinically significant and persistent anxiety and/or depression in the first two years after diagnosis (Dean 1988). 35- 45% of cancer patients in general, develop clinically significant psychiatric disorders (Farber et al (1984). Approximately 68% of the psychiatric diagnosis consisted of adjustment disorders with 13% representing major affective disorder. These classifications were followed in descending order of prevalence by organic mental disorders (4%), personality disorders (3%) and anxiety disorders (2%). Approximately 85% of those patients with a positive psychiatric condition were experiencing a disorder with depression or anxiety as the central symptom. The large majority of conditions were judged to represent highly treatable disorders (Derogatis et al 1983).

Comorbid depressive illness impairs social and occupational functioning, leads to greater emotional distress and decreases treatment participation, compliance and adherence (Harris et al 1988) Antidepressant therapy improves symptoms and the quality of life (Casey 1994).

While studying depression among cancer patients Antonella (2001) used SCID for DSM III R and Endicott criteria and the Hamilton depressed used SCID and 29% using Endicott criteria. 28% were depressed using both criteria. Patients who were depressed using both assessments of depression and more metastases and pain than non- depressed patients.

Sally et al (1997) while studying anxiety in 65 long term cancer survivors using the (HADS). Hospital Anxiety and Depression Scale rates of anxiety in long standing remission and active disease are not very different.

Anxiety is a common symptom experienced by terminally ill which is mainly situational, in relation to stressful or painful procedures or treatment.

Michael et al (2000) examined posttraumatic stress disorder following breast cancer treatment using PTSD checklist. It was found that the PTSD symptoms in female breast cancer patients assessed at baseline and at 1 year follow up did not diminish over time. The symptoms were stable and persistent. Khalid R, 2000 support the view that women who are unmarried and received more extensive and aggressive type of cytotoxic treatment are more likely to experience PTSD like symptoms. It was also found that stage of disease and

quality of life were predictors of PTSD like symptoms in women after mastectomy.

Delirium has been reported to occur at prevalence of 15-20% in palliative care (Posner 1978).

3. Suicide in Cancer Groups

After depression and anxiety, suicidal risk evaluation in the most frequent reason or psychiatric consultation in oncology settings (Babu et al 1996). Studies have classified that there is a definite increase in incidence of suicide among cancer patients compared to general population (Erlend Hem et al 2004). Most cancer patients who are suicidal are diagnosed to be suffering from psychiatric disorders (Bolund 1985).

Frequency of suicidal attempts in cancer patients has not been well studied. The true incidence may be higher, since some deaths may not be recognised as suicidal are not reported as such (W.S. Yeung et al 1997). Thoughts of suicide in cancer patients have been better studied (Conwell 1990), (Cochinov 1995). In a recent study by Cochinov (1995) 45% of terminally ill patients expressed transient desire for death.

Earlier studies (Brown et al 1986), have reported suicide rates ranging form 1.5% to 20% across various cancer populations. Depression plays a significant role in suicide in cancer groups. (Derogatis 1983). In general

depression has been associated with 50% completed suicides and 25% of depressed patients attempt suicide (Guze et al 1970).

Hopelessness has been found to be the single most strong predictor of suicidal behavior (Beck 1975). Adequate pain relief has been found to decrease and stop suicidal ideas in previously suicidal patients (MC Kengy 1971).

4. Psychosexual issues and body image concerns

Cancer patients are reluctant to discuss sexual problems with their treating staff, which may be due to shyness, embarrassment, being unsure whether their doctor would be able to do anything about it or simply because they were never asked (Chaturvedi, 1996).

Cancer survivors experience rates of sexual dysfunction ranging up to 90% (Anderson, 1985). Actual rates may be even higher than reported rates due to widespread reluctance of patients to discuss sexual problems with staff (Auchincloss, 1987).

Cancer concerns about sexuality were reported by nearly 20% of patients with cancer of breast, testis or gynecological organs (Harrison et al 1994). Concerns about relationship with partners were reported as concern by 10% of patients with cancer in the above study.

Because breast cancer is the most common cancer in women, sexual problems have been liked to mastectomy more often than to any other cancer

treatment. Losing a breast, or occasionally both breasts if a woman later has a second tumor, can be traumatic.

The most common sexual side effects stem from damage to a woman's feelings of attractiveness. In our culture, we are taught to view breasts as a basic part of beauty and femininity. If the breast has been removed, a woman may be insecure about whether her partner will accept her and find her sexually pleasing.

The breasts and nipples are also sources of sexual pleasure for many women. Touching the breasts is common part of foreplay in our culture. A few women can reach orgasm just from the stroking of their breasts. For many others, breast stimulation adds to sexual excitement.

Breast surgery or radiation to the breasts does not physically decrease a woman's sexual desire. Nor does it decrease her ability to have vaginal lubrication, normal genital feelings, or reach orgasm. Some good news from recent research is that within a year after their surgery, most women with early stage breast cancer have good emotional adjustment and sexual satisfaction. They report a quality of life similar to women who never had cancer.

Treatment for breast cancer can interfere with pleasure from breast caressing. After a mastectomy, the whole breast is gone. Some women still enjoy being stoked around the area of the healed scar. Others dislike being

touched there and may no longer even enjoy being touched on the remaining breast and nipple.

Sexual dysfunction was found to occur more frequently in women who had received chemotherapy (all ages), and in younger women who were no longer menstruating. In women >=50 yrs, endocrine therapy was unrelated to sexual functioning (Ganz PA et al 1998).

Disturbances of body image have been well documented in patients with breast cancer.

A woman's choice of treatment will likely be influenced by her age, the image she has of herself and her body, and her hopes and fears. For example, some women may select breast-conserving surgery with radiation therapy over a mastectomy for cosmetic and body image reasons. On the other hand, some women who choose mastectomy may want the affected area removed, regardless of the effect on their body image. They may be more concerned about the effects or radiation therapy than body image.

Other issues that women worry about include hair loss from chemotherapy and skin changes of the breast from radiation therapy, chemotherapy, can change a woman's hormone levels and may negatively affect sexual interest and/or response. In addition to these body changes, women may also be dealing with concerns about the outcomes of their treatment. These are all genuine concerns that affect how a woman makes

decisions about her treatment, how she views herself, and how she feels about her treatment. The term body image has been associated with a multitude of definitions with in psychosocial oncology. Cancer and cancer treatments often have negative impact on appearance related variables, (White, 2000).

Hopwood et al (2000) interviewed 46 women having undergone prophylactic mastectomy regarding mental health and Body image out comes using the 28item General Health Questionnaire (GHQ) and 10- item Body Image scale (BIS). 21% reported no negative changes were in sexual attractiveness (55%) decreased physical attractiveness (53%) and self – consciousness about experience (53%). A third of the woman felt less feminine to a minimal degree. The results appeared stable over time. The body image of patients is more severely impaired after mastectomy than after breast conserving surgery (des Haes et al 1986, Bartelink et al 1985).

The overall quality of life improved and the suffering from psychological and physical complaints decreased with time in both groups of patients. However studies by Ganz et al concluded that patients receiving breast conservation therapy do not experience significantly better quality of life or mood than patients having mastectomy; however patients having breast conservation surgery have fewer problems with clothing and body image (Ganz et al 1992).

W. Janni et al (2001) reported greater dissatisfaction with body image and a higher degree of emotional stress caused by the physical appearance of patients who were treated by mastectomy. It is particularly noteworthy that more than three times as many patients would decide differently about their surgical treatment modality in the mastectomy group than would patients it he breast conservation group, if told that the treatments were equivalent.

Alexander et al (2002) studying adaptation issues in Chinese survivors of gynecological cancers reported that all women and sexual problems. A third of the sample reported that their husbands had extramarital affairs and cultural misconceptions about sexual functioning were also said to affect adaptation to illness.

5. Quality of life issues

Quality of life can be defined as a measure of the difference of gap, at any particular time, between the expectations of an individual and his experience of the reality (Rajagopal 1996).

QOL is subjective in nature; each individual has a slightly different view of what is important to his or her QOL. There is a wide agreement that HRQOL should be conceptualized as a complex and multidimensional construct (Mainpour CM et al 1989).

Physical functioning, social interactions, psycho emotional well being and disease or treatment related symptoms are critical domains that are included in most efforts to measure overall QOL (Donovan et al 1989).

Surgery, chemotherapy, Radiation therapy and hormone therapy make up the standard armamentarium of breast cancer therapy either alone or in combination. The efficacy of intervention is now evaluated in terms of their impact on both quantity and qol with the aim of extending survival and improving HRQOL. Determination of the QL of breast cancer patients breast cancer patients under different therapeutic modalities provides a comprehensive description of their potential side effects from the patients perspective (Winner EP 1994). Indeed this can help health care provides in weighing the associated risks and benefits particularly when the differences in survival between the options are small or even non existent (Rowland JH 1991). More over it may be of outcomes and may prove to be of prognostic importance in the setting of clinical trials (5). Also QL data can assist in planning an effective educational intervention.

Younger women (<45 yrs); women having unmarried children and those currently undergoing active treatment showed significantly poorer QOL (Manoj Pandey 2005). Similar findings were reported by Neeraj K Arora et al (1999) that younger women with breast carcinoma could experience a range of

adjustment problems at various points in the treatment cycle during the first year after diagnosis.

These findings were supported by studies by Wenzel et al (1999) which suggests younger women with breast carcinoma should be considered to be at high risk for QOL disruption and significant clinical distress. Single women and those with less education faired worse on a number of QOL dimensions (King et al 2000) pain after surgery for breast cancer, distressed almost one third of patients, regardless of the type of treatment, and had a negative effect on patients QL (Caffo O et al 2003).

The impact of breast cancer therapy on the QOL of Egyptian women was studied by (Fatma El Sharkawai et al 1997). It was found that all the domains of QOL of women having adjuvant therapy were significantly altered compared to those whose underwent mastectomy alone. Triple modality adversely affected global QL, the most compared to radiotherapy or chemotherapy. Radiotherapy had significantly less effect on QL compared to chemotherapy. Triple modality predicted the worst QL. Ethnic differences exists in quality of life among breast and prostrate cancer survivors (Carolyn et al 2002).

In most domains and for women without further disease events after diagnosis quality of life does not seem to be permanently and globally impaired by breast cancer. Consequently, breast cancer survivors who remain free of disease probably do not need organized late psychosocial follow up to improve

qol (Dorval et al). But reduced QOL, sexual functioning was found not only after initial treatment (1- 2 yrs), but also after long post treatment survival (>5yrs) was reported in studies by (Holzner et al 2001) Ganz et al (2002) reported long term disease free breast cancer survivors reported high levels of functioning and (5-10yrs) after initial diagnosis) QOL many years after primary treatment however with poorer functioning on several dimensions of QOL.

Contrary to reports from younger women with breast cancer, Ganz et al (2003) observed significant declines in the physical and mental health of older women (65yr/>) in the 15months after breast cancer surgery, whereas scores on a cancer specific psychosocial QOL measure improve over time, consistent with patterns in younger women.

It is expected that cancer patients during the acute phase of illness (in-crisis) will report a poorer quality of life than those post crisis.

QOL is thus a major area of concern, research and clinical study in oncology settings.

AIMS OF THE STUDY

1. To study the prevalence and nature of Psychiatric Morbidity in patients being treated for breast cancer.

2. To study the Quality of life as experienced by patients with Breast cancer.

3. To study the impact of various treatment modalities on psychiatric morbidity and quality of life.

4. To study the prevalence of psychosexual and body image concerns in patients treated fro breast cancer.

METHODOLOGY

The review of literature on patients with malignancy points to the significance of prevalence, diversity and intensity of psychiatric morbidity among them. Issues like quality of life, psychological reactions to illness contribute to the spiral ascent of available morbidity and have emerged as new focal points of interest and research in the developing field of psycho-oncology.

The cultural nature of indigenous populations contribute a significant dimension in both the genesis and management of the disturbances and dearth of clinical knowledge from studying the native sufferers makes the study both topical and utilitarian.

Choice of cancer of the breast as a study topic touches a very raw and sensitive area of hidden non-communication which is identified with individual's concept of self.

As the prior data in the native population in scattered, the present study aims to establish natural quantitative distribution and relationship among variables. Loosely formulated hypotheses about qualitative statements are verified using reliable and validated techniques.

On the basis of research design it could fit in as a Descriptive Study.

HYPOTHESES

The following hypotheses were framed –

1. Patients with breast cancer have a high incidence of psychiatric morbidity.
2. Patients with breast cancer would have a poor quality of life affecting all domains (Physical, psychological, social and environmental).
3. Patient being treated for breast cancer would suffer from high incidence of sexual dysfunction and related problems.
4. Degree of psychiatric morbidity would be more severe in patients of the child bearing age compared to Perimenopausal and postmenopausal age.
5. Degree of psychiatric morbidity would be more severe in patients of the child bearing age compared to perimenopausal and postmenopausal age.
6. Breast Cancer patients treated with adjuvant chemotherapy experience impaired quality of the relative to those who have undergone surgery alone.
7. Patients undergoing active treatment for breast cancer have a poor quality of life compared to those who have completed treatment.

MATERIALS AND METHODS

The study was conducted in the Government Rajaji Hospital Madurai.

The Patients were selected by random sampling with the help of the staff of Departments of Oncology & those attending Breast clinic for follow up after the completion of treatment.

INCLUSION CRITERIA

1. Only women were selected
2. The patients were above 20 years of age and below 70 years of age.
3. They should have been suffering form Breast cancer as identified, confirmed and staged by histopathological examination.
4. They should be willing to participate in the study after being explained the objectives.
5. They were physically fit and psychologically stable to co-operate during the interview.

EXCLUSION CRITERIA

1. Those who were not able to or not willing to participate were excluded from study.
2. Those who had past history of Psychiatric illness and any major co-morbid physical illness.
3. Those with recurrence of breast cancer following treatment.
4. Unfamiliarity local language (Tamil/ English)

TOOLS USED

CLINICAL PROFORMA:

The subjects were assessed using a specially designed clinical proforma which included the following details – Socio demographic determinants: - Age, Sex, Occupation, education, Marital status, family income, family type.

Illness details: Histopathological report, stage/grade of disease, presence of metastases, duration and treatment related complications and drug compliance.

Perceptions of illness and attitude: Knowledge about illness, reaction to the illness, body image disturbances, suicidal ideation, sexual dysfunction, and a detailed mental status examination. In these sessions patients were administered the semi structured interview schedule, MINIPLUS, HADS, WHOQOL – BREF, FACT-B (version 4)

QUALITY OF LIFE SCALE (WHOQOL – BREF – Field Trial Version – 1996)

This scale has been used to assess the patients perception of Quality of life. Patients are asked to rate their perceptions, feelings, and satisfaction regarding their Physical, Psychological, Social and Environmental well being. The scale has 26 questions which assess the quality of Life in the above mentioned four Life Domains. The responses are given a score ranging from 1-5 for each answer. The individual scores of each domain as well as overall score are then calculated separately. Raw scores may be used as such or

converted into transformed scores using a conversion table. Raw scores were used in this study. These domains are scored positively, a higher score implying better quality of life.

FUNCTIONAL ASSESSMENT OF CANCER THERAPY (FACT – B Version 4)

A 44-item self-report questionnaire designed to measure multidimensional health-related quality of life in patients with breast cancer (Cella 1993). The FACT-B consists of the FACT_G plus additional items that make up the breast cancer subscale (Brady 1997). The Fact-G contains five subscales: physical, functional, social/family and emotional well being and satisfaction with doctors. Each item is rated on a 5-point scale with 0 equal to "not at all" and 4 equal to "very much." Items are reversed if necessary and summed so that a higher subscale score indicates higher well being or satisfaction. All ratings on the FACT –B are completed in terms of the past seven days.

HOSPITAL ANXIETY AND DEPRESSION SCALE

This scale was designed by Zigmond and Snaith (1983) for use in hospital populations. It had been used in assessment of anxiety and depression in the setting of a hospital medial in patients /out patients clinic and has been used to study psychiatric morbidity in oncology populations. The Depressive symptoms included refer to mostly anhedonic features which is said to be one

of the core features of depression. It has less loading of somatic symptoms compared to other scales. Anxiety symptoms were added from Present Status Examination.

It contains of 7 items in each of the two scales and measures anxiety and depression which the patients experienced over the past one week. The subscales are also a valid measure of the severity of the emotional disorder. Each item in the scale has 4 alternatives to chose from, which is rated 0 to 3. A cut off of 8 to 10 for both anxiety and depression has been suggested by the authors.

4. MINI INTERNATIONAL NEUROPSYCHIATRIC INTERVIEW

(Sheehan et al,1998)

The MINI is a short structured diagnostic interview developed jointly by psychiatrists and clinicians in the united states and Europe, for DSMIV and ICD – 10 Psychiatric disorders. With an administration time of approximately 20 minutes, it was designed to meet the need for a short but accurate structured psychiatric interview for multicentre clinical trials and epidemiological studies. It was considered comprehensive enough to cover all patient symptoms. The authors report on the validation of MINI in relation to the structured clinical interview for DSMI R, patient version, the composite international Diagnostic interview and expert professional opinion. The author also describes its family

of interview – The MINI PLUS which includes ten psychiatric diagnoses apart from its parent version MINI. MINI PLUS was used in our study.

5. SOCIO ECONOMIC STATUS SCALE (SES) SE Gupta and B.P Sethi (1978) Kuppusamy 1962)

Socio economic status scale consists of scores on 3 variables (Education, occupation and income) on the basis of a 10point scale. It consists of 10 categories of socio economic status ranging form the highest to the lowest. The categories are grouped into 5 social classes viz. very high, upper middle, lower middle and very low. The inter rater reliability is found to be high (r=0.96%). The scale incorporates guidelines to score children, dependent persons as well as nondependent persons / married and unmarried subjects. The initial 40 scores deal with lower position. The next 60 relate to average / slightly above average positions and the scores between 120-200 pertain to higher positions.

STATISTICS

Cases were selected using random sampling method. The unit of measurement being the scores obtained by administering the aforementioned scales. The arithmetic mean and standard deviation (S.D) were used to compare the data. The statistical significance was calculated using the students ‘t’ test and chi square test. The level of significance was fixed at $P < 0.05$ (95%) confidence limit)

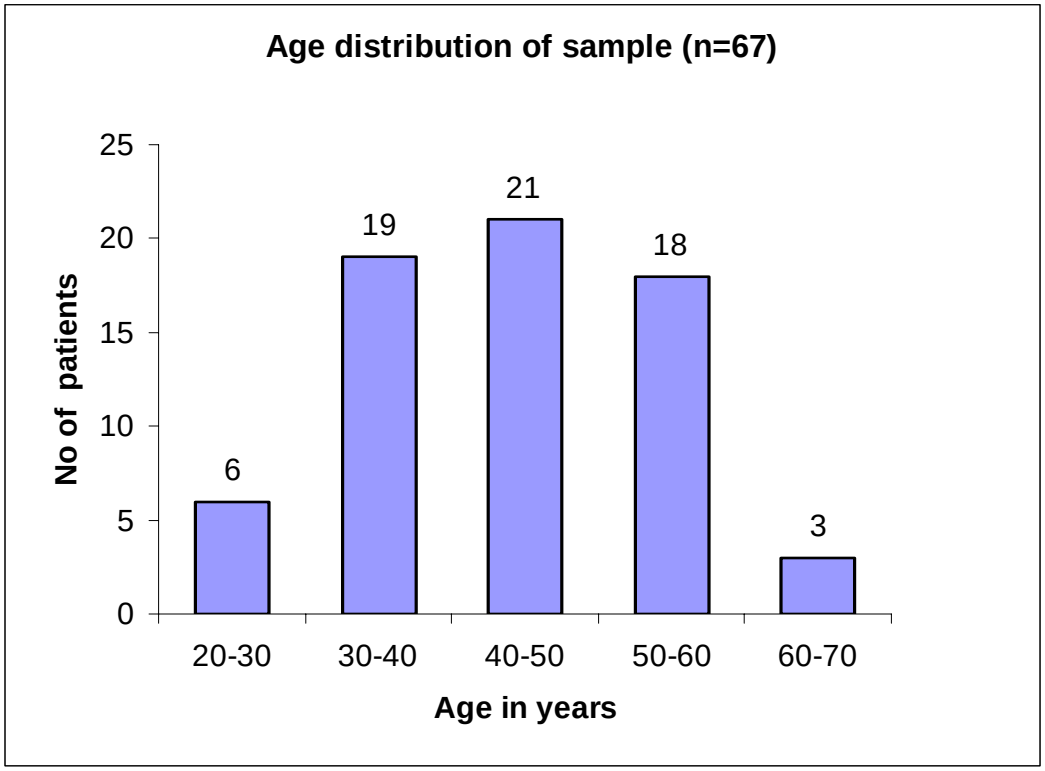
PROCEDURE:

The patients were chosen form the in patients departments of oncology and those attending Breast clinic for follow up after completion of treatment. The purpose of the study was explained to them, followed by detailed evaluation of their illness the details of which were recorded in the proforma. Following this a detailed psychiatric evaluation was carried out and aforementioned scale administered to the patients in a face to facer interview and their responses recorded and scored.

The spouses of significant family members of the patients were interviewed separately required to gather additional information needed for the study.

RESULTS OF THE STUDY

Diagram 1



The total size of the study sample was 67. An age wise distribution revealed that maximum number of patients were between 40-50yrs (31.3%). Approximately 28% were in the 30-40 years group and 26.8% were in the 50- 60 year age group. Those at the extremes of the group were almost equally distributed with 6 women between 20-30 years and 3 women between 60- 70 yrs. The mean age of the sample was 45.23 years (Diagram 1).

Table 1

SOCIO DEMOGRAPHIC PROFILE OF THE SAMPLE

S.No	Description		Number of patients
1.	Family type	Nuclear	61 (91%)
		Extended	3 (4.5%)
		Alone	3 (4.5%)
2.	Domicile	Urban	8 (11.9%)
		Semi urban	11 (16.4%)
		Rural	48 (71.64%)
3.	Marital status	Married	56 (83.6%)
		Widowed	7 (10.4%)
		Divorced	2 (2.9%)
		Unmarried	2 (2.9%)
4.	Social status category	Very low	56 (83.6%)
		Lower middle	8 (11.9%)
		Middle class	3 (4.5%)
5.	Religion	Hindus	54(80.6%)
		Muslims	7 (10.4%)
		Christians	5(7.5%)
		Others	-

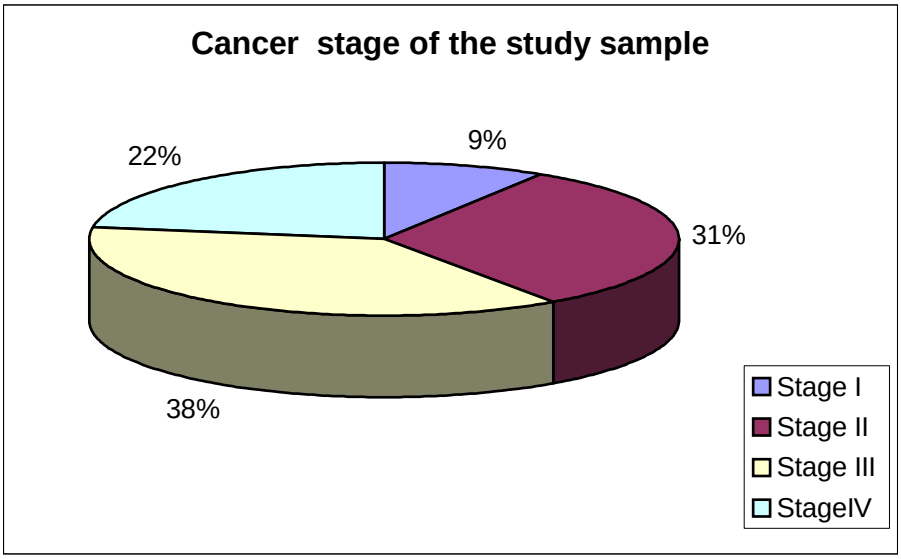
Majority of the patients n=61 (91%) were living in nuclear families. Approximately 9% were members of extended families and those who were living alone. Domiciliary distribution revealed that almost three fourths of the women were from a rural area with 16.4% from semi- urban and urban 71.94%.

The major section of the study sample (83.6%) were married and living with their spouses 7 women were widows while 2 had been divorced from their husbands and another two were unmarried .

Social status profile of the group revealed 56 patients (83.6%) were in the very low, 8 (11.9%) were in lower middle class and 3 (4.5%) were in the middle class category.

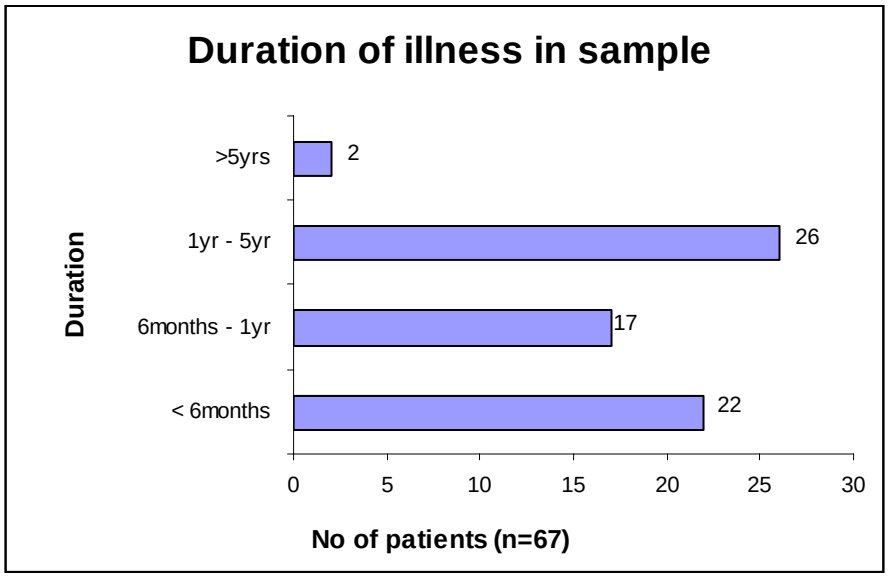
Majority of the sample (80.6%) were Hindus, 10.4% were Muslims and 7.5% were Christians (Table 1).

Diagram 2



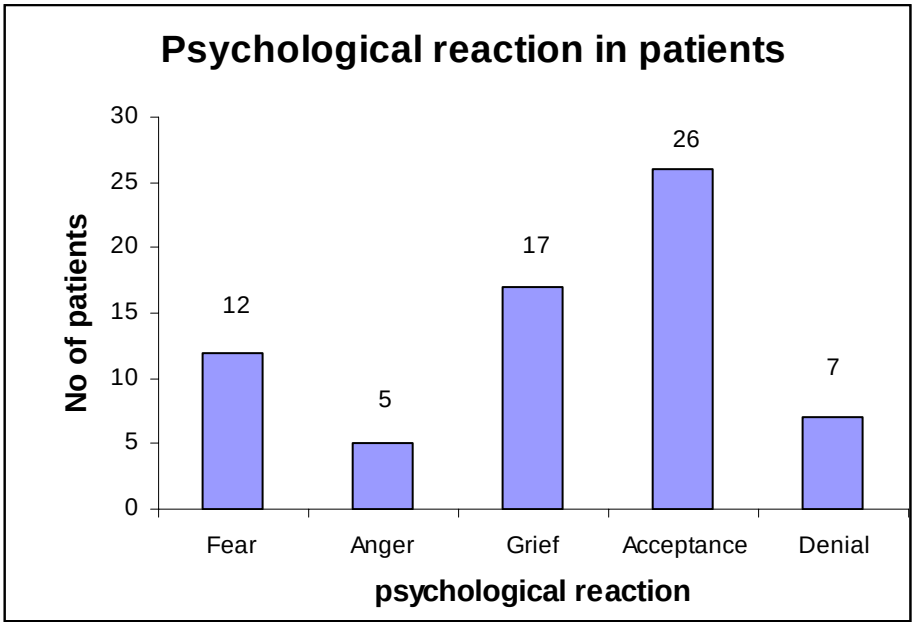
With respect to the stage of illness patients formed a rather heterogenous sample. Majority (37.3%) of patients was in stage III and 31.3% were in was in stage II. Patients in stage IV constituted around 22% and 8.9% were in stage I. Majority of the patients in the sample were in advantage stages (Stage III & IV) constituting about 59.7 % and 27 patients (40.3%) were in early stage cancer (Stage I & II) (Diagram 2).

Diagram 3



With respect to the duration of the illness, 22 patients (32.8%) had been diagnosed and treated less than 6 months and 16 (23.9%) between 6months 1yr. 26 patients (38.8%) had illness between 1- 5yrs and 3 (4.5%) were suffering from disease for more than 5 years (Diagram 3).

Diagram 4



An evaluation of the common psychological reactions in the patient population revealed 26 (38.8%) had stoic / fatalistic acceptance and 17(25.4%) patients in the sample expressed grief, 12 (17.9%) of patients expressed fear of either pain, recurrence of disease or death and 5 (7.5%) felt anger for suffering form the disease 7(10.4%) used denial as a reaction (Diagram 4).

Table 2

Psychiatric morbidity in study sample

1.	Depression	9 (23.7%)
2.	Generalized anxiety disorder	6 (15.8%)
3.	Adjustment disorder	14(36.8%)
4.	Mixed anxiety depression	8(21.05%)
5.	Post traumatic sires disorder	1(2.63%)
6.	Nil psychiatric illness	29(43.3%)

38 (56.72%) of the patients in the study group had an identifiable psychiatric illness. 29(43.3%) of the sample did not meet the criteria for a psychiatric illness. In the affected group adjustment disorder was the commonest diagnosis (36.84%). 9 patients (23.68%) had depression only while 8 patients (21-05%) had mixed anxiety depression. 6 patients (15.79%) had generalized anxiety disorder. Post traumatic stress disorder was found in only 1 (2. 63%) patient of the whole sample (Table 2).

TABLE 3

TYPES OF TREATMENT MODALITIES

S.No	Procedure	No. of patients (n=67)
1.	Surgery alone	13 (19.4%)
2.	Chemotherapy alone	2 (2.9%)
	COMBINATION THERAPIES	
3.	Surgery + Chemotherapy	43 (64.2%)
4.	Surgery + Chemotherapy + Radiotherapy	4 (13.4%)
	TYPES OF SURGICAL PROCEDURE	**No. of patients (n=65)**
1.	Simple mastectomy	9
2.	Mastectomy + B/L oopherectomy	18
3.	Modified Radial mastectomy	31
4.	Mastectomy + Axillary clearance	7
5.	Breast conserving surgery	Nil

	ACTIVE PHASE (CURRENTLY UNDER TREATMENT)	No. of patients (n=42)
1.	Surgery alone	13(31%)
2.	Surgery + Chemotherapy	29(69%)
	FOLLOW UP (COMPLETED TREATMENT)	**No. of patients (n=25)**
1.	Surgery + Chemotherapy + RT	23 (92%)
2.	Chemotherapy alone	2 (8%)

19.4% of the patients in the study sample underwent surgery alone. 2 patients (2.9%) were given chemotherapy alone. 43 patients (64.2%) underwent surgery and also adjuvant chemotherapy was given and (13.4%) had triple modality of treatment (Sur + chemo + RT) The most common type of surgical procedure performed was modified radical mastectomy.

A Total of 42 (62.7%) of the patients were in active phase of treatment (currently undergoing). Among them 13 (31%) underwent surgery and 29 (69%) had both surgery and adjuvant chemotherapy. 25(37.3%) have completed treatment and in the follow up phase. 23 (92%) had surgery and adjuvant chemotherapy. Among the 23 patients 9 had underwent triple modality of treatment. 2(8%) were given chemotherapy alone (Table 3).

TABLE 4

STAGE OF CANCER AND PSYCHIATRIC MORBIDITY

	Stage of cancer	Total number of patients (n=67)	Number of patients with psychiatric morbidity (n=38)
Early	Stage I	6	2
	Stage II	21	14 (36.8%)
Late	Stage III	25	11 (28.9%)
	Stage IV	15	11 (28.9%)

Chis square $X^2 = 0.2496$ df =1

P= 0.6174 (p>0.05)

About 38 (56.72%) of the patient in the study sample had an identifiable psychiatric illness, among which the maximum number of patients 14 (36.8%) were in stage II. 11 patients (28.9%) were in stage III and a similar number was found in stage IV 2 (5.3%) were in stage I (Table 4).

TABLE 5

PHASE OF TREATMENT & PSYCHIATRIC MORBIDITY

Psychiatric morbidity	Active phase (N=27)		Follow up (N=11)
	Surgery N=4	Surgery+Chemotherapy N=23	
Adjustment disorder	3	7	4
Depression	1	6	2
Generalised anxiety disorder	0	3	3
Mixed anxiety depression	0	6	2
Post traumatic stress disorder	0	1	-

Chi square (x^2)= 1.2649 df = 4

P= 0.8673(p>0.05)

Among the different phases of treatment, 27(71%) of patients with psychiatric morbidity were in the active phase of treatment and 11(29%) were in the follow up phase. Among the active phase, 4 (14.8%) with psychiatric morbidity underwent surgery around 23 (85. 19%) had surgery and adjuvant chemotherapy (Table 5).

TABLE 6

COMPARISON OF PSYCHIATRIC MORBIDITY AND MODALITIES OF TREATMENT

Psychiatric morbidity	Active Treatment (N=42)	
	Surgery N=13	Surgery + chemotherapy (N=29)
Adjustment disorder	3	7
Depression	1	6
Generalised anxiety disorder	0	3
Mixed anxiety depression	0	6
PTSD	0	1
Total	4	23

P1 = 0.3077

P2 = 0.7931

t= 3.2694

P= 0.0022 ($p<0.05$)

Comparison of psychiatric morbidity with different modalities of treatment in the active phase showed a statistically significant ($p<0.05$) difference between surgery alone & combined modality of surgery and adjuvant chemotherapy being worst for combined therapy (Table 6).

TABLE 7

SCORES OBTAINED ON RATING SCALES IN STUDY GROUP

Scale	Subscale	Mean	S.D.	P
Hospital anxiety and depression scale	Depression	8.85	3.18	P<0.05
	Anxiety	7.6	3.18	P<0.05
Functional assessment of cancer therapy-breast (FACT – B)	Physical	14.96	3.54	P<0.05
	Social	18.82	4.13	P<0.05
	Emotional	14.03	3.02	P<0.05
	Functional	15.82	3.05	P<0.05
	Additional- Breast Specific	24.82	5.31	P<0.05

The mean scores obtained on the various rating scales used were as follows Depression subscale of the HADS has a mean of 8.85 and SD of 3.18. The Anxiety subscale of HADS has a mean of 7.6 and SD of 3.39. The results were statistically significant with the cut off score of 8 used in study.

- The functional assessment of cancer therapy. Breast with those of individual domains were the physical well being had a (mean 14.96 and SD 3.54), social well being (mean 18.82 and SP 4.13) essential well being (mean 14.03 and SD 3.02), functional well being (mean 15.82 and SD 3.05) and Breast Specific Subscale had a mean of 24.82 and SD of 5.31, All the subscale, in FACT-B was statistically significant which infer that Breast Cancer treatment impairs all the domains (Table 7).

TABLE 8

QUALITY OF LIFE SCORES IN STUDY SAMPLE (RAW SCORES)

WHOQOL –BREF Domains	Mean	Ideal raw scores	Mean expressed as percentage of ideal scores	S.D.	Significance P value
Physical	16.64	35	47.54	5.08	**0.000019**
Psychological	15.49	30	51.63	3.74	**0.000027**
Social	10.57	15	70.47	1.71	**0.000065**
Environmental	26.31	40	65.78	5.29	**0.000070**
Total	69.66	120	58.05	11.27	**0.000045**

Raw scores were used during analysis of the quality of life in the study sample. The total mean score was 69.66 with S.D of 11.27. Those of the individual domains were physical (mean 16.64; S.D), Psychological (mean 15.49; SD 3.74) Social (mean 10.57; S.D 1.71) and Environmental (mean 26.31, SD 5.29). Patients expressed satisfaction just over 50% of the ideal quality of life in. Psychological, domains 51.63% and overall 58.05% of the ideal score. Wherever in the physical domain it was even worse 47.54%. The scores for an ideal quality of life as perceived by the quality of life as perceived by the patient are included for comparison they are 35,30,15,40 and 120 for physical, psychological, social environmental and over all scores respectively.

All the domains including the global QoL score was statistically significant implying an impaired QoL in breast cancer patients (Table 8).

TABLE 9

COMPARISON OF VARIABLES BETWEEN EARLY VS ADVANCED STAGE CANCER PATIENTS

Variables	Early n=27		Advanced N=40		Significant (p value)
	Mean	SD	Mean	SD	
Depression	8.89	3.06	8.82	3.3	0.9291
Anxiety	8.21	3.62	7.15	3.18	0.2184
QOL- Phy	16.07	5.28	17.05	4.95	0.4447
QOL – Psy	14.96	3.14	15.87	4.12	0.3089
QOL – Soc	10.39	1.87	10.69	1.59	0.4934
QOL- Env	25.32	6.32	27.03	4.36	0.2209
QOL – Total	68.39	6.94	70.56	12.18	0.4258

A comparison of scores of variable of psychiatric morbidity and quality of life did not reveal any statistically significant difference between patients in the early stage (I&II) and advanced (State III & IV) diseases.

The mean score of Depression in early stage was 8.89 and in advanced stage 8.82. The mean score of anxiety in early stage was 8.21 and that of advanced stage was 7.15. The results were not statistically significant (Table 9).

TABLE 10

COMPARISON OF VARIABLES BETWEEN PATIENTS ABOVE AND BELOW 45 YEARS

Variables	Age<45 years N=33		Age >45 yrs N=34		Significant P value
	Mean	**SD**	**Mean**	**SD**	
Age	36.97	5.16	53.24	5.19	
Depression	9.03	3.37	8.7	3.02	0.5895
Anxiety	8.88	3.75	6.27	2.47	**0.00001**
QOL – Phy	15.21	5.17	18.09	4.65	**0.0019**
QOL – Psy	14.36	3.26	16.67	3.9	**0.0027**
QOL – Soc	10.21	1.58	10.88	1.78	0.0791
QOL- Env	25.61	4.51	27.12	5.93	0.1676
QOL – total	62.61	10.46	73.85	10.76	**0.0001**
Fact B - Phy	13.91	3.67	16	3.15	**0.0016**
Fact B- Soc	17.27	3.03	20.24	4.52	**0.0007**
Fact – B Emo	13.27	2.96	14.85	2.93	**0.0088**
Fact B- Func	15.24	3.25	16.36	2.77	**0.0534**
Fact B – Breast Specific	23.48	5.79	26.24	4.52	**0.0026**

A comparison of the variable between the patients premenopausal age groups (<45yrs) and postmenopausal age groups (>45yrs) in the study sample

showed significant differences in Quality of life scores in the physical and psychological domain as well as in the global score.

Mean age of the patient under 45yrs group was 36.97 white those above 45yrs had a mean of 53.24.

Anxiety subscale of the HADS also had a significant P Value.

The Breast Specific Subscale of the FACT B also showed a significant difference between the two groups (Table 10).

TABLE 11

COMPARISON VARIABLES BETWEEN DURATION OF ILLNESS LESS AND MORE THAN 1 YR.

Variables	Illness duration <1yr N=38		Illness duration>1yr N=29		Significant (P value)
	Mean	SD	Mean	SD	
Depression	9.03	3.11	8.59	3.32	0.5871
Anxiety	7.95	3.46	7.07	3.27	0.2952
Fact B - Phy	14.2	3.52	16.07	3.34	0.0314
Fact B– Psy	19	4.28	18.56	3.95	0.6689
Fact B– Soc	13.5	2.93	14.81	3.04	0.0839
Fact B- Env	15.53	3.37	16.26	2.51	0.3139
Fact B–Breast Specific	24.5	6.01	25.52	4.07	0.3456

Comparison of the variables between the duration of illness less than and more than one year showed significant differences in the physical as well as in the Emotional well being between the two groups. The mean scores of those

with lesser duration of illness appeared to have greater mean scores of anxiety (7.95) and depression (9.03) when compared to second group (7.07) and 8.59 respectively. No significant differences were seen between these two (Table 11).

TABLE 12

COMPARISON OF VARIABLES BETWEEN PATIENTS UNDER ACTIVE TREATMENT VS FOLLOW UP CASES

Variables	Active phase N=42		Follow up N=25		Significant P value
	Mean	**SD**	**Mean**	**SD**	
Age	43.93	10.83	47.88	7.4	
Depression	9.33	3.18	8.04	3.06	0.1702
Anxiety	7.76	3.50	7.32	3.24	0.6600
QOL – Phy	15.96	5.26	18.24	4.41	0.0728
QOL – Psy	14.88	3.66	16.52	3.73	0.1467
QOL – Soc	10.71	1.52	10.32	1.99	0.4923
QOL- Env	26.05	4.46	26.76	6.53	0.6979
QOL – total	67.45	4.46	73.36	10.35	**0.0360**
Fact B - Phy	14.31	3.72	16.04	2.99	0.0768
Fact B- Soc	18.98	4.50	18.64	3.51	0.8003
Fact B Emo	13.64	3.08	14.68	2.85	0.2395
Fact B- Func	15.62	2.95	16.16	3.25	0.5736
Fact B – Breast Specific	24.17	5.63	25.92	4.63	0.2406

A comparison was also made between those under active treatment (n=42) and follow up (n=25) significant difference was found in the global score QoL. The mean scores of anxiety and depression those under active treatment was greater when compared to those in the second group. No observable differences were seen in the FACT- B scale (Table 12).

TABLE 13

PSYCHIATRIC MORBIDITY AND QUALITY OF LIFE

Psychiatric morbidity	Total number (n=38)	HADS		WHOQOL – BREF				
		Dep. Mean	Anxiety Mean	PHY Mean	PSY Mean	SOC Mean	ENV Mean	TOTAL Mean
Adjustment disorder	14	8.79	6.86	16.57	15.50	10.00	26.00	68.07
Generalised anxiety disorder	6	7.83	13.17	16.83	14.33	9.5	26.67	6.7
Depression	9	12.67	7.14	14.22	13.78	10.33	25.11	64.22
Mixed anxiety depression	8	14.38	12.25	11.13	11.63	10	23	55.75
Post traumatic stress disorder	1	9	15	11	11	8	31	63
Nil psychiatric illness	29	6.38	5.31	19.1	17.48	11.38	27.52	76.72

A comparison was also attempted to study the Psychiatric morbidity and the influence on quality of life. The mean scores of patients with psychiatric morbidity (n=38) was comparatively greater when compared to those without any morbidity (n=29). The global score of QoL was most impaired in patients with mixed anxiety depression when compared to other psychiatric morbidity (Table 13).

Diagram 5

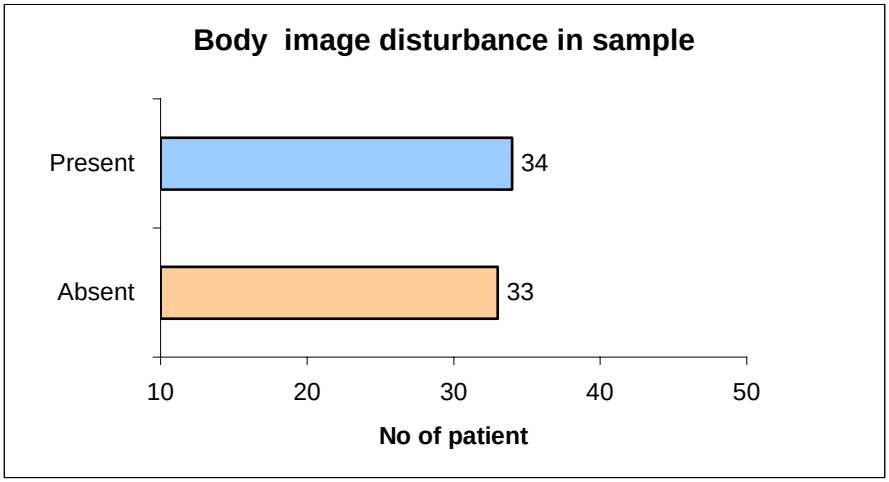


Table 14

TYPE OF BODY IMAGE DISTURBANCE IN SAMPLE (N=34)			
		N=34	**% of whole sample**
1.	Concern over loss of hair	24	35.8%
2.	Decreased physical alternatives	8	11.9%
3.	Feeling of loss of feminity	7	10.4%
4.	Increased self consciousness	6	8.9%

Body image difference was reported in 34(50%) of patients (Diagram 5). 12 of them had disturbance, which were disabling and caused distress to the women concerned.

An analysis of the type of image disturbances revealed concern over the loss of hair 24 (35.8%), decreased physical attractiveness 8 (11.9%), feeling of

loss of feminity 7 (10.4%) and increased self consciousness of being scrutinized by others 6 (8.9%) (Table 14).

Diagram 6

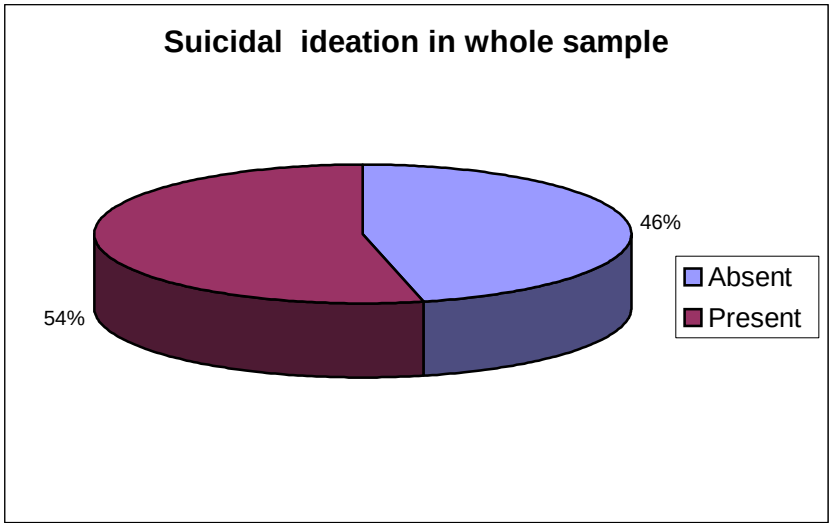
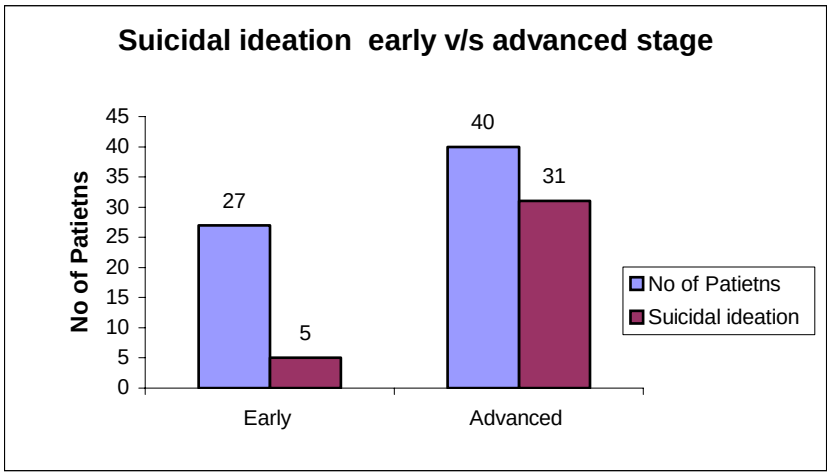


Diagram 7



Suicidal ideations was present in 36 (53.7%) in the study sample when comparing the frequency of suicidal ideation between the patients with early

and advanced stage, 5 (5%) of early ad 32 (77.5%) of advanced stage patients had suicidal thoughts (Diagram 7).

TABLE 15

CAUSES FOR SEXUAL DYSFUNCTION EXPRESSED BY PATIENTS

S. No	Reasons	Number n=34
1.	Lack of interest	16(47%)
2.	Feeling tired /pain	10 (29.4%)
3.	Far of transmitting disease to spouse	3 (8.8%)
4.	Spouse fearful of being infected	4 (11.8%)
5.	Fear of worsening of symptoms	1 (2.9%)
6.	Extramarital relationships in spouse	-
	TYPES OF SEXUAL DYSFUNCTION	
1.	Decreased frequency of the act	11(32.4%)
2.	Totally abstinent	23 (67.6%)

Sexual dysfunction was present in 50.7% of the study sample. Among those affected, 23 (67.6%) of the patient had been totally abstinent since the diagnosis of illness while 11 patients (32.4%) reported a decreased frequency of the act. In the dysfunctional group, 16(47%) cited lack of interest, 10 (29.4%) feeling tired or pain, 3(8.8%) had fear of transmitting disease to spouse and spouse of 4 (11.8%) had fear of being infected. 1(2.9%) felt that intercourse would cause exacerbation of symptoms (Table 15).

DISCUSSION

Psychiatry morbidity in concern patients is a reality but is often under diagnosed and under treated as there is a tendency to explain away the symptoms experienced by the patient (Passik 1998). Unless a patient has major complaints or is assertive enough to express her feelings, routine follow up visits are quite short as the physician tend to focus on severe or acute health problems. There is usually littler time spent on discussion of quality of life issues. Also the patient perceive their problems are inevitable about which nothing can be done.

Further, in developing countries like India, where the majority of patients present with advanced disease, combined treatment modality (Surgery with adjuvant chemotherapy or radio therapy) is given which interferes with general health related parameters and thereby adversely affects the quality of life.

The study aimed at elucidating the type of psychiatric morbidity and quality of life in women being treated with breast cancer using stage of illness, treatment modality, age and duration of illness as variables. A survey of their sexual life, body image concerns was also attempted.

Though essentially descriptive in nature some significant observations which have been reported in previous studies were replicated in the present study.

The common psychological reactions that were identified by Stedeford (1992) included shock, emotional numbness, denial anger, guilt, grief, anxiety, resignation and acceptance. Our study sample displaced greater percentage of acceptance (38.8%), grief (25.4%) Anger (7.5%) and Fear, (17.9%) which included fear of pain or recurrence and death, was also identified in our group. Similar reactions were described by Latha (1985) in studies with breast cancer patients although in a higher percentage. The patients in that study were asked to reveal their immediate thought on hearing about the illness. Our sample was interviewed at a much later stage of the illness. The greater level of acceptance in our sample in concordance with other studies on Indian cancer patients who accept more easily due to belief in theory of karma (Latha 1985.)

The prevalence of psychiatric morbidity in our study sample is high 56.72% in contrast to 47% in a study by Derrogatis et al 1983. The study sample was almost entirely of patients belonging to lowest social class. A study of A.C. Chaves et al (2005) concludes patients in the lowest social class had a significantly higher probability of being a psychiatric case. Similarly nearly 60% of patients were in advanced stages and an equal percentage of sample were currently under active treatment which may have accounted for increased

psychiatric morbidity. This is in agreement with previous studies by (P. Maguire, 1994 Manoj Pandy, 2000 and Minagawa et al (1997) in which 53.7% of sample population met the DSMIIIR criteria for psychiatric disorder. Further the difference in prevalence might also due to sampling fluctuations.

Adjustment disorders were the most common (36.8%) among the psychiatric diagnosis. This is in agreement with findings reported by Tatsuo Akechi et al (2001) and Derogatis et al (1983) where adjustment disorders were most common.

The actual levels of depression alone 23.7% and along with that of co-morbid anxiety reaches 39.47%. This is well within the range of 11-50% suggested by other authors. [Joffe et al (1986), Kulhara et al (1990)]. This was in agreement with the findings of Hardman et al, 1989, who reported affective disorders in 23% of patients. Also Hosaka, Aoki (1996) reported that most frequently observed disorder was depression which was seen in 28% of the cancer patients slightly higher than in our study. Also, our study is in agreement with findings by Massie (2004) who reported 1.5 – 4.6% of breast cancer patients with depression.

Also Maguire et al (1978) compared psychiatric problems 1 year after mastectomy in breast cancer patients with controls being patients with benign breast disease. They reported that 39% of patients has serious anxiety and depression or sexual difficulties in the mastectomy group.

Kulhara et al (1998) using The Hamilton Depression Rating Scale found the nearly 70% of patients had ratable symptoms indicative minor or moderate depression. The study was carried out in cervical cancer patients.

Chaturvedi et al (1994) have used the HADS in cancer population in India and have found it to be a useful instrument to detect anxiety and depression in cancer populations. They suggested various cut off scores with varying degrees of sensitivity and specificity. Cut off scores of 8 for anxiety, had a sensitivity of 68%, specificity of 85%, while for depression it was reported as 75% & 76% respectively. 8 was cut off score on both subscales in our study.

Generalized anxiety disorder was present in 15.79% of the patients with psychiatric morbidity in this study. This is in agreement with the wide range of prevalence estimates of abnormal anxiety in cancer patient population (0.9 – 49%) by (Vant Spijker A, 1997). Our study was also in agreement with observation Stark K et al (2000) in which range was narrower (10-30%) which used standardized psychiatric interviews and applied Research diagnostic criteria for the diagnosis.

PTSD was present in 2.63% of the patients. This is contrast to 35% in study by Mundy et al(2000). But our study correlated with findings by Palmer et al (2004) who reported cancer related PTSD was uncommon and had a low prevalence of 4%, a similar finding reported by AndryKowski et al (1998) who

studied PTSD in women with stage 0 – III A breast cancer, 6 to 72 months after cancer therapy.

Out of 38 patients with Psychiatric morbidity, 27(71%) were under active treatment when compared to 11 (28.95%) who were in the follow up phase but the results were not statistically significant. Among those under active treatment, psychiatric morbidity was higher 79.3% (23) in patients who underwent surgery and given adjuvant chemotherapy when compared to 4 (30.76%) underwent surgery alone and the results were statistically significant. Maguire et al, 1980 reported similar finding of a higher incidence of psychoemotional morbidity in patients given chemotherapy and suggested it was linked to physical toxicity. Cooper et al (1979) added that such morbidity was significantly greater in patients completing a one year course of chemotherapy. Thus chemotherapy leads to a greater psychiatric morbidity compared to surgery alone, a similar finding which was present in our study.

These findings underscore the significant psychiatric morbidity prevalent in various cancer population studies and highlight the need for prompt recognition and treatment otherwise much of the consequent morbidity remains hidden (Maguire 1986).

Stage of the illness was found to be very significant determinant of psychiatric morbidity and Quality of life. Psychiatric comorbidity increases with advancing stage of illness. It also contributed to increased stress faced by

the patients with respect to disease related the events. Those in advanced stage had higher levels of depression and anxiety. Antonella et al (2000) used DSM IIIR and Endicott criteria to detect depression and found that those with metastases met criteria for depression in both criteria suggesting higher morbidity in that group. Marlene et al (2000) reported similar findings with respect to physical, social and psychological well being in patient groups. Those with adjuvant therapy had less well being. In our study most of the patients in advanced stage were receiving adjuvant therapy and reported very low rates (nearly 60%) in well being compared to those in the early stage. Physical health is one of the most important determinants of well being. Although Quality of life is impaired in early stages when compared to advanced stages, no observable or statistically significant mean score was present in our study.

Minagawa H (1997), suggested cancer stage is one factor that influences the nature and incidence of psychiatric disorders and found 53.7% met the DSM III R criteria for psychiatric disorders in the terminally ill cancer patients. In our study 55% of advanced stage patients had psychiatric morbidity.

Sally et al (1997) studying anxiety and depression using the Hospital Anxiety and Depression Scale in long term cancer survivors reported no difference in scores between those in remission and those in active disease. The relationship between age, duration of illness and Psychological problems and

quality of life in probable more complex and require further study. Mirjam et al (2002) however has reported that cancer patients in acute phase of illness (in-crisis) will report a poorer quality of life than post- crisis.

The Duration of illness did not significantly influence the quality of life as was hypothesized in the beginning of life study. However the physical functioning was significantly affected in patients with illness duration <1 yr. This may be because of the fact that nearly 80% of the those under active treatment had illness duration of <1 yr and the treatment modality especially chemotherapy had a negative impact on physical well being as reported by Neeraj Arora et al (1999), Chie WE et al(1999). This is contrary to reports by Ganz et al; 2003 in which older women with breast cancer had a significant decline in the physical and mental health 15 months after breast cancer surgery.

Patients with breast cancer treatment had a statistically significantly impairment of quality of life affecting all domains (physical, psychological, social and environmental). This is in agreement with studies by Greimel E et al (2002) which reported that in female cancer patients, global quality of life and emotional functioning are mostly affected during the course of the disease, independent of their diagnosis. Also younger patients (in the pre and perimenopausal age group <45 yrs) had statistically significant impairment of al domains including the breast specific subscale in FACT B. This is in agreement with studies Manoj Pandey et al (2005), Neeraj Arora et al (1999), Broeckel et

al (2000), Vinokur AD et al (1990) Ganz (1985) which reported that younger patients experienced significantly greater deterioration in their mental health and well being than similarly impaired older patients. A study by Conde D et al (2005) reported women between ages of 45 and 65 with breast cancer report a good quality of life comparable to their counterparts who have not been diagnosed with breast cancer.

Further in our study impairment in global score quality of life, emotional well being and breast specific subscale, in young patients was significant which is in agreement with Wenzel et al (1999). This findings may be due to the fear of recurrence of disease coupled with concern regarding employment, social support, diminished work capacity and personal relationship all of which have shown a decline post treatment.

A significant impairment has been noted in quality of life in the physical health domain and social relationship, a finding which concur with findings by Fatma M. El- Sharkawi et al (1997). The decline in the physical health scores may be explained by the physical toxicity of treatment especially chemotherapy with other adverse effects like hair loss which may intensify the body image disturbances (Yarbro CH, 1985) coupled with the mutilating surgery of mastectomy which amplifies the problem. The impairment of work capacity and asthenia following treatment necessitating help at home from relatives and friends who are unable to provide support and hence results in greater

dissatisfaction. Stress caused by cancer prevents the patients form fulfilling the normal roles which might be a great stress for other members. They, in addition to their normal roles in the family have to take up their normal roles in the family have to take up the role given by the sick person, case for the sick person and also have to find some additional resources to support themselves.

The global Quality of life score was significantly compared affected in patients under active treatment compared to follow up patients whereas the individual domain scores did not show any statistical significance. However, the quality of life in physical and psychological domains were impaired. This findings concur with studies by Dorval et al, Ozyilkan et al, Fehlauer et al (2005), Chie WC et al (1999) in which long term, disease free breast cancer survivors reported high level of functioning and quality of life when compared to those currently under active treatment. Similar findings was also reported by Manoj Pandey et al (2005) those currently undergoing active treatment showed significantly poorer quality of life scores in univariate analysis.

This finding is in contrast to Bernhard Holzner et al (2001), Dow et al (1996), Ganz PA (1996) which reported reduced quality of life was present not only during initial treatment but also after long post treatment period.

50% of patients, a significant section of the sample expressed body image concerns. While (2000) expressed that cancer and cancer treatment have negative impact on appearance related variable. Loss of hair (35.8%) was the

main body image disturbance in our sample with discussed physical alternatives (11.9%) loss of feminity (10.4%) and self –consciousness being a lesser degree. This is in contrast to Hopwood et al (2000) findings in western women. They reported similar type of body image concerns but with much with higher frequency of concerns regarding physical attractiveness (53%), sexual attractiveness (55%) and approximately 1/3 rd feeling less feminine.

Suicidal ideations were high (53.7) in the overall sample and especially high among those in advanced disease 77.5%. Findings can be explained on the basis of greater degree of stress, poorer quality of life and higher level of psychiatric morbidity. These are higher than those in previous studies. Cochinov (1995) reported 45% and Brown (1986), Silberfarb (1980) reported rates or 1.5 – 20% across various population. The rates of suicidal ideations separately in depression where not assessed in out study but would probably be high as suggested by authors (Guze et al 1970). High rates of ideations in the advanced stage could be due to higher levels of Psychiatric morbidity and poorer quality of life.

In the cancer patients reporting suicidal ideation, it is essential to determine whether the underlying cause is a depressive illness or an expression of the desire to have ultimate control over intolerable symptoms Massie (1994). Hopelessness is a stronger predictive factor for suicide than is depression (Kovac, 1975). The assessment of hopelessness is not straight forward in the

patient with advanced disease with no hope of cure. In this study, the underlying reasons for hopelessness was found to be due to poor – symptoms management, poor self esteem, disrupted social integration and support , fear of painful death or feeling of abandonment and the functional restraints and increased financial burden imposed by the disease and its treatment.

In a retrospective analysis of predictors of suicidal ideation, it was found that those with more symptoms of major depression and poorer physical functioning were significantly more likely to report suicidal ideation (Akechi, 2001).

Approximately half (50.7%) the study samples reported sexual dysfunction ranging form decreased frequency to complete abstinence. Cultural factors, and social taboos and fear about the illness significantly influence sexual function. Anderson (1985) has reported rates of up to 90% in cancer survivors. Harrison et al (1994) reported rates of 20% in patients of cancer breast, testes and gynecological cancer. Our findings are in the middle range of these two extremes. Alexander et al (2002) reported cultural misconceptions about sexual function in Chinese cancer patients. In that study a third of the sample reported extramarital relationships in the spouse. No such finding was reported in our study.

Also sexual dysfunction occurred more frequently in women who had received chemotherapy (all ages) and in younger women who were no longer

menstruating (Ganz 1998). Counseling regarding psychosexual dysfunction would help patients readjust, understand and cope with their dysfunctions. Counseling services should be provided for all the women treated for breast cancer, not just those who undergo mastectomy (Fallowfield, 1986).

The findings in our studies to an extent concur with other studies but have been influenced to some degree by the research design, scales used for assessment and nature of the population studied. Further studies would probably help to clarity the nature and extent of psychiatric morbidity and other significant areas of concern and use the knowledge for appropriate psychotherapeutic and rehabilitative programmes.

CONCLUSION

1. Patients with breast cancer have a significant poorer quality of life affecting all domains.
2. Patients with breast cancer have a significant psychiatric morbidity
3. Breast cancer patients treated with adjuvant chemotherapy have a significantly higher psychiatric morbidity relative to those who have underwent surgery alone.
4. Younger patients and those currently under active treatment have a significant impairment of quality of life in physical and psychological domains and a higher degree of psychiatric morbidity.
5. Patients with advanced stages have an impaired quality of life and a higher degree of psychiatric morbidity compared to those in early stages.
6. Patients being treated for breast cancer would suffer form high incidence of sexual dysfunction and are influenced by patients perception of illness, cultural factors.
7. Body image disturbance are present in patients with breast cancer.
8. Suicidal ideations are higher in those with advanced stages compared to early stages.

PRACTICAL IMPLICATION

- “LIFE IS NOT JUST A MATTER OF LENGTH BUT OF DEPTH AND QUALITY AS WELL.
- “PSYCHOLOGICAL CARE OF CANCER PATIENTS SHOULD BE AN INTEGRAL PART OF THE MEDICAL CARE AND AVAILABLE AT ALL STAGES OF TREATMENT”.
- “THE FAILURE TO DETECT AND TREAT PSYCHIATRIC MORBIDITY IN CANCER PATIENTS WHICH IS LIKELY TO IMPACT NOT ONLY ON PATIENTS QUALITY OF LIFE BUT ON THE EFFECTIVE IMPLEMENTATION AND DELIVERY OF CANCER TREATMENT AS WELL AS ON THE COURSE OF ILLNESS.”
- “TO INTEGRATE SCREENING QUESTIONNARIES INTO ROUTINE HISTORY TAKING TO DETERMINE MENTAL HEALTH PROBLEMS AND TO MAKE DECISIONS WHETHER THE PROBLMES CAN BE MANAGED WITH LOCAL RESOURCES OR REQUIRE ACCESS TO EXISTING LIAISON MENTAL HEALTH SERVICES.”
- “TARGETED INTERVENTION BY IDENTIFICATION OF SUBSET OF WOMEN AT RISK IS ONE STEP FORWAD IN A DEVELOPING

COUNTRY LIKE INDIA WHERE PATIENT BURDEN IS HIGH AND RESOURCES ARE EXTREMELY LIMITED."

- "HOWEVER IT IS NOT CLEAR WHAT MIGHT BE THE BEST MODEL OF CARE WHETHER ONE MODEL SUITS ALL CIRCUMSTANCES."
- "INCORPORATION OF INDIVIDUAL PREFERENCES OF TREATMENT SHOULD BE CONSIDERED WHILE MAKING TREATMENT DECISIONS WHEN THE DIFFERENCES IN SURVIVAL BETWEEN THE OPTIONS ARE SMALL OR EVEN NON EXISTENT"

However, it must be remembered, the decision making process is not a substitution for the direct assessment of patient outcome regarding disease–free interval and survival.

Let this be the sowing seed for the studies to come to understand and throw a better light on the complex interaction between the quality of life, psychosocial concerns among the patients with breast cancer, on organ which is an important physiological, psychological and aesthetic part of the female form.

LIMITATIONS OF THE STUDY

1. The major limitations of the study is the fact that it is a cross sectional analysis involving a small sample size. The limitation have been attributable to mainly to paucity of time.
2. The study sample was chosen from patients who reported to a Govt. Hospital. Most of them belonged to a uniform social status and background. The results thus cannot be extrapolated to the whole population.
3. The influence of different types of surgical procedures and other modalities of treatment on the psychiatric morbidity and Quality of life has not been taken into account.
4. Follow up of the patients would help in understanding the illness, its course and outcome. But follow up of patients was not done in this study.

PROFORMA

A – SOCIODEMOGRAPHIC DATA

- Name :
- Age :
- Sex : Female
- Education : Nil/School/SSLC/HSC/Graduate/PG/Professional
- Occupation : Unemp/Emp/Non-Prof/Prof
- Income :
- Marital Status : Unmarried / Married/Single/Separated/Divorced/Widow
- Address : Urban/Rural
- Religion : Hindu / Muslim/Christian/Others
- Family Type : Single/Nuclear/Joint
- Number of children : Living alone/with children

B – ILLNESS DETAILS

- Diagnosis (HPE/Biopsy Report / Quadrant affected
- Stage / Grade of cancer
- Presence of metastases
- Duration of illness
- Mode of treatment – chemotherapy /combined (Sur+chemo)
- Complication of disease (if any)
- Other details (if any) – Sur radical/breast conservation
- Drug compliance (Good, poor)
- Perception of illness:
    - Extent of knowledge about illness
- Chemotherapy regimen used:
- Prophylactic antinauseants used: Y/N
- Previous chemotherapy – Y/N (If yes, specify no of cycles)
- Psychological reaction: Fear/anger/grief/acceptance/denial
- Body image disturbances +/- Type of disturbance:

C- PAST HISTORY

- Mental illness – Y/N
- Medical illness – Y/N
- Past H/o of treatment for present complaints – other Modalities (specify)
- Suicidal attempt / gestures
- Drug intake → OC/Native treatment / HRT / Others

D- FAMILY H/O

- Type of family – living alone / Nuclear /Joint
- Family H/o of mental illness / Suicide
    - Alcohol abuse
    - Similar illness [Breast cancer]

E-PERSONAL H/O

- Birth & Development H/o
- Menarche – age Menopause:
- Married Y/N
- Children Y/N
- Smoker Y/N
- Alcoholic Y/N
- Ganja Y/N
- Other substance use / abuse/dependence
- Sexual dysfunction – absent / present (Frequency reduced / abstinent)

F- PREMORBID PERSONALITY

G – MENTAL STATUS EXAM

- Conscious : Y/N
- Rapport : Good/Possible/Not Possible
- Gaze Contact : Maintained / Possible/ Not possible

- Dressing and grooming: Adequate/Average/Poor
- Psychomotor activity : Increased/Normal/Decreased
- Attention : Aroused/Not aroused
- Concentration : Sustained/ Not sustained
- Memory : Immediate Y/N / Recent Y/N / Remote Y/N
- Orientation : Y/N / Place: Y/N / Person: Y/N

TALK

- Quantum : Decreased /Normal/Increased
- Tone : Decreased/Normal/Increased
- Tempo : Decreased/Normal/Increased
- Reaction time : decreased/Normal/Increased
- Prosody : Maintained/Not maintained
- Relevant : Y/N
- Coherent : Y/N

THOUGHT

- Formal thought disorder Y/N (Pls specify)
- Delusions : Y/N (Pls Specify)
- Hallucination : Y/N (Pls Specify)
- Depressive ideas : Y/N
- Suicidal ideation : Y/N

MOOD

INSIGHT : Absent / Partial /Present

Physical Examination

SCALES

1. World Health Organisation Quality of Life Scale (WHOQOL-BREF)
2. Functional assessment of cancer therapy – Breast (FACT-B) Version 4
3. Hospital Anxiety and Depression Scale (HADS)
4. Mini International Neuropsychiatric Interview (MINI PLUS)
5. Socioeconomic scale

WHOQOL – BREF

Raw scores

Domain 1 (Physical) – (6-Q3)+(6-Q4)+Q10+Q15+Q16+Q17+Q18

Domain 2 (Psychological) – Q5+Q6+Q7+Q11+Q19+(6-Q26)

Domain 3 (Social) – Q20+Q21+Q22

Domain 4 (Environmental) – Q8+Q9+Q12+Q13+Q14+Q23+Q24+Q25

Quality of life scale – WHO QOL – BREF

		Very poor	**Poor**	**Neither poor not good**	**Good**	**Very good**
I (GJ)	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	**Dissatisfied**	**Neither satisfied nor dissatisfied**	**Satisfied**	**Very satisfied**
I (G4)	How satisfied are you with your health?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	An extreme amount
3 (F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4 (F1.3)	How much do you need any medial treatment to function in your daily life?	1	2	3	4	5
5 (F4.1)	How much do you enjoy life?	1	2	3	4	5
6 (F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7 (F 52)	How well are you able to concentrate?	1	2	3	4	5
8 (F16.1)	How safe do you feel in you daily life?	1	2	3	4	5
9 (F22.1)	How healthy is your physical environment?	1	2	3	4	5

		Not at all	A little	Moderately	Mostly	Completely
10 (F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
11 (F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
12 (F18.1)	How you enough money to meet you needs?	1	2	3	4	5

13 (F20.1)	How available to you is the information the you need in your day-to-day life?	1	2	3	4	5
14 (F21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very Poor	**Poor**	**Neither poor for good**	**Good**	**Very Good**
15 (F9.1)	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	**Dis Satisfied**	**Neither satisfied nor dissatisfied**	**Satisfied**	**Very satisfied**
16 (F3.3)	How satisfied are you with your sleep?	1	2	3	4	5
17 (F10.3)	How satisfied are you with your ability to perform your daily laying activities	1	2	3	4	5
18 (F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
19 (F6.3)	How satisfied are you with yourself?	1	2	3	4	5
20 (F13.3)	How satisfied you with your personal relationship?	1	2	3	4	5
21 (F15.2)	How satisfied are you with your sex life?	1	2	3	4	5
22 (F14.4)	How satisfied are you with the support you get form your friends?	1	2	3	4	5
23 (F17.3)	How satisfied are you with the conditions of your living place?	1	2	3	4	5

24 (F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5
25 (F23.3)	How satisfied are you with your transport?	1	2	3	4	5

		Never	**Seldom**	**Quite often**	**Very often**	**Always**
26 (F8.1)	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

FACT – B (Version 4)

	PHYSICAL WELL-BEING	**Not at all**	**A little bit**	**Some-what**	**Quite a bit**	**Very much**
GP1	I have a lack of energy ……	0	1	2	3	4
GP2	I have nausea ……..	0	1	2	3	4
GP3	Because of my physical condition, I have trouble meeting the needs of my family ……	0	1	2	3	4
GP4	I have pain …….	0	1	2	3	4
GP5	I am bothered by side effects of treatment ……	0	1	2	3	4
GP6	I feel ill ……..	0	1	2	3	4
GP7	I am forced to send time in bed……..	0	1	2	3	4

	SOCIAL/FAMILY WELL-BEING	**Not at all**	**A little bit**	**Some-what**	**Quite a bit**	**Very much**
GS1	I feel close to my friends……	0	1	2	3	4
GS2	I get emotional support from my family……	0	1	2	3	4
GS3	I get support from my friends……..	0	1	2	3	4
GS4	My family has accepted my illness…	0	1	2	3	4
GS5	I am satisfied with family communication about my illness….	0	1	2	3	4
GS6	I feel close to my partner (or the person who is my main support)	0	1	2	3	4
Q1	Regardless of your current level of sexual activity, please answer the following question. If you prefer not to answer it, please check this box and go the next section	0	1	2	3	4
GS7	I am satisfied with my sex life	0	1	2	3	4

	EMOTIONAL WELL-BEING	Not at all	A little bit	Some-what	Quite a bit	Very much
GE1	I feel sad ……..	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness …….	0	1	2	3	4
GE3	I am losing hope in the fight against my illness……	0	1	2	3	4
GE4	I feel nervous …….	0	1	2	3	4
GE5	I worry about dying…….	0	1	2	3	4
GE6	I worry that my condition will get worse	0	1	2	3	4

	FUNCTIONAL WELL-BEING	Not at all	A little bit	Some-what	Quite a bit	Very much
GF1	I am able to work (include work at home)……	0	1	2	3	4
GF2	My work (include work at home is fulfilling ……..	0	1	2	3	4
GF3	I am able to enjoy life …….	0	1	2	3	4
GF4	I have accepted my illness	0	1	2	3	4
GF5	I am sleeping well	0	1	2	3	4
GF6	I am enjoying the things I usually do for fun	0	1	2	3	4
GF7	I am content with the quality of my life right now					

	ADDITIONAL CONCERNS	Not at all	A little bit	Some-what	Quite a bit	Very much
B1	I have been short of breath…….	0	1	2	3	4
B2	I am self-conscious about the way I dress……	0	1	2	3	4
B3	One or both of my arms are swollen or tender……..	0	1	2	3	4
B4	I feel sexually attractive……..	0	1	2	3	4
B5	I am bothered by hair loss……..	0	1	2	3	4
B6	I worry that other members of my family might someday get the same illness…….	0	1	2	3	4
B7	I worry about the effect of stress on my illness	0	1	2	3	4
B8	I am bothered by a change in weight	0	1	2	3	4

B9	I am able to feel like a woman	0	1	2	3	4
P2	I have certain parts of my body where I experience significant pain	0	1	2	3	4

HOSPITAL ANXIETY AND DEPRESSION SCALE

1. I feel tense or wound up:
    a. Most of the time 3
    b. A lot of the time 2
    c. Form time to time, occasionally 1
    d. Not at all 0

2. I still enjoy the things I used to enjoy:
    a. Definitely as much 0
    b. Not quite so much 1
    c. Only a little 2
    d. Hardly at all 3

3. I get a sort of frightened feeling as if something awful is about to happen

    a. Very definitely and quite badly 3
    b. Yes, but not too badly 2
    c. A little, but it dose not worry me 1
    d. Not at all 0

4. I can laugh and see the funny side of things
    a. As much as I always could 0
    b. Not quite so much now 1
    c. Definitely not so much now 2
    d. Not at all 3

5. Worrying thoughts go through my mind
    a. A great deal of the time 3
    b. A lot of the time 2
    c. From time to time but not too often 1
    d. Only occasionally 0

6. I feel cheerful
    a. Not at all 3
    b. Not often 2
    c. Sometimes 1
    d. Most of the time 0

7. I can sit at case and feel relaxed
    a. Definitely 0
    b. Usually 1
    c. Not often 2
    d. Not at all 3

8. I feel as if I am slowed down
    a. Nearly all the time 3
    b. Very often 2
    c. Sometimes 1
    d. Not at all 0

9. I get a sort of frightened feeling like butterflies in the stomach
    a. Not at all 0
    b. Occasionally 1
    c. Quite often 2
    d. Very often 3

10. I have lost interest in my appearance
    a. Definitely 3
    b. I don't take so much care as I should 2
    c. I may not take quite as much care 1
    d. I take just as much care as ever 0

11. I feel restless as if I have to be on the move
    a. Very much indeed 3
    b. Quite a lot 2
    c. Not very much 1
    d. Not at all 0

12. I look forward with enjoyment to things
    a. As much as ever I did 0
    b. Rather less than I used to 1
    c. Definitely less than I used to 2
    d. Hardly at all 3

13. I get sudden feelings of panic
    a. Very often indeed 3
    b. Quite often 2
    c. Not very often 1
    d. Not at all 0

14. I can enjoy a good book or radio or TV programme
    a. Often 0
    b. Sometimes 1
    c. Not often 2
    d. Very seldom 3

MINI SCALE

MINI PLUS

A. MAJOR DEPRESSIVE EPISODE

A1	Have you been consistently depressed or down, most of the day, nearly every, for the past two weeks?	No	Yes	1
A2	In the past two weeks, have you been less interested in most things or less able to enjoy the things you used to enjoy most of the time?	No	Yes *	2
	Is **A1** or **A2** codes **yes**?	No	Yes	
A3	Over the past two weeks, when you felt depressed or uninterested:			
	a. Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by ± 5% of body weight or ± 8 lbs, or ± 3.5 kgs., for a lb./ 70 kg. person in a month)? If **yes** to either, code **yes**.	No	Yes*	3
	b. Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively?	No	Yes	4
	c. Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?	No	Yes *	5
	d. Did you feel tired or without energy almost every day?	No	Yes	6
	e. Did you feel worthless or guilty almost every day?	No	Yes	7
	f. Did you have difficulty concentrating or making decisions almost every day?	No	Yes	8
	g. Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead?	No	Yes	9
	Are 5 or more answers (A1-A3) coded yes?			

If patient has current major depressive episode continue to A4, otherwise move to module B:

No	Yes*
Major depressive episode, current	

A4	a. During your lifetime, did you have other periods of two weeks or more when you felt	No	Yes	10
	b. Did you ever have an interval of at least 2 months without any depression and any loss of interest between 2 episodes of depression?	No	Yes*	11

Major depressive episode, current

* If patient has Major Depressive Episode, Current, code Yes in corresponding question on page 5

MAJOR DEPRESSIVE EPISODE WITH MELANCHOLIC FEATURES (optional)

IN THE PATIENT CODES POSITIVE FOR A CURRENT MAJOR DEPRESSIVE EPISODE (A3=YES) EXPLORE THE FOLLOWING

A5	a. Is A2 coded Yes?	No	Yes	
	b. During the most severe period of the current depressive episode, did you lose your ability to respond to things that previously gave you pleasure, or cheered you up?	No	Yes	12
	If no: when something good happen does it fail to make you feel better, even temporarily?	No	Yes	
	Is either A5 a or A5b coded Yes?	No	Yes	
A6	Over the past two week period, when you felt depressed and uninterested:			
	a. Did you feel depressed in a way that is different from the kind of feeling you experience when someone close to you dies?	No	Yes	13
	b. Did you feel regularly worse in the morning, almost every day?	No	Yes	14
	c. Did you wake up at least 2 hours before the usual time of awakening and have difficulty getting back to sleep, almost every day?	No	Yes	15
	d. Is A3c coded yes (Psychomotor retardation or agitation)	No	Yes	
	e. Is A3a coded yes for anorexia or weight loss?	No	Yes	
	f. Did you feel excessive guilt or guilt out of proportion to the reality of the situation?	No	Yes	16

Are **3** or more **A6** answers coded **yes**?

No	Yes
Major depressive episode with melancholic features current	

B. DYSTHYMIA

If patient symptoms currently meet criteria for major depressive episode, do not explore this module.

B1	Have you felt sad, low or depressed most of the time for the last two years?	No	Yes	17
B2	Was this period interrupted by your feeling OK for two months or more?	No	Yes	18
B3	During this period of feeling depressed most of the time:	No	Yes	19
	a. Did your appetite change significantly?	No	Yes	20
	b. Did you have trouble sleeping or sleep excessively?	No	Yes	21
	c. Did you feel tired or without energy?	No	Yes	22
	d. Did you lose your self-confidence?	No	Yes	23
	e. Did you have trouble concentrating or making decisions?	No	Yes	24

	f. Did you feel hopeless?	No	Yes	
B4	Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way?	No	Yes	25
	Is B4 coded yes?	No Dysthymia	Yes Current	

C. SUICIDALITY

	In the past month did you:			Points
C1	Think that you would be better off dead or wish you were dead?	No	Yes	1
C2	Want to harm yourself?	No	Yes	2
C3	Think about suicide?	No	Yes	6
C4	Have a suicide plan?	No	Yes	10
C5	Attempt suicide?	No	Yes	10
	In your lifetime:			
C6	Did you ever make a suicide attempt?	No	Yes	
	Is atleast **1** of the above coded **yes**?	Suicide risk	Current	
	If yes, add the total number of points for the answers (C1-C6) checked 'Yes' and specify the level of suicide risk as follows.	1-5 points low ☐		
		6-9 points Moderate ☐		
		≥ 10 points High ☐		

D. (HYPO) MANIC EPISODE

D1	a. Have you ever had a period of time when you were feeling 'up' or 'high' or so full of energy or full of yourself that you got into trouble, or that other people thought you not your usual self? (Do not consider were intoxicated on drugs or alcohol)	No	Yes	1
	IF PATIENT IS PUZZLED OR UNCLEAR ABOUT WHAT YOU MEAN BY 'UP' OR 'HIGH', CLARIFY AS FOLLOWS: by 'up' or high I mean: having elated mood; increased energy; needing less sleep; having rapid thoughts; being full of ideas; having an increase in productivity motivation, creativity, or impulsive behavior.			
	If **Yes**:			
	b. Are you currently feeling 'up' or 'high' or full of energy?	No	Yes	2

D2	Have you ever been persistently irritable, for several days, so that you had arguments or verbal or physical fights, or shouted at people outside your family? Have you or others noticed that you have been more irritable or over reacted, compared to the people, even in situations that you felt were justified? If yes:	No	Yes	3
	b. Are you currently feeling persistently irritable	No	Yes	4
	Is **D1** a or **D2a** coded **yes**?	No	Yes	
D3	If D1b or D2b = yes: explore only current episode If D1b and D2b = no: explore the most symptomatic past episode During the times when you felt high, full of energy, or irritable did you:			
	a. Feel that you could do things others couldn't do, or that you were an especially important person?	No	Yes	5
	b. Need less sleep (for example, feel rested after only a few hours sleep?	No	Yes	6
	c. Talk too much without stopping, or so fast that people had difficulty understanding?	No	Yes	7
	d. Have racing thoughts?	No	Yes	8
	e. Become easily distracted so that any little interruption could distract you?	No	Yes	9
	f. Become so active or physically restless that others were worried about you?	No	Yes	10
	g. Want so much to engage in pleasurable activities that you ignored the risks or consequence (for example, spending sprees, reckless driving, or sexual indiscretions)?	No	Yes	11
	Are **3** or more **D3** answers codes Yes (Or **4** or more if **D1a** is No (in rating past episode) Or if **D1b** is **no** (in rating current episode))?	No	Yes	
	Did these symptoms last at least a week **and** cause significant problems at home, at work, socially, or at school, or were you hospitalized for these problems?	No ↓❒	Yes ↓❒	12

The episode explored was A: Hypomanic episode / Manic episode

Is D4 coded No?

Specify if the episode is current or past.

No	Yes
Hypomanic episode	
Current	❒
Past	❒

Is D4 coded yes?

Specify if the episode is current or past

No	Yes
Manic episode	
Current	❒
Past	❒

E. PANIC DISORDER

(MEANS: CIRCLE NO IN E5 AND SKIP TO F1)

E1	a. Have you, no more than one occasion, had spells or attacks when you suddenly felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way?	No	Yes	1
	b. Did the spells peak within 10 minutes?	No	Yes	2
E2	At any time in the past, did any of those spells or attacks come on unexpectedly or occur in an unpredictable or unprovoked manner?	No	Yes	3
E3	Have you ever had one such attack followed by a month or more of persistent fear of having another attack, or worries about the consequences of the attack?	No	Yes	4
E4	During the worst spell that you can remember:			
	a. Did you have skipping, racing or pounding of your heart?	No	Yes	5
	b. Did you have sweating or clammy hands?	No	Yes	6
	c. Were you trembling or shaking?	No	Yes	7
	d. Did you have shortness of breath or difficulty breathing?	No	Yes	8
	e. Did you have a choking sensation or a lump in your throat?	No	Yes	9
	f. Did you have chest pain, pressure or discomfort?	No	Yes	10
	g. Did you have nausea, stomach problems or sudden diarrhea?	No	Yes	11
	h. Did you feel dizzy, unsteady, lightheaded or faint?	No	Yes	12
	i. Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body?	No	Yes	13
	j. Did you feat that you were losing control or going crazy?	No	Yes	14
	k. Did you fear that you were dying?	No	Yes	15
	l. Did you have tingling or numbness in parts of your body?	No	Yes	16
	m. Did you have hot flushes or chills?	No	Yes	17
E5	Are both **E3**, and **4** or more **E4** answers, coded yes?	No	Yes PANIC DISORDER LIFETIME	
E6	If E5=No, are any E4 answers coded yes?	No	Yes LIMITED	

	Then skip to F1		SYMPTOM ATTACKS LIFETIME	
E7	In the past month, did you have such attacks repeatedly (2 or more) followed by persistent fear of having another attack?	No	Yes PANIC DISORDER CURRENT	18

F. AGORAPHOBIA

F1	Do you feel anxious or uneasy in places or situations where you might have a panic attach or the panic-like symptoms we just spoke about, or where help might not be available or escape might be difficult; like being a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, travelling in a bus, train or car?	No	Yes	19
F2	If F=1 No, circle No in F2. Do you fear these situations so much that you avoid them, or suffer through them, or need a companion to face them?	No	Yes AGORAPHOBIA CURRENT	20

If F2 (Current agoraphobia) coded No
and
Is E7 (Current panic disorder) coded Yes?

No Yes
PANIC DISORDER without agoraphobia CURRENT

If F2 (Current agoraphobia) coded yes
and
Is E7 (Current panic disorder) coded yes?

No Yes
PANIC DISORDER without agoraphobia CURRENT

Is F2 (Current agoraphobia) coded yes
and
Is E5 (Panic disorder lifetime) coded no?

No Yes
AGORAPHOBIA, CURRENT without history of Panic Disorder

G. SOCIAL PHOBIA (SOCIAL ANXIETY DISORDER)

(Means: go to the diagnostic box, circle no and move to the next module)

G1	In the past month, were you fearful or embarrassed being the focus of attention, or fearful of being humiliated? This includes things like speaking in public, eating in public or with others, writing while someone watches, or being in social situations	No	Yes	1
G2	Is this fear excessive or unreasonable	No	Yes	2

G3	Do you fear these situations so much that you avoid them or suffer through them?	No	Yes	3
G4	Does this fear disrupt your normal work or social functioning or cause you significant distress?	No	Yes	4

SOCIAL PHOBIA
(Social Anxiety Disorder)
CURRENT

H OBSESSIVE – COMPULSIVE DISORDER

(Means : go to the diagnostic box, circle no and move to the next module)

H1	In the past month, have you been bothered by recurrent thoughts, impulses, or images that were unwanted, distasteful, inappropriate, intrusive, or distressing? (For example, the idea that you were dirty contaminated or had germs, or fear of contaminating others, or fear of harming someone even though you didn't want to, or fearing you would act on some impulse, or fear or superstitions that you would be responsible for things going wrong, or obsessions with sexual thoughts, images or impulses, or hoarding, collecting, or religious obsessions.) (Do not include simply excessive worries about real life problems. Do not include obsessions directly related to eating disorders, sexual deviations, pathological gambling, or alcohol or drug abuse because the patient may derive pleasure from the activity and may want to resist it only because of its negative consequences.)	No to H4	Yes	1
H2	Did they keep coming back into your mind even when you tried to ignore or get rid of them?	No To H4	Yes	2
H3	Do you think that these obsessions are the product of your own mind and that they are not imposed from the outside?	No	Yes Obsessions	3
H4	In the past month, did you do something repeatedly witout being able to resist doing it, like washing ir cleaning excessively counting or checking things over and over, or repeating, collecting, arranging things, or other supersitious rituals?	No	Yes Compulsions	4
	Are H3 or H4 coded yes?	No	Yes	
H5	Did you recognize that either these obsessive thoughts or these compulsive behaviors were excessive or unreasonable?	No	Yes	5
H6	Did these obsessive thoughts and/or compulsive behaviours significantly interfere with your normal routine, occupational functioning, usual social activities, or relationships, or did they take more than one hour a day?	No	Yes O.C.D. CURRENT	6

I. POSTTRAUMATIC STRESS DISORDER (optional)

(means: go to the diagnostic box, circle No, and move to the next module)

I1	Have you ever experienced or witnessed or had to deal with an extremely traumatic even that included actual or threatened death or serious injury to you or someone else? EXAMPLES OF TRAUMATIC EVENTS INCLUDE: SERIOUS ACCIDENTS, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, FIRE DISCOVERING A BODY, SUDDEN DEATH OF SOMEONE CLOSE TO YOU, WAR, OR NATURAL DISASTER.	No	Yes	1
I2	Did you respond with intense fear, helplessness or horror?	No	Yes	2
I3	During the past month, have you re-experienced the event in a distressing way (such as, dreams, intense recollections, flashbacks or physical reactions?	No	Yes	3
I4	In the past month:			
	a) Have you avoided thinking the event, or have you avoided things that remind you of the event?	NO	Yes	4
	b) Have you had trouble recalling some important part of what happened?	No	Yes	5
	c) Have you become less interested in hobbies or social activities?	No	Yes	6
	d) Have you felt detached or entranced from others?	No	Yes	7
	e) Have you felt detached or estranged from others?	No	Yes	8
	f) Have you felt that your life will be shortened or that you will die sooner than other people?	No	Yes	9
	ARE 3 OR MORE 14 ANSWERS CODED YES?	No	Yes	
I5	**In the past month**			
	a) Have you had difficulty sleeping?	No	Yes	10
	b) Were you especially irritable or did you have outbursts of anger?	No	Yes	11
	c) Have you had difficulty concentrating?	No	Yes	12
	d) Were you nervous or constantly on your guard?	No	Yes	13
	e) Were you easily startled?	No	Yes	14
	ARE 2 OR MORE 15 ANSWERS CODED YES?	No	Yes	
I6	During the past month, have these problems significantly interfered with your work or social activities, or caused significant distress?	No	Yes	15

POSTTRAUMATIC STRESS DISORDER CURRENT

J. ALCOHOL ABUSE AND DEPENDENCE

(MENAS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

JI	In the past 12 months, have you had 3 or more alcoholic drinks within a 3hour period on 3 or more occasions?	No	Yes	1
J2	In the past 12 months			
	a. Did you need to drink more in order to get the same effect that you got when you first started drinking?	No	Yes	2
	b. When you cut down on drinking did your hands shake, did you sweat or feel agitated? Did you drink to avoid these symptoms or to avoid being hungover, for example, "the shakes" sweating or agitation?	No	Yes	3
	c. During the times when you drank alcohol, did you end up drinking more than you planned when you started?	No	Yes	4
	d. Have you tried to reduce or stop drinking alcohol but failed?	No	Yes	5
	e. On the days that you drank, did you speed substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol?	No	Yes	6
	f. Did you spend less time working, enjoying hobbies, or being with others because of your drinking?	No	Yes	7
	g. Have you continued to drink even though you knew that the drinking caused you health or mental problems?	No	Yes	8
	ARE 3 OR MORE J2 ANSWERS CODED YES?	No	Yes	
		ALCOHOL DEPENDENCE CURRENT		
J3	In the past 12 months			
	a. Have you been intoxicated, high, or hungover more that once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE YES ONLY IF THIS CAUSED PROBLEMS).	No	Yes	9
	b. Were you intoxicated more than once in any situation where you were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc?	No	Yes	10
	c. Did you have legal problems more than once because of your drinking, for example, an arrest or disorderly conduct?	No	Yes	11

d. Did you continue to drink even though your drinking caused problems with your family or other people? No Yes 12

ARE 1 OR MORE J3 ANSWERS CODED YES?

No Yes
ALCOHOL ABUSE CURRENT

K. NON – ALCOHOL PSYCHOACTIVE SUBSTANCE USE DISORDERS

(MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

Now I am going to show you / read to you a list of street drugs or medicines.

K1 a. **In the past 12 months,** did you take any of these drugs more than once, to get high, to feel better, or to change your mood? No Yes

CIRCULE EACH DRUG TAKEN:

Stimulants: amphetamines, "speed", crystal meth, "rush", Dexedrine, Ritalin, diet pills.

Cocaine : snorting, IV, freebase, crack, "speedball",

Narcotics: heroin, morphine, Dilaudid, opium, Demerol, methadone, codeine, percodan, Darvon, OxyContin.

Hallucinogens : LSD ("acid"), mescaline, peyote, PCP ("Angel Dust", "Peace pill"), psilocybin, STP, "mushrooms", ecstasy, MDA, or MDMA.

Inhalants: "glue", ethtl chloride, nitrous oxide ("laughing gas"), amyl or butyl nitrate ("poppers").

Marijuana: hashish ("hash"), THC, "pot", "grass", "weed", "reefer".

Tranquilizers: Quaalude, Seconal ("reds"), Valium, Xanax, Librium, Ativan, Dalnmane, Halcion, barbiturates, Miltown.

Miscellaneous: steroids, nonprescription sleep or diet pills, GHB. Any others?

SPECIFY MOST USED DRUG(S) : ----------

ONLY ONE DRUG/ DRUG CLASS HAS BEEN USED — CHECK ONE BOX ☐

ONLY THE MOST USED DRUG CLASS IS INVESTIGATED. ☐

EACH DRUG CLASS USED IS EXAMINED SEPARATELY (PHOTOCOPY K2 AND K3 AS NEEDED) ☐

SPECIFY WHICH DRUG/ DRUG CLASS WILL BE EXPLORED IN THE INTERVIEW BELOW IF THERE IS CONCURRENT OR SEQUENTIAL POLYSUBSTANCE USE : _____

K2 **Considering your use of (NAME THE DRUG / DRUG CLASS SELECTED), in the past 12 months:**

a. Have you found that you needed to use more (NAME OF DRUG / DRUG CLASS SELECTED) to get the same effect that you did when you first started taking it? No Yes 1

b. When you reduced or stopped using (NAME OF DRUG / DRUG CLASS SELECTED), did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable, or depressed)? Did you use any drug (s) to keep yourself from getting sick (withdrawal symptoms) or so that you would feel better? No Yes 2

IF **YES** TO EITHER, CODE **YES**.

c. Have you often found that when you used (NAME OF DRUG / DRUG CLASS SELECTED), you ended up taking more than you thought you would? No Yes 3

d. Have you tried to reduce or stop taking (NAME OF DRUG / DRUG CLASS SELECTED) but failed? No Yes 4

e. On the days that you used (NAME OF DRUG / DRUG CLASS SELECTED), did you spend substantial time (> 2 hours), obtaining, using or in recovering from the drug, or thinking about the drug? No Yes 5

f. Did you spend less time working, enjoying hobbies, or being with family or friends because of your drug use? No Yes 6

g. Have you continued to use (NAME OF DRUG / DRUG CLASS SELECTED), even though it caused you health or mental problems? No Yes

No	Yes
SUBSTANCE DEPENDENCE CURRENT	

Are 3 more K2 answer coded Yes?

SPECIFY DRUG (S): _____

Considering your use of (NAME OF DRUG / DRUG CLASS SELECTED), in the past 12 months

K3 a. Have you been intoxicated, high or hungover from (NAME OF DRUG/DRUG CLASS SELECTED) more than once, when you had other responsibilities at school, at work, or at home? Did this cause any problem? No Yes 8

(Code yes only if the caused problems)

b. Have you been high or intoxicated from (NAME OF DRUG / DRUG SELECTED) more than once in any situation where you were physically at risk (for example, driving a car, riding a motorbike, using machinery, boating , etc.)? No Yes 9

c. Did you have legal problems more than once because of your drug use, for example, an arrest or disorderly conduct? No Yes 10

d. Did you continue to use (NAME OF DRUG / DRUG SELECTED), even though it caused problems with your family or other people? No Yes 11

ARE **1** OR MORE **K3** ANSWER CODED YES?

SPECIFY DRUG(S): _____

No	Yes
SUBSTANCE ABUSE CURRENT	

L. PSYCHOTIC DIRODERS

ASK FOR AN EXAMPLE OF EACH QUESTION ANSWERED POSITIVELY. CODE YES ONLY IF THE EXAMPLES CLEARLY SHOW A DISTORTION OF THOUGHT OR OF PERCEPTION OR IF THEY ARE NOT CULTURALLY APPROPRIATE. BEFORE CODING, INVESTIGATE WHETHER DELUSIONS QUALIFY AS "BIZARRE".

DELUSIONS ARE "BIZARRE" IF: CLEARLY IMPLAUSIBLE, ABSURD, NOT UNDERSTANDABLE, AND CANNOT DERIVE FROM ORDINARY LIFE EXPERIENCE.

HALLUCINATIONS ARE SCORED "BIZARRE" IF: A VOICE COMMENTS ON THE PERSON'S THOUGHTS OF BEHAVIOR, OR WHEN TWO OR MORE VOICES ARE CONVERSING WITH EACH OTHER.

Now I am going to ask you about unusual experiences that some people have.

					BIZARRE	
L1	a.	Have you ever believed that people were spying on you, or that someone was plotting against you, or trying to hurt you? NOTE: ASK FOR EXAMPLES TO RULE OUT ACTUAL STALKING.	No	Yes	Yes	1
	b.	**IF YES,** do you currently believe these things?	No	Yes	Yes L6	2
L2	a.	Have you ever believe that someone was reading your mind or could hear your thoughts, or that you could actually read someone's mind or hear what another person was thinking?	No	Yes	Yes	3
	b.	**IF YES:** do you currently believe these things?	No	Yes	Yes L6	4
L4	a.	Have you ever believed that you were being sent special messages through the TV, radio, or newspaper, or that a person you did not personality know was particularly interest in you?	No	Yes	Yes	7
	b.	**IF YES:** do you currently believe these things?	No	Yes	Yes L6	8
L5	a.	Have your relatives or friends ever considered any of your beliefs strange or unusual? INTERVIEWER: ASK FOR EXAMPLES ONLY CODE YES IF THE EXAMPLES ARE CLEARLY	No	Yes	Yes	9

	DELUSIONAL IDEAS NOT EXPLORED IN QUESTION L1 TO L4, FOR EXAMPLE, SOMATIC OR RELIGIONS DELUSIONS OR DELUSIONS OF GRANDIOSITY, JEALOUSY, GUILT, RUIN OR DESTITUTION, ETC.				
	b. **IF YES:** do they currently consider your beliefs strange?	No	Yes	Yes	10
L6	a. Have you ever heard things other people couldn't hear, such as voices? HALLUCINATIONS ARE SCORED "BIZARRE" ONLY IF PATIENT ANSWERS YES TO THE FOLLOWING:	No	Yes		11
	b. **IF YES:** have you heard these things in the past month?	No	Yes	Yes L8b	12
L7	a. Have you ever had visions when you were awake or have you ever seen things other people couldn't see?	No	Yes		13
	CLINICIAN: CHECK TO SEE IF THESE ARE CULTURALLY INAPPROPRIATE.				
	b. If yes: have you seen these things in the past month?	No	Yes		14
	CLINICIAN'S JUDGMENT				
L8	b IS THE PATIENT CURRENTLY EXHIBITING INCOHERENCE, DISORGANIZED SPEECH, OR MARKED LOOSENING OF ASSOCIATIONS?	No	Yes		15
L9	b IS THE PATIENT CURRENTLY EXHIBITING DISORGANIZED OR CATATONIC BEHAVIOR?	No	Yes		16
L10	b ARE NEGATIVE SYMPTOMS OF SCHIZOPHRENIA, E.G. SIGNIFICANT AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL-DIRECTED ACTIVITIES (AVOLITION), PROMINENT DURING THE INTERVIEW?	No	Yes		17
L11	ARE 1 OR MORE <<b>> QUESTIONS CODED YES BIZARRE? OR ARE 2 OR MORE <<b>> QUESTIONS CODED YES (RATHER THAN YES BIZARRE)?				
L12	ARE 1 OR MORE <<a>> QUESTIONS CODED YES BIZARRE? OR ARE 2 OR MORE <<a>> QUESTIONS CODED YES (RATHER THAN YES BIZARRE)? CHECK THAT THE TWO SYMPTOMS OCCURRED DURING THE SAME TIME PERIOD. OR IS L11 CODED YES?				

No	yes	
PSYCHOTIC DISORDER CURRENT		
No	yes	18
PSYCHOTIC DISORDER LIFETIME		

L13 A ARE 1 OR MORE <<b>> QUESTIONS FROM L1b TO L7b CODED YES AND IS EITHER:
MAJOR DEPRESSIVE EPISODE (CURRENT)
OR
MANIC EPISODE, (CURRENT OR PAST) CODED YES?

b You told me earlier that you had period(s) when you felt (depressed/high/persistently irritable).
Were the beliefs and experiences you just described (SYMPTOMS CODED YES FROM L1b to L7b) restricted exclusively to times when you were feeling depressed /high/irritable?

No	yes	19

MOOD DISORDER WITH PSYCHOTIC FEATURES
CURRENT

M. ANOREXIA NERVOSA

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

M1	a. How tall are you?	❑ ft	❑	❑In
		❑	❑	❑cm.
	b. What was your lowest weight in the past 3 months?	❑	❑	❑lbs.
		❑	❑	❑kgs.
	c. Is patient's weight lower than the threshold corresponding to his / her height? (see table below)	No	Yes	
	In the past 3 months:			
M2	In spite of this low weight, have you tried not to gain weight?	No	Yes	1
M3	Have you feared gaining weight or becoming fat, even though you were underweight?	No	Yes	2
M4	a. Have you considered yourself fat or that part of your body was too fat?	No	Yes	3
	b. Has your body weight or shape greatly influenced you felt about yourself?	No	Yes	4
	c. Have you thought that your current low body weight was normal or excessive?	No	Yes	5
M5	ARE 1 OR MORE ITEMS FROM M4 CODED YES?	No	Yes	
M6	For women only: during the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant?	No	Yes	6

FOR WOMEN: ARE M5 AND M6 CODED YES?
FOR MEN: IS M5 CODED YES?

No	Yes

ANOREXIA NERVOSA CURRENT

N. BULIMIA NERVOSA

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

N1	In the past three months, did you have eating binges or times when you ate a very large amount of food within a 2-hour period?	No	Yes	7
N2	In the last 3 months, did you have eating binges as often as twice a week?	No	Yes	8
N3	During these binges, did you feel that your eating was out of control?	No	Yes	9
N4	Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications?	No	Yes	10
N5	Does your body weight or shape greatly influence how you feel about yourself?	No	Yes	11
N6	DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA?	No	Yes ↓ Skip to N8	
N7	Do these binges occur only when your are under (_____ lbs./kg.)? INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE.	No	Yes	12
N8	IS N5 CODED YES AND N7 CODED NO OR SKIPPED?			

No Yes
BULIMI NERVOSA
CURRENT

No Yes
ANOREXIA NERVOSA
Binge Eating / Purging Type
CURRENT

IS N7 CODED YES?

O. GENERALIZED ANXIETY DISORDER

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

O1	a. Have you worried excessively or been anxious about several things over the past 6 months	No	Yes	1
	b. Are these worried present most days?	No	Yes	2
	Is the patient's anxiety restricted exclusively to, or better explained by, any disorder prior to this point?	No	Yes	3
O2	Do you find it difficult to control the worries or do they interfere with your ability to focus on what you are doing?	No	Yes	4

O3 FOR THE FOLLOWING, CODE NO IF THE SYMPTOMS ARE CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT.

When you were anxious over the past 6 months, did you, most of the time:

a.	Feel restless, keyed up or on edge?	No	Yes	5
b.	Feel tense?	No	Yes	6
c.	Feel tired, weak or exhausted easily?	No	Yes	7
d.	Have difficulty concentrating or find your mind going blank?	No	Yes	8
e.	Feel irritable?	No	Yes	9
f.	Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively?	No	Yes	10

ARE **3** OR MORE **O3** ANSWERS CODED **YES**?

No	Yes
GENERALIZED ANXIETY DISORDER CURRENT	

P. ANTISOCIAL PERSONALITY DISORDER (optional)

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO)

P1 **Before you were 15 years old, did you:**

a.	repeated skip school or run away from home overnight?	No	Yes	1
b.	repeated lie, cheat, "con" others, or steal?	No	Yes	2
c.	start fights or bully, threaten, or intimate others?	No	Yes	3
d.	deliberately destroy things or start fires?	No	Yes	4
e.	deliberately hurt animals or people?	No	Yes	5
f.	force someone to have sex with you?	No	Yes	6
	Are 2 or more P1 answers coded yes?	No	Yes	

Do not code yes to the behaviors below if they are exclusively politically or religiously motivated.

P2 **Since you were 15 years old, have you:**

a.	repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owned, deliberately being impulsive or deliberately not working to support yourself?	No	Yes	7
b.	done things that are illegal even if you didn't get caught (for example, destroying property, shoplifting, stealing, selling drugs, or committing a felony)?	No	Yes	8
c.	been in physical fights repeatedly (including physical fights with your spouse or children)?	No	Yes	9
d.	often lied or "conned" other people to get money or pleasure, or lied just for fun?	No	Yes	10

	e. exposed others to danger without caring?	No	Yes	11
	f. felt no guilt after hurting, mistreating, lying to, or staling from others, or after damaging property?	No	Yes	12
	ARE **3** OR MORE **P3** QUESTIONS CODED **YES**?	No	Yes ANTISOCIAL PERSONALITY DISORDER LIFETIME	
P8	How old were you when you first began having symptoms of generalized anxiety?	☐age		13
P9	During the past year, for how many months did you have significant symptoms of generalized anxiety?	☐		14

Q. ANTISOCIAL PERSONALITY DISORDER (optional)

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

Q1	**Before you were 15 years old, did you:**			
	a. repeatedly skip school or runaway from home overnight?	No	Yes	1
	b. repeatedly lie, cheat, "con" others, or steal?	No	Yes	2
	c. start fights or bully, threaten, or intimidate others?	No	Yes	3
	d. deliberately destroy things or start fires?	No	Yes	4
	e. deliberately hurt animals or people	No	Yes	5
	f. force someone to have sex with you?	No	Yes	6
	ARE 2 OR MORE Q1 ANSWERS CODED YES?	No	Yes	
	DO NOT CODE YES TO THE BEHAVIORS BELOW IF THEY ARE EXCLUSIVELY POLITICALLY OR RELIGIOUSLY MOTIVATED			
Q2	**Since you were 15 years old, have you:**			
	a. repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owed, deliberately being impulsive or deliberately not working to support yourself?	No	Yes	7
	b. done things that are illegal even if you didn't get caught (for example, destroying property, shoplifting, stealing, selling drugs, or committing a felony)?	No	Yes	8
	c. been in physical fights repeatedly (including physical fights with your spouse or children?	No	Yes	9
	d. often lied or "conned" other people to get money or pleasure, or lied just for fun?	No	Yes	10
	e. exposed others to danger without caring?	No	Yes	11

	f. felt no guilt after hurting, mistreating, lying to, or staling from others, or after damaging property?	No	Yes	12
	ARE **3** OR MORE Q**3** QUESTIONS CODED **YES**?	No	Yes	

ANTISOCIAL PERSONALITY DISORDER LIFETIME

R. SOMATIZATION DISORDER (optional)

(MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

R1	a. Have you had many physical complaints not clearly related to a specific disease beginning before age 30?	No	Yes	1
	b. Did these physical complaints occur over several years?	No	Yes	2
	c. Did these complaints lead you to seek treatment?	No	Yes	3
	d. Did these complaints cause significant problems at school, at work, socially, or in other important areas?	No	Yes	4
R2	Did you have pain in your:	No	Yes	5
	head	No	Yes	6
	abdomen	No	Yes	7
	back	No	Yes	8
	joints, extremities, chest, rectum	No	Yes	9
	during menstruation	No	Yes	10
	sexual intercourse	No	Yes	11
	urination			
	ARE 2 OR MORE R2 ANSWERS CODED YES?	No	Yes	
R3	Did you have any of the following abdominal symptoms:			
	nausea			
	bloating	No	Yes	12
	vomiting	No	Yes	13
	diarrhea	No	Yes	14
	intolerance of several different foods	No	Yes	15
		No	Yes	16
	ARE 2 OR MORE R3 ANSWERS CODED YES?	No	Yes	
R4	Did you have any of the following sexual symptoms:			
	loss of sexual inter	No	Yes	17
	erection or ejaculation problems	No	Yes	18
	irregular menstrual periods	No	Yes	19
	excessive menstrual bleeding	No	Yes	20
	vomiting throughout pregnancy	No	Yes	21
	ARE 2 OR MORE R4 ANSWERS CODED YES?	No	Yes	
R5	Did you have any of the following symptoms:			8
	paralysis or weakness in parts of your body	No	Yes	
	impaired coordination or imbalance	No	Yes	

	difficulty swallowing or lump in throat	No		
	difficulty speaking	No		
	difficulty emptying your bladder	No		
	loss of touch or pain sensation	No		
	double vision or blindness	No		
	deafness, seizures, loss of consciousness	No		
	significant episodes of forgetfulness	No		
	unexplained sensations in your body	No		
	(Clinician: please evaluate if these are somatic hallucinations)			
	g.	No	Yes	9
	h.	No	Yes	10
	i.	No	Yes	11
	j. felt no guilt after hurting, mistreating, lying to, or staling from others, or after damaging property?	No	Yes	12
	ARE **3** OR MORE Q**3** QUESTIONS CODED **YES**?	No	Yes	
R6	Were the symptoms investigated by your physician?	No	Yes	32
R7	Was any medical illness found, or were you using any drug or medication that could explain these symptoms ☐No ☐Yes			33
	R6 AND R7 (SUMMARY): CLINICIAN: HAS AS ORGANIC CAUSE BEEN RULED OUT?	No	Yes	
R8	Were the complaints or eisability out of proportion to the patient's physical illness?	No	Yes	34
	IS R7 (SUMMARY) OR R8 CODED YES?	No	Yes	
R9	Were symptoms a pretense or intentionally produced (as in factitious disorder)?	No	Yes	35
	ISR CODED NO	No Yes SOMATIZATION DISORDER LIFE TIME		
R10	Are you currently suffering from these symptoms	36 No Yes SOMATIZATION DISORDER LIFE TIME		

S. HYPOCHONDRIASIS

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

S1	In the past six months, have you worried a lot would having a serious physical illness? DO NOT CODE YES IF ANY PHYSICAL DISORDER CAN ACCOUNT FOR THE PHYSICAL SENSATIONS OR SINGS THE PATIENT DESCRIBES	No	Yes	1
S2	Have you had this worry for 6 months or more ?	No	Yes	2
S3	Have your ever been examined by a doctor for the symptoms	No	Yes	3
S4	Have you illness fears persisted in spite of the doctor's reassurance?	No	Yes	4
S5	Does this worry cause you significant distress, or does it interfere with your ability to function at work, socially, or inn other important ways?	No	Yes	5
S6	IS S5 CODED YES?	No	Yes	

HYPOCHONDRIASIS CURRENT

T. BODY DYSMORPHIC DISORDER

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

T1	Are you preoccupied with a defect in your appearance?	No	Yes	1
T2	Has this preoccupation persisted in spite of others (including a physician genuinely feeling that you it worry was excessive?	No	Yes	2
T3	Does this preoccupation cause you significant distress, or does it interfere significantly with your ability function at work, socially or in some other important way?	No	Yes	3
T4	IS T3 CODED YES	No	Yes	

BODY DYSMORPHIC DISORDER CURRENT

U. PAIN DISORDER

(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

U1	Currently, is pain your main problem?	No	Yes	1
U2	Currently, is the pain severe enough to need medical attention?	No	Yes	2
U3	Currently is the pain causing you significant distress, or interfering significantly with your ability to function it work, socially or in some other important way?	No	Yes	3

U4	Did psychological actors or stress have an important role in the onset of the pain, or did they make it worse or keep it going?	No	Yes	4
U5	Is the pain a pretence or intentionally produced or feigned /	No	Yes	5
U6	Did a medical condition have an important role in the onset of the pain, or did the medical condition make it worse, or keep it going?	No	Yes	6
U7	Has the pain been present for more than 6 months	No ↓ Acute	Yes ↓ Chronic	7
U8	IS U6 CODED NO?	No	Yes	
		PAIN DISORDER Associated with psychological factors CURRENT		
U9	IS U6 CODED YES? IF U8 OR U9 ARE CODED YES AND U7 = NO, ADD: ACUTE TO DIAGNOSIS TITLE AND U7 = YES. ADD: CHRONIC TO DIAGNOSIS TITLE	No	Yes	
		PAIN DISORDER Associated with psychological factors and general medical condition		

V. CONDUCT DISORDER AGE 17 OR YOUNGER

(MEAN : GO TO THE DIAGNOSTIC CIRCLE NO, AND MOVE TO THE NEXT MODULE)

please involve the family or significant caregiver in eliciting this information

V1	In the past 12 months have you:			
	a. bullied , threatened or intimidated others	No	Yes	1
	b. Started fights	No	Yes	2
	c. used a weapon that could harm someone (for example, knife , gun , bat, broken bottle)	No	Yes	3
	d. Deliberately hurt people	No	Yes	4
	e. deliberately hurt animals	No	Yes	5
	f. stolen things using force (For example, armed robbery, mugging , purse snatching, extortion	No	Yes	6
	g. forced anyone to have sex with you	No	Yes	7
	h. deliberately started fires to damage property	No	Yes	8
	i. deliberately destroyed things belonging to others	No	Yes	9
	j. broken into someone's house or car	No	Yes	10
	k. lied repeatedly to get things or "conned " (triked0 other people	No	Yes	11
	l. Stolen things	No	Yes	12

	m. Stayed out late at night in spite of you parents forbidding, you starting before age 13 years	No	Yes	13
	n. run away from home at least twice	No	Yes	14
	o. often skipped school, starting before age 13 years	No	Yes	15
	Are 3 or more V1 answers coded yes with at least one coded yes in the past 6 months	No	Yes	
V2	Did these behaviours cause significant problems at school, at work, or with friends and family?	No	Yes	16

IS V2 CODED YES /

No	Yes
CONDUCT DISRODER CURRENT	

Subtypes

With ADHD ☐

With history of physical or sexual abuse ☐

With history of traumatic divorce ☐

With history of adoption ☐

With other stresses ☐

W. ATTENTION DEFICIT/ HYPERACTIVITY DISORDER

(CHILDREN /ADOLESCENTS)

(MEANS ; GO TO T IS DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

Please involve the family or significant caregiver in eliciting this information)

W1	a. Failed to pay attention to details when playing or doing some work?	No	Yes	1
	b. Had difficultly paying attention when playing or doing some work?	No	Yes	2
	c. Seemed not to listen when spoken to directly	No	Yes	3
	d. Not followed instruction, or failed to finish school work or chores (even though you understood the instruction and weren't trying to be difficult?	No	Yes	4
	e. Had difficulty getting organized	No	Yes	5
	f. Avoided or disliked things that require a lot of thinking (like school work or homework)?	No	Yes	6
	g. Lost things you needed?	No	Yes	7
	h. Become easily distracted by little things ?	No	Yes	8
	i. Become forgetful in your day to day activities?	No	Yes	9
	W1 (summary : are 6or more W1 answers coded yes?	No	Yes	
	Int: Past 6 months have you often :			
W2	a. Squmend in your seat or fidgeted with your hands or	No	Yes	10

	feet			
	b. Left your seat in class when you were not supposed to ?	No	Yes	11
	c. Run around and climbed a lot when you shouldn't or others didn't want you to?	No	Yes	12
	d. Had difficulty playing quietly	No	Yes	13
	e. felt like you were "driven by a motor" or were always "on the go?	No	Yes	14
	f. Talks too much?	No	Yes	15
	g. Blurted out an answer before the question was completed ?	No	Yes	16
	h. Had difficulty waiting your turn?	No	Yes	17
	i. Interpreted or intruded on others?	No	Yes	18
	W2 (SUMMARY): ARE 6 OR MORE W2 ANSWERS CODED YES?	No	Yes	
W3	Did you have some of these hyperactive or inattentive symptoms before you were 7 years old?	No	Yes	19
W4	Have some of these symptoms caused significant problems in tow or more of the following situations at school at work, at home, or with family or friends? IS W4; CODEDYES?	No	Yes	20

No	Yes
CONDUCT DISRODER CURRENT	

Attention deficit / hyperactivity disorder (Adult)

(MENUS: GO TO THE DIAGNOSTIC BOX, AND MOVE TO THE NEXT MODULE)

As a child

W5	a. Were you active, fidgety, restless, always on the go?	No	Yes	21
	b. were you inattentive and easily distractible	No	Yes	22
	c. Were unable to concentrate at school or while doing your homework?	No	Yes	23
	d. Did you fail to finish things, such as school work, projects, etc? d.	No	Yes	24
	e. Were you short tempered , irritable , or did you have a "short fuse", or tend to explode.	No	Yes	25
	f. Did things have to be repeated to you many times before you did them?	No	Yes	26
	g. Did you tend to be impulsive without thinking of the consequences?	No	Yes	27
	h. Did you have difficulty waiting for your turn, frequently needing to be first.	No	Yes	28
	i. Did you get into fights and/ or brother other behavior?	No	Yes	29
	j. Did you school complain about your behaviour	No	Yes	30
	W5 (Summary) are 6 or more answers coded yes?	No	Yes	
	Did you have some of these hyperactive - impulsive or inattentive symptoms before you were 7 years old?	No	Yes	31

As an adult :			
a. Are you still distractible ?	No	Yes	32
b. Are you intrusive, even if you have better control than when you were a child?	No	Yes	33
c. Are you impulsive ? For example , do you tend to spend more money than you really should?	No	Yes	34
d. Are you still fidgety, restless, always on the go, even if you have better control than when you were a child.	No	Yes	35
f. Are you still irritable and get angier than you need to?	No	Yes	36
f. Are you still impulsive ? For example, do you tend to spend more money than you really should?	No	Yes	37
g. Do you have difficulty getting work organized	No	Yes	38
h. Do you have difficulty getting organized even outside of work?	No	Yes	39
i. Are you under – employed or do you work below your capacity?	No	Yes	40
j. Are you not achieving according to people's expectations of your ability?	No	Yes	41
h. Have you changed jobs or have been asked to leave jobs more frequently than other people?	No	Yes	42
k. Does your spouse complain about your inattentiveness or lack of in him/her and/ or the family?	No	Yes	43
l. Have you sometimes feel like you are in a snowy television or our of focus?	No	Yes	44
W7 (SUMMARY): ARE 9 OR MORE W7 ANSWERS CODED YES?	No	Yes	45
Have some of these symptoms caused significant problems in tow or more of the following situations: at school, at work, at home, or with family or friends?	No	Yes	46
IS W8 CODED YES?	No	Yes	

Adult attention deficit/ Hyperactivity disorder

X. ADJUSTMENT DISORDERS

(MEANS" GO TO THE DIAGNOSTIC BOX, CIRCLE, NO, AND MOVE TO THE NEXT MODULE)

EVEN IF STRESS IS PRECIPITATED THE PATIENT'S DISORDER, DO NOT USE AN ADJUSTMENT DISORDER

DIAGNOSIS IF ANY OTHER PSYCHIATRIC DISORDER IS PRESENT, SKIP THE ADJUSTMENT DISORDERS SECTION IF THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOTHER SPECIFIC AXIS DISORDER OR ARE MERELY AN EXACERBATION OF A PREEXISTING AXIS I II DISORDERS.

ONLY AS THESE QUESTIONS IF PATIENT CODES NO TO ALL OTHER DISORDERS

ARE THE FOLLOWING EMOTIONAL / BEHAVIORAL SYMPTOMS PRESENT?

X1	Are you having emotional or behavioral symptoms as a result of a life of stress? [Examples include anxiety/depression/misbehavior/physical complaints (examples of misbehavior include fighting, driving recklessly, skipping school, vandalism, violating the rights of others, or doing illegal things)].	No	Yes	1
X2	Did these emotional/behavioral symptoms start within 3 months of the onset of the stressor?	No	Yes	2
X3	a. Are these emotional/behavioral symptoms causing marked distress beyond what would be expected?	No	Yes	3
	b. Are these emotional/behavioral symptoms causing significant impairment in your ability to function socially, at work, or at school?	No	Yes	4
X4	Are these emotional/behavioral symptoms due entirely to the loss of a loved one (bereavement) and are they similar in severity, level of impairment and duration to what most others would suffer under similar circumstances? (If so this is uncomplicated bereavement.)			
	HAS UNCOMPLICATED BEREAVEMENT BEEN RULED OUT?	No	Yes	5
X5	Have these emotional /behavioral symptoms continued for more than 6 months after the stress stopped?	No	Yes	6

Qualifiers	Mark all that apply
A. Depression , tearfulness of hopelessness	□
B. Anxiety nervousness, jitteriness, worry	□
C. Misbehaviour(for example , fighting, driving recklessly, skipping school, vandalism, violating other's rights, doing illegal things).	□
D. work problems, school problems, physical complaints or social withdrawal .	□

IF MARKED:

- A only , then code as Adjustment disorder with depressed mood. 309.0
- B only, then code as adjustment disorder with anxious mood. 309.24
- C only, then code as Adjustment disorder of conduct. 309.3
- A and B only, then code as Adjustment disorder with mixed anxiety and depressed mood. 309.28
- C and (A or B) , then code as Adjustment disorder of emotions and conduct. 309.4
- D only, then code as Adjustment Disorder unspecified. 309.9.

IF X5 IS CODED NO, THEN CODE DISORDER YES WITH QUALIFIER

No	Yes
	Adjustment Disorder with _____(see above for qualifiers)

Y. PREMENSTRUAL DYSPHORIC DISORDER

(MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

Y1	During the past year, were most of your menstrual periods preceded by a period lasting about one week when your mood changed significantly?	No	Yes	1
Y2	During, these periods, do you have difficulty in your usual activities or relationships with others, are you less efficient at work, or do you avoid other people?	No	Yes	2
Y3	During these premenstrual episodes (but not at in the week after your period ends) do you have the following problems most of the time:			
	a. Do you feel sad, low depressed, hopeless, or self – critical?	No	Yes	3
	b. Do you feel particularly anxious, tense, keyed up or on edge?	No	Yes	4
	c. Do you often feel suddenly sad or tearful, or are you particularly sensitive to other's comments?	No	Yes	5
	d. Do you feel irritable, angry or argumentative?	No	Yes	6
	ARE I OR MORE Y3 ANSWERS CODED YES?	No	Yes	7
	e. Are you less interested in your usual activities, such as work, hobbies or meeting with friends?	No	Yes	8
	f. Do you have difficulty concentrating?	No	Yes	9
	g. Do you feel exhausted, tire easily, or lack energy?	No	Yes	10
	h. Does your appetite change, or do you overeat or have specific food cravings?	No	Yes	11
	i. Do you have difficulty sleeping or do you sleep excessively?	No	Yes	12
	j. Do you feel you are overwhelmed or out of control?	No	Yes	13
	k. Do you have physical symptoms such as breast tenderness or swelling, headaches, joint or muscle pain, a sensation or bloating, or weight gain?	No	Yes	14
	Are or more Y3 answers coded yes?			
	IF YES, DIAGNOSIS MUST BE CONFIRMED BY PROSPECTIVE DAILY RATINGS DURING AT LEAST 2 CONSECUTIVE CYCLES.			

No	Yes
Premenstrual Dysphoric Disorder probable CURRENT	

Z. MIXED ANXIETY – DEPRESSIVE DISORDER

DO NOT USE THIS MODULE ALONE WITHOUT FIRST COMPLETING ALL THE ANXIETY AND MOOD DISORDERS.

(MEANS: GO TO THE DIAGNOSTIC BOX AND CIRCLE NO.

(SKIP THIS DISORDER IF PATIENT'S SYMPTOMS HAVE ALREADY MET CRITERIA FOR ANY OTHER DISORDER AND CODE NO IN THE DIAGNOSTIC BOX.)

Z1	Have you been depressed or down consistently for at least a month?	No	Yes	1
Z2	When you felt depressed did you have any of the following symptoms for at least one month:			
	a. Did you have difficulty concentrating for find you mind going blank?	No	Yes	2
	b. Did you have trouble sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening, or sleeping excessively)?	No	Yes	3
	c. Did you feel tired or low in energy?	No	Yes	4
	d. Did you feel irritable?	No	Yes	5
	e. Did you worry too persistently for at least a month?	No	Yes	6
	f. Did you cry easily?	No	Yes	7
	g. were you always on the lookout for possible dangers/	No	Yes	8
	h. Did you fear the worst?	No	Yes	9
	i. Did you feel hopeless about the future?	No	Yes	10
	j. Was your self – confidence low, or did you feel worthless?	No	Yes	11
	Summary of Z2: Are 4 or more Z2 answers coded yes?	No	Yes	
Z3	Do these symptoms cause for significant distress or impair your ability to function at work, socially, or in some other important way?	No	Yes	12

SOCIO – ECONOMIC STATUS SCALE

(S.C. Gupta & B.P. Sethi, 1978)

Scoring Manual

Sl. No.	Educational Categories	Score
1	Upto 5th class	20
2	Less than High school	40
3	High school	60
4	Intermediate	80
5	Graduation (excluding professional subjects*) or technical diploma	100
6	Post-graduation excluding professional subjects	120
7	Post graduate diploma in non-professional subjects; BE, B.Tech., B. Arch., MBBS, BMBS, BIMS, MDH, BDS LLB	140
8	Post graduate diploma or degree in professional subjects, Ph.D.	160
9	D.Lit, DSc or Equivalent; award of membership or fellowship from professional institutions of International recognition	180
10	National or international award for the academic or scientific achievements	200

* Engineering, Medicine and Law

Sl. No.	Income (Rs.)	Score
1	Upto 250	20
2	251 – 500	40
3	501 – 750	60
4	751 – 1000	80
5	1001 – 1500	100
6	1501 – 2500	120
7	2501 – 5000	140
8	5001 – 10,000	160
9	10,000 – 15,000	180
10	Above 15,000	200

Sl. No.	Occupational Groups	Score
	1. Skilled and Semi – skilled	
1.1	Semi – skilled or unskilled workers (e.g., barber unskilled labour)	40
1.2	Skilled workers (drivers, painters, mechanics, printers, watch repairers)	60
1.3	Skilled workers of higher rank or having special training	80
	2. Office work and Equivalent	
2.1	Peon, Chowkidar, Constable or equivalent	40
2.2	Junior grade office assistant, dispatcher, head constable or equivalent	60
2.3	Senior grade office assistant, sub inspector or lower grade inspectors, (e.g., sanitary inspector, supervisors in private or public organization)	80
	3. Teaching Job	
3.1	Teachers of primary and junior High school	60
3.2	Teachers of High School or Intermediate (excluding Principal of Intermediate College)	80
3.3	Lecturers and readers in the University or equivalent; principle of intermediate College	100
3.4	University Professors and principals of degree or post-graduate college	120
3.5	Eminent professors having national or international recognition	160
	4. Business	
4.1	Petty business and small shop-keepers	60
4.2	Middle class businessman	80
4.3	Businessman or industrialist of upper strata	100
4.4	Eminent businessman in the town or city	120
4.5	Eminent industrialist in the state or country	160
	5. Professional jobs (medicine, law and engineering)	
5.1	Individuals in the profession of medicine. Law or technology having no recognized training	60
5.2	Qualified professional having no specialization	80
5.3	Specialist in the professional jobs	100
5.4	Senior Grade specialist	120
5.5	Eminent professionalists in the field	160
	6. Semi – Professional	
6.1	Junior grade technical or scientific assistants, lower grade semiprofessionals (pharmacists and nursing staff)	60
6.2	Senior grade technical or scientific assistants and the semi-professionals of average grade (psychologists, statisticians, social workers, surveyors, etc)	80
6.3	Scientist employed as Class I and Class II in the central Govt. or equivalent employees in either organizations, assistant or joint director or vice-principal in the technical institutions	100
6.4	Directors and Principals in technical institutions	120
6.5	Directors of highly prestigious technical institutions and/or scientist of international recognition	160

	7. Artist and Literary men	
7.1	Low grade artists, actors, writers, religious pandits, palmists and similar others having little expertise	60
7.2	Individuals of above category having considerable expertise	80
7.3	Experts of above categories having high social image	100
7.4	Most eminent writers, poets, magicians, religious figures, artists and actors	120
	8. Agriculture	
	(This category was included because some urban residents may have agriculture or orchard as their main source of livelihood)	
8.1	Small size holding of agriculture or orchard which can hardly meet the basic needs of a family	60
8.2	Medium size holding or agriculture or orchard sufficient for average middle class family in an urban setup	80
8.3	Large size holding of the above mature which can comfortable meet the requirements of an upper middle class family	100
8.4	Agriculturist or fruit grower of very large size holding	120
	9. Administrative Service	
9.1	Office Superintendent, Section Officers, Inspectors (e.g., Police, Sales Tax, Income Tax, etc.) Junior PCs, Officers including Tahsildar and equivalent	100
9.2	IAS and equivalent services (e.g., IPS, IFS, ISS or Senior PSC)	120
9.3	Senior IAS and equivalent; Vice-Chancellor, Director – General, Heads of prestigious institutions	140
9.4		160
9.5		180
9.6		200
	10. Judicial Service	
10.1	Munsif, Honorary magistrate or equivalent	100
10.2	District and senior judge	120
10.3	Judges of high	140
10.4		160
10.5		180
10.6		200
	11. Political Leaders	
11.1	Leaders of district level (block Pramukh, Corporation or Equivalent)	100
11.2	M.P. M.L.A., M.L.C. District Chairman and City Major	120
11.3	Major of Metropolitan City, State Ministers and Union deputy ministers and other political headers of equivalent level	140
11.4		160
11.5		180
11.6		200

Social Status Categories

On the basis of sum scores of the three variables, an individual's status can be ascertained from the following table-

Status Category	Total Score	Major Social Class	Its description
1	476 and above	Very High	Individuals of most prestigious social position, mainly consisting of top-most businessmen, politicians, administrators, scientists, professional men or highly distinguished persons in the other fields.
2	426 – 475	Very High	Same as above
3	376 – 425	Upper Middle	Individuals of above categories having obviously higher social position but not belonging to the top most category in their specialities. This standard of living is definitely of a superior class and as such they would constitute only a small percentage of our urban society.
4	326 – 375	Upper Middle	Same as above
5	276 – 325	Middle Class	Although inferior to the upper middle class. Their individual scores on the 3 variable are likely to be in the range of 80 to 100.
6	226 – 275	Middle Class	Same as above
7	176 – 225	Lower Middle	Majority of urban subjects are likely to belong to this category. Their substandard of living makes their existence on urban society a marginal one. Their individual scores on the 3 variable usually range between 60 to 80.
8	126 – 175	Lower Middle	Same as above
9	76 – 125	Very Low	These individuals are characterizes with lower standards of living. Their educational occupational as well as financial position is almost at the lowest level and as such they belong to the most disadvantageous class having very little to survive.
10	Upto 75	Very Low	Same as above.