

**“HOSPITAL BASED PROSPECTIVE STUDY TO COMPARE
VALIDITY AND RELIABILITY OF UNIDIMENSIONAL
AND MULTIDIMENSIONAL SCALES TO ASSESS
PRURITUS INTENSITY”**

Submitted by

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**DISSERTATION SUBMITTED TO THE BLDE UNIVERSITY,
BIJAPUR, KARNATAKA.**



In partial fulfillment of the requirements for the degree of

M. D

in

DERMATOLOGY, VENEREOLOGY AND LEPROSY

Under the guidance of

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ACKNOWLEDGEMENT

With proud privilege and deep sense of respect I would like to express my gratitude and indebtedness to my guide and esteemed teacher **Dr.Aparna Palit** M.D., Professor, Department of Dermatology, Venereology and Leprosy, BLDE UNIVERSITY's Shri B. M. Patil Medical College, for the constant encouragement and support, which she rendered in preparing this dissertation and in pursuit of my post graduate studies.

I am extremely grateful to my eminent and esteemed teacher **Dr.Arun C. Inamadar** M.D., D.V.D., Professor and Head, Department of Dermatology, Venereology and Leprosy, BLDE UNIVERSITY's Shri B. M.Patil Medical College, for his overall guidance and inspiration during my study.

I am grateful to **Dr. M. S. Biradar** M.D. Principal of B.L.D.E.U'S Shri. B. M. Patil Medical College Hospital and Research Centre, Bijapur, for permitting me to utilize hospital resources for completion of my work.

I am forever grateful to my teachers **Dr.Keshavmurthy Adya** Assistant Professor, **Dr.Vishalakshi Pandit** Assistant Professor, **Dr.Ajit Janagond** Assistant Professor, **Dr.Niranjan. S. Deshmukh** Senior Registrar, for their valuable help and guidance during my study.

I am thankful to my seniors, **Dr. Swaroopa, Dr. Puja,** and **Dr. Shashikant M** for their suggestions and advice and my juniors, **Dr. Sneha, Dr. Ajay,** and **Dr. Joe** for their co-operation and encouragement.

I express my thanks to the library staff and all hospital staff for their kind cooperation in my study.

I would like to express my thanks to **Mrs. Vijaya Sorgavi** and **Mr. Mohd Shannawaz** statisticians, Department of Community Medicine, for their help in statistical analysis and my cousin **Mr. Manish Patil** for his help in editing the photos.

I am deeply thankful to my parents, **Mr. Sangaraj B Desai** and **Mrs. Shaila S Desai**, my aunt, **Dr. Thilotamma Naidu**, my uncle **Mr. Prasad Naidu** and other family members for their constant encouragement, support and blessings.

Last but not the least, I convey my heartfelt gratitude to all the patients, without whose co-operation, this study would not have been possible.

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LIST OF ABBREVIATIONS

AEP	-	Atopic eruption of pregnancy
HIV	-	Human immunodeficiency virus
ICP	-	Intrahepatic cholestasis of pregnancy
IFSI	-	International Forum for the Study of Itch
ISS	-	Itch severity scale
NRS	-	Numerical rating scale
PUPPP	-	Papular-urticarial papules and plaques of pregnancy
VAS	-	Visual analogue scale
VRS	-	Verbal rating scale

ABSTRACT

Background

Pruritus is the most commonly described symptom in patients with dermatological disorders. Chronic pruritus significantly reduces the quality of life and may lead to severe disability. Pruritus is a subjective symptom with multiple dimensions that cannot be measured objectively. Various scales have been described to evaluate pruritus, but these need to be evaluated.

Objectives

To compare validity and reliability of unidimensional and multidimensional scales to assess pruritus intensity.

Method

It was a hospital-based, prospective study. Three hundred and seventy three patients with generalized pruritus attending the Dermatology, Venereology and Leprosy out-patient department of a tertiary care hospital were included in this study. Detailed history was taken, cutaneous and systemic examination was done. Investigations were done whenever necessary.

Patients were assessed through the following scales:

- **Unidimensional scales-** Visual analogue scale (VAS), Verbal rating scale (VRS), Numerical rating scale (NRS).
- **Multidimensional scales-** 5-D pruritus scale, Itch severity scale (ISS).

Patients were assessed thrice; twice on first visit at interval of 1-3 hours, and thereafter 6 weeks later.

Data were calculated with mean (\pm SD) and Pearson's correlation coefficient. Intra-class correlation coefficient was calculated for measuring validity and reliability of various scales.

Results

Three hundred and thirty nine patients repeated questionnaires 1-3 hours later and 139 completed 6 weeks later. Male to female ratio was 1.34:1. Mean (\pm SD) age of the patients was 48 (\pm 13.8) years. Among cutaneous causes of pruritus, majority presented with chronic urticaria (21.17%) and scabies (17.42%). In systemic causes, anemia induced pruritus (6.97%) and drug induced pruritus (4.28%) were common. Among unidimensional scales, correlation of VAS with NRS showed higher correlation coefficients at each visit. In multidimensional scales, correlation of 5D and ISS showed statistically significant high values. NRS and ISS have high reproducibility under unidimensional and multidimensional scales respectively. The standard deviation of VRS and ISS was least, so these are the most reliable scales as derived from the results of this study.

Conclusion

High validity and reliability in pruritus intensity assessment was shown by all the scales. It is recommended to use more than one scale and a combination of different scales to evaluate pruritus intensity for better assessment.

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INTRODUCTION

Pruritus is the most commonly described symptom in patients with dermatological disorders.¹ Pruritus is the Latin word for itch. Pruritus (itching) can be defined subjectively as a poorly localized, non-adapting, usually unpleasant sensation which elicits an immediate desire to scratch.²

Pruritus is intended to avoid the pruritogenic stimulus, thereby serving a protective function.³ Chronic pruritus has a prevalence of approximately 17% in adults.⁴ Although, the diseases are confined to skin, these have an impact on the psychosocial status of the patient, social interactions and daily activities.⁵ Chronic pruritus significantly reduces the quality of life and may lead to severe disability.⁶

Pruritus is a subjective symptom that cannot be measured objectively.⁴ It is multidimensional, encompassing sensory, discriminative, cognitive, evaluative and motivational components.⁷ Because of broad inter-individual variation, the act of scratching cannot be considered as an indicator for pruritus severity.⁴ The measurement of severity as a reflection of subjective factors, along with itch intensity, may provide a more accurate representation of the pruritus.¹ There are several methods to evaluate pruritus, but none can be considered as standard.⁸ The unidimensional scales to assess pruritus severity include Visual analogue scale (VAS), Verbal rating scale (VRS), and Numerical rating scale (NRS); 5-D pruritus scale and Itch severity scale (ISS) are multidimensional.^{1,4,6}

Generalized pruritus is a primary symptom of many dermatological diseases including atopic dermatitis, scabies, senile xerosis, and urticaria.³ It is a common feature of several systemic diseases like chronic renal failure, hepatobiliary diseases, iron deficiency anemia, HIV infection, hypothyroidism, hyperthyroidism, diabetes mellitus, psychosomatic diseases and drug reactions.¹

The studies available in English literature on validation of pruritus intensity scales have been conducted in Western countries. There is no Indian study validating the efficacy of the pruritus scales. According to the previous studies both unidimensional and multidimensional scales are sensitive in measuring pruritus intensity, however multidimensional scales give a better insight of its impact on the quality of life of the patient.

The present study is undertaken to compare the utility (validity and reliability) of available pruritus scales in Indian patients. This may help the clinicians to quantify and to assess the course of pruritus intensity in various diseases. As the scales take into account the relative impact of pruritus on quality of life, the physicians are expected to be better equipped to treat the patients during the chronic course of the disease.

OBJECTIVES OF STUDY

1. To compare validity and reliability of unidimensional scales to assess pruritus intensity.
2. To compare validity and reliability of multidimensional scales to assess pruritus intensity.
3. To compare validity and reliability between unidimensional and multidimensional scales to assess pruritus intensity.

REVIEW OF LITERATURE

Itch is one of the commonest sensations experienced by human beings. It is a symptom that essentially manifests itself in the skin and/or mucous membranes and may range from mild to intense, localized to generalized and intermittent to persistent.¹⁰

Von Hafenreffer (1660) described pruritus as an “unpleasant sensation that triggers a desire to scratch”, a definition that is considered valid till today.¹¹ Chronic pruritus is a common symptom seen in various diseases, and until 1990s it had drawn minimal attention to evoke scientific research. However, significant advancements have been made, especially in the past decade, in understanding pruritus.¹¹

Pathogenesis of itch:

Itch had been considered for decades as a weak pain, a sensation induced when weak signals are transmitted on neurons transmitting pain, until the neurons for histamine-induced itch were found by microneurographical studies.⁹

The mechanism of itch appears to be regulated by a complex interplay of various factors and may differ depending on the pathophysiological changes in the skin.¹² Itchy skin diseases like atopic dermatitis, chronic urticaria, psoriasis and allergic contact dermatitis are associated with increased production and release of cytokines, neurotrophins and neuropeptides possibly leading to the exacerbation of itch.¹² Thus, infiltrating and tissue resident cells are responsible for the induction or exacerbation of itch.¹² The role of cells implicated in pruritus are listed in table 1 and specific mediators of pruritus are listed in table 2. The neuronal pathway for pruritus has been explained in flowchart 1.

Table 1: Role of immune cells in pruritus¹²

Keratinocytes	<ul style="list-style-type: none"> • Part of innate defense system- release inflammatory and pruritogenic substances. • Detect itch-associated signals by expression of protease-activated receptor (PAR)-2, opioid, cannabinoid and histamine H4 receptors. • Also inhibit itch through release of endocannabinoids, which bind directly to inhibitory receptors on sensory nerves.
Mast cells	<ul style="list-style-type: none"> • Tissue resident cells, found in close vicinity to hair follicles, keratinocytes, blood vessels and sensory nerves. • Best-known mast cell mediator – histamine, induces itch via H1 receptors. • Other mast cell-derived substances - proteases, lipid mediators, neuropeptides and various cytokines. • Mast cell activators- neurotrophins such as neurotrophin (NT)-3, neuropeptides including vasoactive intestinal peptide (VIP), calcitonin gene-related peptide (CGRP), substance P (SP) and endothelin-1.
Eosinophils	<ul style="list-style-type: none"> • Tissue resident cells that do not re-enter the circulation. • Express nerve growth factor (NGF), NT-3, and brain-derived neurotrophic factor (BDNF). • Respond to various triggers via production of neurotrophins, neuropeptides.

Flowchart 1: Pathway for itch^{13,14,15}

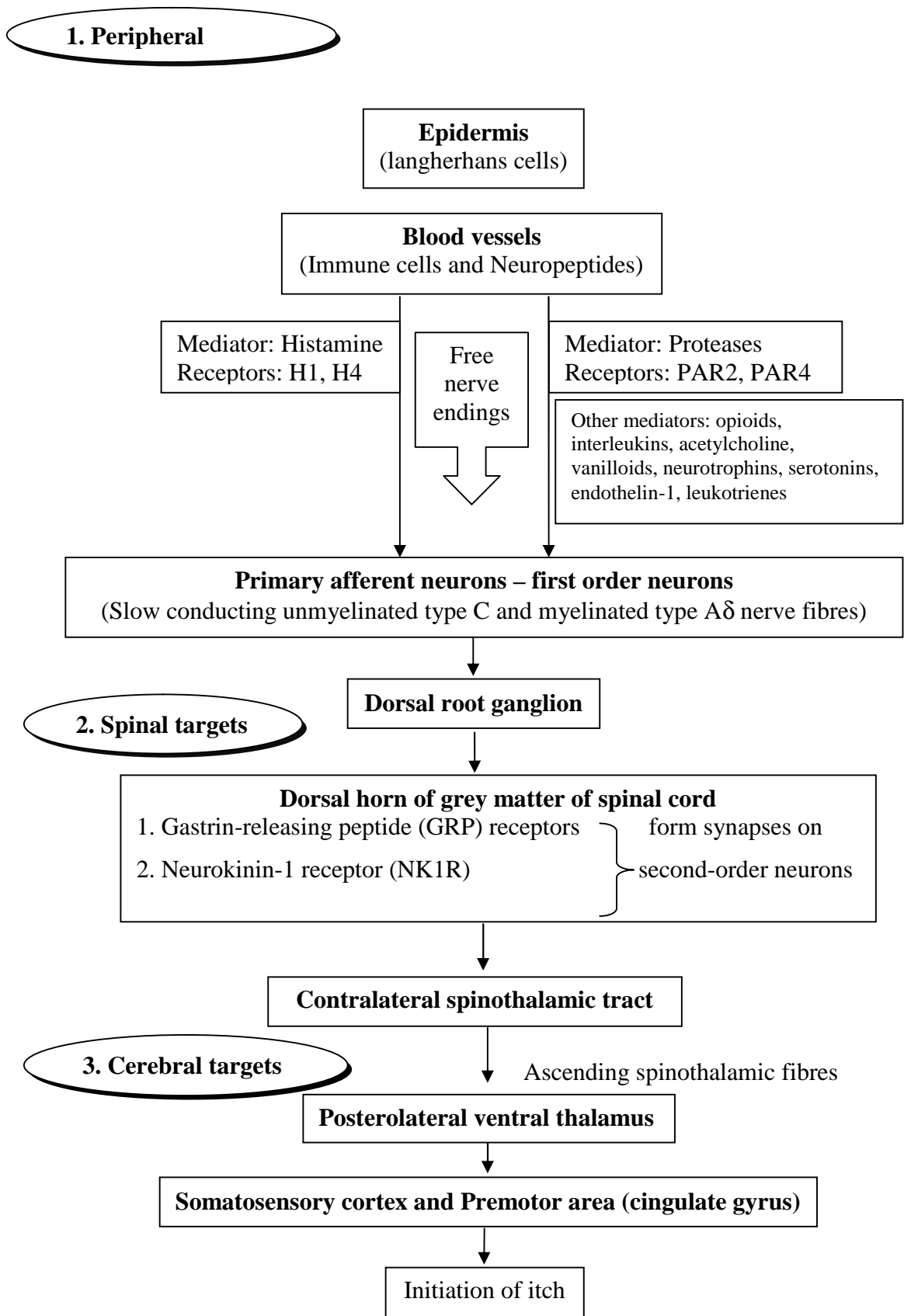


Table 2: Mediators of pruritus^{9,11,13}

Mediator	Receptor	Source	Target cell/function
Histamine	H ₁ and H ₄	Mast cells (MCs)	Direct binding to nociceptors, neurogenic inflammation
Neurotransmitters: Acetylcholine	Nicotinic and muscarinic acetylcholine receptors	Autonomic cholinergic nerves, keratinocytes	Mediates itch in atopic dermatitis patients
Neuropeptides: SP CGRP VIP	Tachykinin Receptor CGRP receptors Adenylate cyclase activating peptide receptors	Sensory nerve fibers Sensory nerve fibers Sensory nerve fibers, Merkel cells	Low concentrations: priming of MCs; release of TNF- α , histamine, leukotriene B ₄ , prostaglandin D ₂ from MCs. MC activation Histamine release from MCs
Neurotrophins: e.g., NGF, NT-4, BDNF	Specific receptors trk A: NGF; trk B: NT-4, BDNF; trk C: NT-3	NGF: MCs, keratinocytes, fibroblasts, eosinophils. BDNF: eosinophils	MC activation and proliferation of sensory nerves
Opioids	μ -, κ -, δ -, opioid receptors	Nerves, keratinocytes	Antipruritic effect of μ -opioid antagonists (central effect) and κ -opioid agonists (spinal cord level)
Endocannabinoids	CB receptors	Nerves, keratinocytes	Antipruritic in the periphery
Cytokines: e.g., IL-2, IL-31	IL-2 and IL-31 receptor	Sensory nerve endings	Direct neuroreceptor activation
Kallikreins, Proteases	PARs, tryptic Enzymes	Keratinocytes, endothelial cells, MCs, platelets	Chymase degrades pruritic and antipruritic peptides; tryptase induces inflammation and itch by a neurogenic mechanism
Leukotriene	LTB ₄	Sensory nerve endings	Direct induction of pruritus

(MC-mast cell, SP- substance P, VIP- vasoactive intestinal peptide, CGRP- calcitonin gene-related peptide, NGT-nerve growth factor, NT-neurotrophin, BDNF-brain-derived neurotrophic factor, IL-interleukins, LT- leukotriene, trk- tyrosine kinase, PAR- protease-activated receptor, TNF-tumor necrosis factor, CB-cannabinoid)

Classification of pruritus:

As pruritus occurs in various diseases of different etiologies, different classification systems have come into existence. There is no internationally accepted clinical classification of itch.

Classification systems that are currently used are mentioned in table 3.

Table 3: Classification of chronic pruritus¹¹

Neuroanatomical classification (Twycross et al. 2003) Classification based on possible origin of pruritus	<ol style="list-style-type: none"> 1. Pruritoceptive: pruritus arising in the skin 2. Neuropathic: pruritus resulting from peripheral nerve damage 3. Neurogenic: mediators produce pruritus in the CNS without nerve damage 4. Psychogenic
Differential diagnostic classification (Bernhard 2005) Groups potential underlying diseases	<ol style="list-style-type: none"> 1. Dermatologic diseases 2. Systemic diseases 3. Neurologic diseases 4. Psychosomatic/psychogenic diseases 5. Mixed 6. Other (unknown cause)
Clinical classification (Ständer et al. 2006) Classification by clinical skin condition	<ol style="list-style-type: none"> 1. Pruritus on primarily diseased, inflamed skin 2. Pruritus on primarily normal, noninflamed skin 3. Pruritus with chronic secondary scratch lesions
IFSI classification (Ständer et al. 2007) Combines clinical and differential diagnostic classification schemes	<ol style="list-style-type: none"> 1. Pruritus on diseased skin -- Dermatologic diseases 2. Pruritus on non-diseased skin -- Systemic, neurologic and psychosomatic/psychogenic diseases. 3. Chronic scratch lesions -- Dermatologic, systemic, neurologic and psychosomatic/psychogenic diseases.
Pruritus can be distinguished as acute or chronic, with the latter defined as pruritus lasting 6 or more weeks according to recommendations by the International Forum for the Study of Itch (IFSI)-2007.	

(IFSI- International Forum for the Study of Itch)

Dermatological diseases and systemic diseases with chronic pruritus are listed in table 4 and table 5 respectively.

Table 4: Dermatological causes of chronic pruritus¹⁶

<p>1. Inflammatory dermatoses</p>	<p>a. Atopic dermatitis, b. Psoriasis, c. Contact dermatitis, d. Xerosis, e. Drug reactions, f. “Invisible dermatoses”.</p>
<p>2. Infectious dermatoses</p>	<p>a. Mycotic, bacterial and viral infections, b. Scabies, pediculosis, c. Arthropod bite reactions.</p>
<p>3. Autoimmune dermatoses</p>	<p>a. Bullous dermatoses (dermatitis herpetiformis, bullous pemphigoid), b. Dermatomyositis.</p>
<p>4. Genodermatoses</p>	<p>a. Darier’s disease, b. Hailey-hailey disease, c. Ichthyoses, d. Epidermolysis bullosa pruriginosa.</p>

Table 5: Systemic diseases with chronic pruritus¹⁶

1. Endocrine and metabolic diseases	<ul style="list-style-type: none"> a. Chronic renal failure, b. Liver diseases with or without cholestasis, c. Hyperthyroidism, d. Perimenopausal pruritus 	
2. Infectious diseases and infestations	<ul style="list-style-type: none"> a. HIV-infection, b. Intestinal helminthic infestation. 	
3. Hematological	<ul style="list-style-type: none"> a. Iron deficiency, b. Polycythemia vera 	
4. Lymphoproliferative diseases	<ul style="list-style-type: none"> a. Hodgkin's disease, b. Non-Hodgkin's lymphoma, c. Plasmacytoma 	
5. Visceral neoplasms	Solid tumours of the cervix, prostate, or colon, carcinoid syndrome	
6. Pregnancy	<ul style="list-style-type: none"> a. Pruritic urticarial papules and plaques of pregnancy, b. Intrahepatic cholestasis of pregnancy, c. Pemphigoid gestationis, and d. Atopic eruption of pregnancy. 	
7. Drug-induced pruritus	Opioids, ACE-inhibitors, amiodarone, simvastatin, hydrochlorothiazide, hydroxyethyl starch, allopurinol	
8. Neurogenic origin (without neuronal damage)	Hepatic itch with increased endogenous α -opioids	
9. Neuropathic diseases (neuronal damage causes itch)	<ul style="list-style-type: none"> a. Multiple sclerosis, b. Cerebral or spinal infarcts, c. Brachioradial pruritus, 	<ul style="list-style-type: none"> d. Nostalgia paresthetica, e. Post-herpetic neuralgia, f. Vulvodynia,
10. Somatoform pruritus	<ul style="list-style-type: none"> a. Psychiatric/psychosomatic diseases, b. Obsessive-compulsive disorders, 	<ul style="list-style-type: none"> c. Depression, d. Schizophrenia, e. Tactile hallucinations. f. Anxiety disorders,

In the following section, pathogenesis of pruritus in various cutaneous and systemic diseases will be highlighted.

Pruritus in atopic dermatitis (AD):

Pruritus is a predominant feature of AD.¹⁷ There are various stimuli to induce pruritus in patients with AD, namely; exposure to allergens, changes in humidity, stimuli that induce sweating, contact with synthetic fibres, especially wool, and even low concentration of irritants.^{17,18} Though it is presumed that mast cell degranulation via IgE-mediated allergen-specific mechanisms is important in AD, antihistamines are less effective in controlling pruritus in AD.^{17,18} Topical corticosteroids and calcineurin inhibitors reduce pruritus which suggests that inflammatory cells might have a role in pruritus.¹⁷

Cytokines like IL-2, 4, 5, 6, 8, 10, 13, interferon (IFN)- γ , and TNF- α may contribute to the pruritus of AD.¹⁸ Pruritus is also induced by IL-31 expressed by skin-homing CLA (cutaneous lymphocyte antigen) - positive T cells in AD, the receptors of which are expressed by keratinocytes and infiltrating macrophages.¹⁸ There is rapid cessation of pruritus with cyclosporine which might indicate the involvement of T-lymphocyte products like cytokines.¹⁸ Capsaicin depletes nociceptive nerve endings and thus helps to control of pruritus in AD.¹⁸ Acetylcholine (ACh) levels are elevated in lesional skin of patients with AD and is also produced by keratinocytes.¹⁸ Opioid receptor antagonists like naloxone and nalmefene reduce pruritus suggesting the role of opioids in inducing pruritus.¹⁸

Pruritus in psoriasis:

About 85% of patients with psoriasis experience generalized pruritus.¹⁹ Pruritus in psoriasis is significant yet under-recognised.²⁰ Itching generally occurs in body parts which do not have any skin lesion.²⁰ The most common pruritic sites are back, extremities, buttocks, and abdomen; however in one study conducted on hospitalized patients with psoriasis scalp was the commonest site.¹⁹

Histamine does not seem to have a role in the development of pruritus in patients with psoriasis, it has also been observed that histamine blockade does not prevent pruritus.²¹ In the epidermis and dermal nerve fibres of pruritic psoriatic skin there is increased expression of NGF-immunoreactive keratinocytes, elevated NGF content in the lesional skin, with enhanced expression of high-affinity receptor Trk-A.²¹

Regarding the role of cytokines, there is increase in the number of interleukin (IL)-2 immunoreactive cells in pruritic lesions compared to nonpruritic lesions of psoriasis and there is no remarkable difference in the expression of other cytokines.²¹ Psoriatic patients with pruritus also have a marked increase in the density of E-selectin positive venules which correlate well with itching intensity.²¹ Psoriatic patients with pruritus have an increased serum concentration of soluble vascular adhesion protein (VAP)-1.²¹

Pruritus in scabies:

In patients with scabies there is development of hypersensitivity to the mite or its products.²² The immune response which is mounted against the mites, eggs and scybala causes pruritus.¹⁹ Pruritus in scabies may be localized or generalized, which usually begins 3 to 6 weeks after the first-time infestation.¹⁹

Pruritus in scabies is generally intense which increases at night and is aggravated by a hot bath or shower.²³ Itching may be present even before cutaneous lesions appear.²³ The pathognomonic lesions of scabies are burrows, which appear as slightly raised, brownish, tortuous lesions (Fig. 1) Lesions in the penile and scrotal area are common in men, and in women, the areola, nipples and genital regions are typically affected.²³ In infants, elderly and immunocompromised individuals all areas including the scalp and face are susceptible.²³

Delayed type of hypersensitivity with predominance of T-lymphocytes is manifested by the appearance of pruritic inflammatory papules and nodules.²²

Pruritus in chronic urticaria:

The dermal mast cells release vasoactive mediators of which histamine is the most important in the pathogenesis of chronic urticaria.²⁴ Pruritus is caused by histamine binding to H₁ receptor by stimulation of C fibres.²⁴

In about 50% of patients with chronic urticaria there is formation of IgG autoantibody against IgE (5-10%) or its high affinity receptor FcεRI (30-40%).²⁴ The cross-linking of FcεRI on the surface of mast cells and basophils leads to the release of mediators.²⁴ Subsequently, there is activation of phospholipase C and increase in intracellular calcium.²⁴ This process ultimately leads to upregulation of the transcription factors which have an important role in production of leukotrienes and cytokines through activation of phospholipase A2.²⁴

The itching is often disproportionately severe compared with whealing and is often most severe at night. The eliciting stimulus determines the shape of the wheals (Fig. 2), but they are often linear from scratching or stroking.

Pruritus in renal diseases:

Renal pruritus is a localized or generalized, paroxysmal symptom occurring in patients with chronic renal failure.¹⁹ The prevalence ranges between 50 and 90%.²⁵ It is rarely a feature in children, or in patients with acute renal failure.²

The term 'uremic pruritus' is often used synonymously, but does not result from raised serum urea levels.¹⁹ The prevalence of itch increases with deteriorating renal function but does not improve significantly with dialysis.²⁶ The pruritus is independent of duration of dialysis or cause of renal failure.²⁶ The etiology of renal itch is unclear; the implicated mechanisms are listed in table 6. The pathogenesis of renal itch is explained in table 7.

Table 6: Mechanisms of renal itch^{25,27}

1. Metabolic factors like increased concentrations of divalent ions (calcium, magnesium), parathyroid hormone (pTh), histamine and tryptase
2. Dysfunction of peripheral/ central nerves, involvement of opioid receptors
3. (μ and κ)
4. Xerosis cutis (dry skin)
5. Microinflammation/ microangiopathy
6. Anemia – Iron deficiency
7. Hypervitaminosis A

Table 7: Pathogenesis of renal itch²⁵

1. Histamine released from mast cells in response to pruritogenic substances, stimulates C-terminal nerve endings.
2. Cascade of signals from nerve endings activate specific areas in the central nervous system resulting in perception of itch.
3. Direct axon reflex mechanism; sensory nerve endings release neuropeptides
4. Locally released neuropeptides aggravate the itch response by stimulating accumulation of inflammatory cells and release of pruritic mediators.

The intensity of pruritus ranges from sporadic discomfort to complete restlessness throughout the day.²⁸ Patients complain of generalized pruritus in 25-50%, in the remaining, predominantly over the back, face and arm.²⁸ In 25% it is severe during or immediately after dialysis.²⁸

Treatment of renal itch is difficult. The useful modalities are listed in table 8.

Table 8: Treatment options for renal itch¹⁹

1. Topicals	<ul style="list-style-type: none"> a) Emollients, b) Capsaicin (0.025% three to five times daily).
2. Physical	<ul style="list-style-type: none"> a) Ultraviolet B therapy
3. Systemic	<ul style="list-style-type: none"> a) Gabapentin (100mg three times a week) b) Naltrexone (50 mg po qd) c) Nalfurfine (5 mg IV three times a week) d) Oral activated charcoal (6 g po qd). e) Cholestyramine (4–16 g po qd in divided doses) f) Ondansetron (8 mg po or IV qd) g) Erythropoietin (36 U/kg sc three times a week) h) Thalidomide (100 mg po qd) i) Intravenous lidocaine j) Ketotifen (1–2 mg po qd)
4. Dialysis Techniques	<ul style="list-style-type: none"> a) Intensive efficient dialysis b) Magnesium-free dialysis
5. Surgical	<ul style="list-style-type: none"> a) Subtotal parathyroidectomy b) Renal transplant

Pruritus of hepatic origin:

Pruritus is a frequent manifestation in patients with liver diseases and intra- or post- hepatic cholestasis.²⁹ Primary biliary cirrhosis (PBC), primary sclerosing cholangitis (PSC), hepatitis B and C, autoimmune hepatitis, carcinoma of bile ducts, alcoholic cirrhosis are among the hepatic disorders resulting in pruritus.²⁹ The prevalence of pruritus in PBC is as high as 69%, with 75% of the patients complaining of pruritus prior to the diagnosis of PBC.³⁰

The etiology of cholestatic pruritus is unknown. In recent years, several mechanisms have been recognized in the causation of cholestatic pruritus.³⁰ It is proposed that cholestasis leads to release of pruritogens from the liver; which in turn stimulates neural itch fibers of the skin, transmitting the stimulus to the spinal cord and subsequently to the brain.³⁰ Factors involved in the pathogenesis of pruritus of hepatic origin have been presented in table 9.

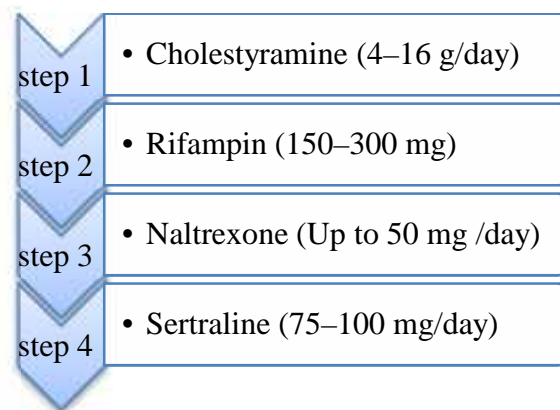
Table 9: Factors involved in the pathogenesis of pruritus in hepatic disorders³⁰

1. Lysophosphatidic acid (LPA)	Increased local formation of LPA near unmyelinated nerve endings potentiates action potential along the nerve fibers and correlates with the itch response.
2. Bile salts	Pruritogenic in the skin.
3. Opioids	Imbalance between μ and κ receptors may initiate itch through systemic and peripheral pathways.
4. Histamine	In patients with PBC and PSC complaining pruritus, histamine levels were elevated.
5. Progesterone metabolites	Steroid sulfates and disulfates are increased in patients with intrahepatic cholestasis of pregnancy.

Hepatic pruritus is often generalised, affecting palms and soles in a characteristic manner.² Pruritus is often described with terms such as “lying on a bed of cactus”, “irritation,” “hard to get to,” “pins and needles” and “crawling” sensation by the patients and unlike other causes scratching does not appear to relieve cholestatic pruritus.³⁰

Several therapeutic modalities have been identified as effective treatments for pruritus in patients with primary cholestatic disease. The management of pruritus described by the 2009 American Association for the Study of Liver Diseases (AASLD) guidelines is mentioned in flow-chart 2.

Flow-chart 2: Step ladder management of pruritus in cholestatic pruritus^{30,31}



Endocrine disease

Thyroid disease:

Pruritus is a lesser known symptom of hyperthyroidism, particularly in autoimmune thyroid disorders.² In a Malaysian study of 236 patients with hyperthyroidism, up to 6.4% of patients with hyperthyroidism had symptoms of pruritus.³²

The pathophysiology of generalised pruritus in autoimmune thyroid disorders is unclear. It is postulated that pruritus is a manifestation of cell-mediated immunity, which lowers the mast cell threshold for release of histamine.³²

Localized or generalized pruritus may also be seen in patients with hypothyroidism, but not as common.¹⁹ It is most probably driven by xerosis of the skin.²⁷

Hyperparathyroidism:

Abnormal parathyroid gland activity may also cause pruritus.²⁹ These patients often experience a lack of vitamin D and minerals (e.g. zinc, etc.) which probably contributes to chronic pruritus.²⁹ Secondary hyperparathyroidism in chronic renal diseases may be an additional provocative factor in uremic itch.²⁹

Diabetes mellitus:

Pruritus is present occasionally in diabetics.²⁹ Itch may be generalized or more frequently localized on the scalp, genitalia or perianal area.²⁹

Pruritus in pregnancy:

Pruritus affects upto 20% of pregnant women.³³ Pruritus can be severe enough to disturb sleep and affect the quality of life, and might lead to or worsen depression.³³ Although it is commonly caused by dry skin, it can also indicate an underlying condition unique to pregnancy.³³

The specific dermatosis of pregnancy with pruritus includes pruritic urticarial papules and plaques of pregnancy (PUPPP), intrahepatic cholestasis of pregnancy (ICP), pemphigoid gestationis (PG), and atopic eruption of pregnancy (AEP).³⁴ Diagnosis and management of pruritus in pregnancy has been mentioned in flow-chart 3 and table 10.

Flowchart 3: Diagnostic approach to pruritus in pregnancy³³

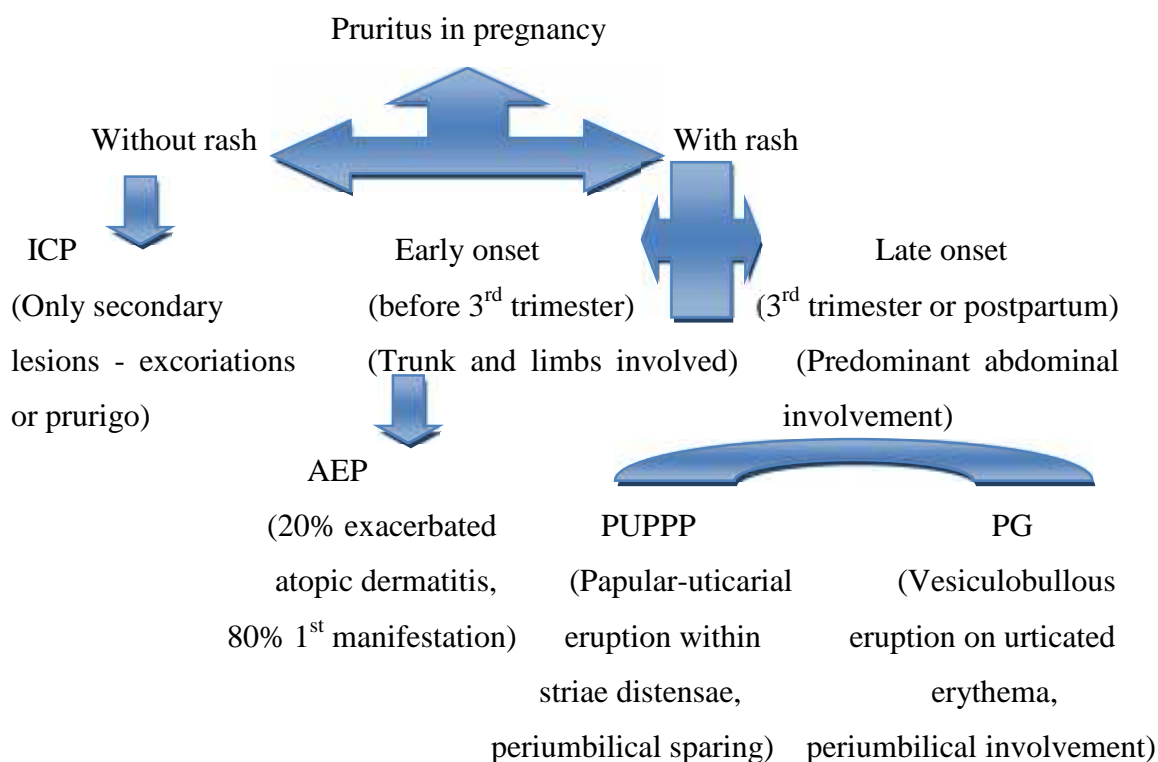


Table 10: Diagnostic features and management of pruritus in pregnancy³³

	ICP	AEP	PUPPP	PG
Immunofluorescence	Nonspecific	Nonspecific	Nonspecific	Linear C3 along DEJ
Histopathology	Nonspecific	Nonspecific	Nonspecific	With or without subepidermal blister
Laboratory	Elevated total serum bile acid	With or without elevated IgE levels	Nonspecific	Positive indirect IMF
Fetal risk	Fetal distress, Stillbirths	No	No	Small for gestational age
Treatment	Ursodeoxycholic acid (15 mg/kg/day)	Moderately potent topical corticosteroids, ± oral antihistamines	Moderately potent topical corticosteroids, ± oral antihistamines	Prednisolone (0.5–2 mg/kg/day), Plasmapheresis

Drug induced chronic pruritus:

Pruritus can be a side effect of a variety of drugs.²⁹ This may be the result of a direct action on skin structures, or indirect through iatrogenic hepatotoxicity or nephrotoxicity.²⁹ The implicated drugs remain for a long time in the dermal macrophages.²⁹ It is estimated that pruritus accounts for 5% of the cutaneous adverse reactions after drug intake. Drug induced pruritus has been summarized in table 11 and common groups of drugs causing pruritus are listed in table 12. The clinical features are variable; the lesions may be scarlatiniform, rubelliform or morbilliform, or may consist of a profuse eruption of small papules showing no close resemblance to any infective exanthema (Fig. 3).

Table 11: Drug induced pruritus³⁵

	Acute pruritus	Chronic pruritus	
Characteristic	Spontaneous relief after interruption of drug	No spontaneous cessation after drug interruption	
		Group I: - Pathomechanism known; clear time-relation between intake of a drug and onset of pruritus.	Group II: - No hypothesis or pathomechanisms. - Late onset of pruritus.
Examples	Opioid-induced (60%) - Starts 6–12 hours after administration Chloroquine: (55–90%) - Itching for 1–3 days	Hydroxyethyl starch - Starts 3 weeks after infusion therapy. - Lasts up to 15 months duration.	Glimepiride: < 1% of patients.

Table 12: Drugs that may induce pruritus³⁵

Group of drugs	Examples	Possible mechanism	Frequency
Antihypertensive drugs	1. Angiotensin-converting enzyme inhibitors	Increase of bradykinin level or cholestatic liver injury.	1–15%
	2. Calcium channel blockers	Unknown	<2%
	3. Others - Beta-adrenergic blockers, Angiotensin II antagonists	Unknown	Case reports
Oral hypoglycemics	1. Sulphonylurea derivates	Unknown	<5%
	2. Biguanides	Cholestatic liver injury	Case reports
Lipid lowering drugs	Statins	Unknown	16%
Antibiotics	1. Penicillins	Cholestatic liver injury	2-20%
	2. Cephalosporins	Secondary to skin lesions	<2%
	3. Macrolides	Secondary to skin lesions	<0.3%
Plasma volume expanders	Hydroxyethyl starch (HES)	Deposition of HES in small peripheral nerves/ Schwann cells of cutaneous nerves	12-54%
Cytostatics	1. Paclitaxel,	Unknown	10-14%
	2. Tamoxifen	Xerosis	3-5%
Others	1. Non steroidal anti-inflammatory drugs	Increased synthesis of leukotrienes	1-7%
	2. Opioids	Centrally mediated process via μ -opioid receptor	2-100%

Pruritus in human immunodeficiency virus (HIV) infection:

Various causes of pruritus in HIV infected patients are listed in table 13.

Table 13: Causes of pruritus in HIV infection^{28, 36}

1) Papular pruritic eruptions
a) Follicular pruritic eruptions; eosinophilic folliculitis, demodex folliculitis, staphylococcal folliculitis, pityriosisporum folliculitis.
b) Insect bite reaction
c) Non specific pruritic papular eruptions
2) Xerosis
3) Lichenoid dermatitis
4) Pruritic diseases exacerbated by HIV infection
a) Seborrheic dermatitis
b) Psoriasis
c) Infections and infestations (scabies, folliculitis)
d) Superficial fungal infections
e) Acute and chronic urticaria
f) Photosensitivity reactions (lichenoid photo eruptions)
5) Others
a) Drug eruptions
b) Generalized idiopathic pruritus

Pruritus is a marker of HIV infection, occurring in up to 30% of the patients.³⁶ Skin diseases are an important and almost inevitable consequence of infection with the HIV.³⁷

Eosinophilic folliculitis is the most common pruritic follicular eruption.³⁶ It is a chronic, pruritic, culture-negative folliculitis that is unresponsive to systemic

antibiotics and that occurs in HIV-infected patients with CD₄ count <200/mm³.³⁶ Clinically, it is characterized by multiple follicular and urticarial papules, most commonly involving the upper trunk, face, and proximal extremities.³⁶ Pustules are usually smaller than in bacterial folliculitis and represent end stage lesions.³⁶ Most lesions (90%) occur above the nipple line on the anterior trunk, and typically extend down the midline of the back to lumbar spine.³⁶ The disease waxes and wanes in severity and may spontaneously clear only to flare up unpredictably.³⁶ Diagnosis is made by histopathology, which is characterized by eosinophilic and neutrophilic infiltration of the hair follicle.³⁶ The serum IgE and blood eosinophil count may be raised.³⁶ The most effective therapy is prednisone.³⁶ Oral isotretinoin (0.5-1mg/kg per day), itraconazole (200mg twice a day), and topical tacrolimus and pimecrolimus may be effective.³⁶ UVA and UVB phototherapy, potent topical corticosteroids, and nonsedating antihistamines ameliorate pruritus significantly and clear eruptions.³⁶

Erythematous to skin-colored pruritic papules that do not fit the diagnostic criteria of eosinophilic folliculitis, scabies, insect bites, and drug reactions are categorized as pruritic papular eruption of HIV.³⁷ A skin biopsy is very essential to distinguish this condition from other HIV associated dermatoses.³⁷ Pruritic papular eruptions of HIV shows non-specific reaction pattern whereas the others have specific histopathology. The etiology is not known; hence treatment is difficult and nonspecific.³⁷ Clinically, the lesions are symmetrically distributed, non-follicular papules, often with secondary changes like excoriations, formation of prurigo nodularis (Fig. 4). Oral antihistamines, topical antipruritic preparations, and topical or oral corticosteroids are used with varying results.³⁷ These similarities indicate that some cases of pruritic papular eruption may be variants of eosinophilic folliculitis.³⁷

Other causes of pruritus in HIV infected patients include papulosquamous diseases, systemic lymphomas, renal insufficiency, and hepatic disease.³⁶ Some of the antiretroviral drugs and other drugs given to the HIV-infected patients may cause pruritus (with or without a rash).³⁶

Pruritus in the elderly:

Geriatric patients are commonly affected by pruritic dermatoses.³⁸ The condition is more prevalent in women than in men.³⁸ In patients older than 85 years of age, incidence of pruritus is nearly 20%.³⁸ The high prevalence of pruritus is a consequence of three physiological changes that occur with aging:³⁸

1. The epidermal barrier repair is diminished;
2. The immune system of elderly patients are activated and have defective Th1 function along with enhanced Th2 function (immunosenescence);
3. Neurodegenerative disorders may lead to pruritus by their central or peripheral effects.

Clinical approach to the elderly patient with pruritus is mentioned in table 14.

Table 14: Causes of pruritus in elderly³⁸

<p>1. Pruritus in the absence of primary skin lesions</p>	<p>1) The “Invisible” dermatoses</p> <ul style="list-style-type: none"> • Xerosis (most common cause) • Drug induced (ACE inhibitors, opioids, Hydroxyethyl starch) <p>2) Pruritus with no rash</p> <ul style="list-style-type: none"> • Renal or hepatic itch • Iron deficiency • Parasitic infestation • Lymphoreticular malignancy
<p>2. Pruritus with rash</p>	<p>1) Eczematous dermatitis in the elderly patient</p> <ul style="list-style-type: none"> • Nummular dermatitis • Photodermatitis • Contact dermatitis <p>2) Chronic itch-scratch disease in the elderly patient</p> <ul style="list-style-type: none"> • Chronic eczematous dermatitis • Neurodegenerative disorder (brachioradial pruritus) <p>3) Papular dermatitis in the elderly patient</p> <ul style="list-style-type: none"> • Prurigo • Transient acantholytic dermatosis (TAD)

Pruritus in malignancy:

Chronic itch may be a presenting sign of malignancy.³⁹ Any malignancy can induce pruritus as a paraneoplastic phenomenon, but the true relationship between cancer and this symptom is unclear.¹⁹ Generalized pruritus not responding to

conventional therapy or persistent, unexplained pruritus should prompt the clinician to evaluate for underlying malignancy.¹⁹

Prevalence of chronic itch is as high as 30% in patients with Hodgkin's disease and 15% of patients with non-Hodgkin's disease.³⁹ Idiopathic generalized pruritus may be a preceding sign in multiple myeloma, leukemia, and solid tumors of different types.³⁹

Suggested mechanisms of tumor-associated pruritus have been listed in table 15.

Table 15: Causes of tumor-associated pruritus¹⁹

1. Toxic products released from necrotic tumor cells entering the systemic circulation.
2. Production of chemical mediators of pruritus by the tumor.
3. Allergic reactions to tumor-specific antigens, increased proteolytic activity and histamine release.

Patients with paraneoplastic disorders usually present with severe intractable itch and manifest with secondary skin lesions as a result of the itch-scratch cycle that include excoriations, hyperpigmentation or hypopigmentation, lichenification, prurigo nodules and scars.³⁹ Aquagenic pruritus can precede the development of T cell lymphoma or myelodysplasia by several years.³⁹ Papuloerythroderma of Ofuji differs from ordinary erythroderma by sparing the face and flexures, and often intensely pruritic. A characteristic and distinctive pattern of sparing of the abdominal flexures has been termed the 'deck chair sign' (Fig. 5).

Cutaneous paraneoplastic syndromes which induce itching have been listed in table 16.

Table 16: Paraneoplastic syndromes³⁹

Paraneoplastic syndrome	Associated malignancies
Erythroderma	Lymphoma, leukemia
Sign of Leser Trélat	Adenocarcinoma of gut, hematological malignancies
Generalized granuloma annulare	Lymphoma, leukemia,
Dermatomyositis	Carcinoma of colon in men. Breast and ovarian cancers in women Nasopharyngeal carcinoma in Asians.
Bazex syndrome	Head and neck, upper airway, digestive tract carcinoma (pharynx, larynx, esophagus)
Malignant acanthosis nigricans	Adenocarcinoma of gut

According to a recent case series, combination of low dose of mirtazapine (7.5 to 15 mg at evening) and gabapentin (300 mg at night up to 900-2400 mg per day) is effective in the treatment of the itch related to cutaneous T-cell lymphoma.³⁹ Intractable itch in lymphoma has been treated with butorphanol at a dose of 3-4 mg/day or oral prednisone 40 mg tapering down gradually over 3 weeks.³⁹ Thalidomide is considered a second line anti-pruritic agent which forms a part of the chemotherapeutic regimen.³⁹ Pruritus resolves rapidly after successful removal and treatment of the underlying malignancy.³⁹

Hematological causes of pruritus:

Iron deficiency is a cause of intractable pruritus.² Pruritus presents even in absence of skin disease, or in absence of anemia.² Pruritus and severe iron deficiency in patients with polycythemia vera improves with correction of iron deficiency.²

Pruritus is a common symptom and is seen in about 30-50% of patients with polycythemia vera.¹⁹ Pruritus starts within few minutes of contact with water and lasts for about 15 to 60 minutes.² It is known as 'bath itch' and is associated with elevated serum and urinary histamine levels.² Platelet aggregation has been proposed as the mechanism which leads to release of pruritogenic factors like serotonin and histamine.² Treatment of polycythemia may not relieve the itching.² However, correction of venesection induced iron deficiency may relieve pruritus but at the cost of exacerbating the polycythemia.² Oral aspirin (300mg three times daily) is the first line of treatment.¹⁹ Psoralen ultraviolet A (PUVA) photochemotherapy, narrow-band ultraviolet B (UVB) phototherapy, interferon α 2b, serotonin re-uptake inhibitors like paroxetine and oral antihistamines are the other available treatment options.^{2,19}

EVALUATION OF PRURITUS SEVERITY.

Evaluation of pruritus is done by a number of methods, although none can be considered as standard.⁸ Largely assessments of pruritus can be categorized into two main groups: one is the subjective evaluations of itch, and the other is the measurement of scratching.⁸ The first category includes simple assessments of itch severity (i.e. visual analogue scale, numeric rating scale, verbal rating scale), itch questionnaires providing data on itch quality, computerized analysing systems, and measurement of pruritus perception threshold.⁸ Assessment of scratching may be done by observation of excoriations and degree of lichenification, infrared video-recording, limb meters (wrist activity monitors, pressure sensors), fingernail vibration transducers (piezo film sensors, pruritometer), and acoustic evaluation system of scratching.⁸ Furthermore, to analyse brain activity during itching episodes, functional imaging techniques (functional magnetic resonance, positron emission tomography)

have been used.⁸ The usual recommendation is to use at least two independent methods of itch assessment in clinical studies on pruritus.⁸

Pruritus is a subjective feeling; the objective assessment of intensity still remains a challenge.⁸ The measurement of severity as a reflection of subjective factors, along with itch intensity, may provide a more accurate representation of the pruritus.¹ For subjective evaluation, pruritus scales are divided into unidimensional and multidimensional.

SCALES FOR THE MEASUREMENT OF PRURITUS.

UNIDIMENSIONAL SCALES:

Visual analogue scale (VAS)

VAS was initially developed by Haynes and Patterson (1921).⁴ It is commonly used to measure panic, depression, fatigue, and pain.⁴ VAS provides an easy and rapid estimation of itch, hence is the most commonly used method to evaluate severity of pruritus.⁴ Although, it was originally developed to assess the intensity of pain, subsequently it was used for evaluation of pruritus.⁸

VAS is a ten centimeter long scale oriented either horizontally or vertically, the beginning of which refers to no pruritus (0 points) and the end to the most severe pruritus (10 points).⁸ The patients indicate the intensity of pruritus by indicating at the point that corresponds to the severity of their pruritus.⁸ Although pruritus is graded on a linear scale from one extreme to another, it is assumed VAS is not linear but exponential.⁴

The most important disadvantage of VAS is that it is not suitable for people with motor or cognitive problems that impair understanding the scale or marking the line with a pen.⁸ This limitation becomes essentially important for elderly people and

young children.⁸ VAS provides information only about itch intensity, and hence there is a need for multidimensional assessment tools which provide detailed information about various aspects of pruritus.⁸

In a study by Reich et al,⁸ the pruritus intensity score assessed with VAS was not significantly influenced by age, gender, or the diagnosis. There was no significant difference between patients taking anti-pruritic medications and those who did not.⁸ There was also no statistically significant difference between the horizontal and vertical VAS scores.⁸ The authors also concluded that pruritus rating could be influenced by some cultural and ethnic aspects which were yet to be determined.⁸

Numerical rating scale (NRS)

NRS is one of the simplest and most frequently used instruments in clinical practice to measure the intensity of pain.⁴⁰ NRS is used to assess intensity of pruritus experienced by the patient verbally from 0 to 10, where 0 indicates no pruritus and 10 indicates the most intense pruritus they can imagine.⁸ NRS can be graphically or verbally delivered.⁴¹ In graphical presentation, the numbers are often enclosed in boxes.⁴¹

A hospital based study by Page et al,⁴⁰ revealed that NRS has good convergent, discriminant and criterion validity. In a study by Reich A et al,⁸ rating of pruritus by patients was higher with NRS compared to VAS, a similar response was seen by other authors during pain assessment.

Verbal rating scale (VRS)

VRS is a 5-point Likert scale designed to measure pain intensity.^{8,40} VRS can also be used to measure pruritus intensity. It comprises a list of adjectives used to denote pruritus intensity.⁸ The words used are ‘no pruritus’, ‘mild pruritus’, ‘moderate pruritus’, ‘severe pruritus’, and ‘very severe pruritus’.⁸ These adjectives are assigned

with numbers for ease of recording.⁴¹ The adjectives corresponding to the grade of pruritus has been presented in table 17.

Table 17: Grades of pruritus⁴²

4+	Very severe	Constant itching with excoriation and bleeding. Marked insomnia and irritability.
3+	Severe	As above, without excoriation and bleeding.
2+	Moderate	Awakening at night, finding self scratching.
1+	Mild	Itching only when awake.
0	None	No itch.

Disadvantages of using VRS is that the rank numbers may lead to misapprehension that intervals between each descriptor are equal and could be a source of error.⁴¹ In a study by Reich et al,⁸ VRS correlated well with other scales and the highest correlation was observed with NRS followed by horizontal VAS and vertical VAS.

Multidimensional scales:

It was difficult to quantify the nature of pruritus with unidimensional scales. Hence multidimensional scales were developed to quantify subjective and multidimensional nature of pruritus. Multidimensional scales take into account how the symptom is perceived by the patient and provides more accurate representation of the pruritus. Along with measuring the intensity of pruritus, its impact on quality of life and changes over time can be detected.

5-D itch scale

5-D itch scale was derived by modification of ‘Total Neuropathy Scale’.⁶ It is a brief, single page, instrument which is sensitive to change over time.⁶ The dimensions are **D**egree, **D**uration, **D**irection, **D**isability and **D**istribution.⁶ The scores of each of the five domains are done separately and then added to obtain a total 5-D score.⁶ 5-D scores may range between 5 (when there is no pruritus) to 25 (most severe pruritus).⁶

Single-item dimension scores (duration, degree and direction) are equal to the value indicated in the response ranging between 1–5.⁶ The disability dimension encompasses four items that evaluate the impact of itching on daily activities: sleep, leisure/social activities, housework/errands and work/school.⁶ An average score of all four items may underestimate the impact of itching on daily activities, and hence the score for the disability dimension is achieved by taking the highest value on any of the four items.⁶ For the distribution dimension, the number of affected body parts is tallied with the score ranging between 0 – 16 and the sum is categorized into five scoring sections as follows:⁶

- Total of 0–2 = score of 1,
- Total of 3–5 = score of 2,
- Total of 6–10 = score of 3,
- Total of 11–13 = score of 4, and
- Total of 14–16 = score of 5.

In a study conducted by Elman et al,⁶ The 5-D itch scale showed a very high test-retest reliability. In the same study though there was no change in 5-D score over a 3-day interval, a significant change in 5-D score was seen after 6 weeks interval, implying that the 5-D scale is responsive to change.⁶

Itch severity scale (ISS)

ISS was developed by Majeski et al,¹ as a practical questionnaire to quantify pruritus severity and associated patient burden. It is a modification of pruritus severity questionnaire developed by Yosipovitch et al.¹ It has 7 components; frequency, itch description, affected body surface area, intensity, effect on sleep, effect on mood, and effect on sexual desire/ function.⁴³ Majeski et al,¹ has shown that ISS scale was useful in comparing pruritus intensity in different disease populations and in assessment of treatment in pruritus.

As ISS is a self reported questionnaire, and requires short time for completion which makes it practical, convenient and useful in clinics as well as through mails.¹

From the review of the literature it is evident that pruritus is a common and distressing symptom which may be of cutaneous origin as well as may indicate underlying systemic illness. Hence patients with pruritus deserve thorough assessment of the underlying cause. In this regard, assessment of pruritus intensity is a step towards better work-up and management of the patients suffering from long-term pruritus. Although various scales are available to assess pruritus intensity, very few studies have been undertaken for their validation and there is absolute paucity of such study in the Indian dermatology literature. This study is an attempt to validate various pruritus scales among Indian patients.

METHODOLOGY

SOURCE OF DATA:

A hospital-based, prospective study to compare validity and reliability of unidimensional and multidimensional scales to assess pruritus intensity was conducted in the department of Dermatology Venereology and Leprosy of B.L.D.E.U's Shri. B.M. Patil Medical College Hospital and Research Centre, Bijapur, Karnataka. Three hundred and seventy three patients complaining of generalized chronic pruritus were recruited from the out patient section of the department. The study was conducted between October 2012 to August 2014.

METHOD OF COLLECTION OF DATA:

Inclusion criteria:

All patients >18years presenting with generalized pruritus (of both dermatological and systemic etiology) of duration >6weeks were enrolled for the study.

Exclusion criteria:

Patients with motor or cognitive dysfunction were excluded from the study.

METHOD:

Detailed history of pruritus, in respect of onset and duration of symptoms, recurrence, family history of atopy, and preexisting medical condition were taken from patients (proforma enclosed).

Each patient was subjected to a complete cutaneous and systemic examination. Each patient was assessed thrice; twice at the first visit at interval of 1-3 hours, and the third one after 6 weeks.

Before starting the assessment each patient was explained about the test procedure and each of the scales in colloquial language.

The steps of recording pruritus were as follows:

- On first visit each patient was asked to record current pruritus intensity (over last 24 hours) on a VAS (horizontal 100mm line), on a NRS (from 0-10) and five point VRS on a questionnaire (V-1). Similarly “5-D itch questionnaire” and “Itch severity scale questionnaire” were filled by input from the patient.
- The intensity was re-recorded on a questionnaire with a different order of scales within 1-3 hours according to patients’ convenience (V-2).
- Assessment was repeated after 6 weeks (V-3).

Scales and Scoring methods:

1. **VAS** – It is a 10cm (100mm) long line oriented horizontally on which the patient was asked to indicate the intensity of pruritus by crossing the line at a point that corresponded to their pruritus severity; beginning of the scale refers to “no pruritus” (0 points) and the end of the most severe pruritus they can imagine corresponds to 10 points. The length from left end to the vertical mark made by the patient was measured in millimeters.
2. **NRS** – Patient was asked to assign a numerical score representing the intensity of their symptoms on a scale from 0 to 10, with 0 for having no symptoms and 10 having the worst imaginable pruritus.

3. **VRS** -- Five point list of adjectives was given to the patient. No pruritus (0 point), mild pruritus (1 point), moderate pruritus (2 points), severe pruritus (3 points), very severe pruritus (4 points).
4. **5-D itch scale** – The questionnaire was completed by the investigator based on the detailed history given by the patient. The scores of each of the five domains were calculated separately and then summed together to obtain a total 5-D score. The scores range from 5 (no pruritus) to 25 (most severe pruritus).
5. **ISS** – The questionnaire was completed by the investigator based on detailed history from the patient. The different component responses to each of the seven questions were summed separately and divided by the highest possible total score for the respective question. The seven values were then added together and multiplied by 3 to get a total out of 21. Total ISS scores may range from 0 (no pruritus) to 21 (most severe pruritus).

The highest possible score for each question is as follows:

Question 1: 12

Question 2: 15

Question 3: 100

Question 4: 12

Question 5: 4

Question 6: 2

Question 7: 6

(The calculated score for each question from 1-7 was assigned as a, b, c, d, e, f, g respectively);

wherein,

a = sum of different component response in question 1.

b = sum of different component response in question 2.

c = percentage body surface area involved in itch.

d = sum of different components response in question 4 (scored from 0-4)

e = the number of selected answer.

f & g = sum of different component responses in questions 6 & 7 respectively.

$$\text{ISS} = [(a/12) + (b/15) + (c/100) + (d/12) + (e/4) + (f/2) + (g/6)]$$

LABORATORY INVESTIGATIONS:

Following laboratory investigations were carried out for the patients wherever indicated:

- Complete hemogram
- Peripheral blood smears
- Random blood sugar or urine sugar
- Liver function tests
- Blood urea and serum creatinine
- Stool test for ova, parasite, cyst (OPC)
- Thyroid profile
- Iron deficiency profile
- Serum vitamin B-12 and folate levels
- Skin biopsy

All patients were provided topical and/or systemic treatment as indicated by clinical and investigational results.

STATISTICAL ANALYSIS:

Data was presented with mean +/- SD and diagrammatic presentation was done. To find the validity of different scales Pearson's correlation coefficient was used. Cronbach's α was determined to assess the internal consistency of the measure. To find the reliability of different scales intra-class correlation coefficient was used.

ETHICAL CLEARANCE:

Institutional ethical committee clearance was undertaken for the study.



Figure 1: Scabies - Papules and burrows on the finger web space



Figure 2: Linear lesions of immediate dermographism



Figure 3: Morbilliform exanthem caused by nevirapine



Figure 4: Nodular prurigo in HIV infection



Figure 5: Papuloerythroderma of Ofuji - 'Deck-chair' sign

RESULTS

Patients and follow-up

A total of 373 patients with chronic pruritus completed questionnaires during the study period. Of these, 339 subjects repeated the questionnaire 1–3 hours later to assess test-retest reliability. One hundred and thirty nine questionnaires were completed 6 weeks later. Male to female ratio was 1.34:1. Mean (\pm SD) age of the patients was 48 (\pm 13.8) years. Chronic pruritus was predominantly seen in patients above 60 years (28.4%). Number of patients completing questionnaires and age-wise distribution of pruritus is shown in figure 6 and 7.

Figure 6: Number of patients completing questionnaires

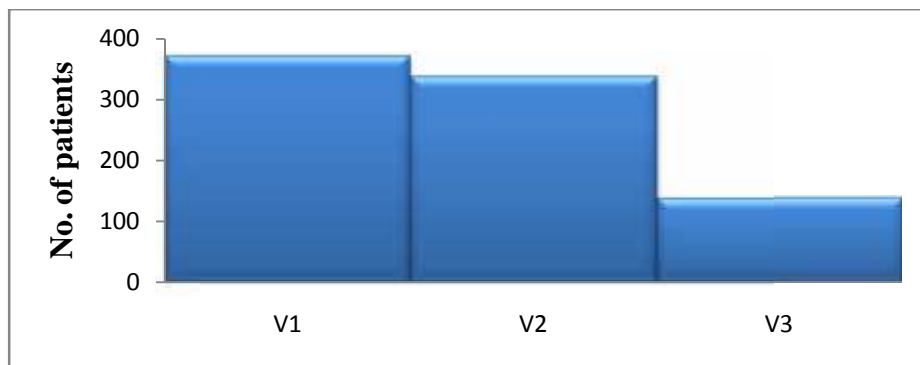
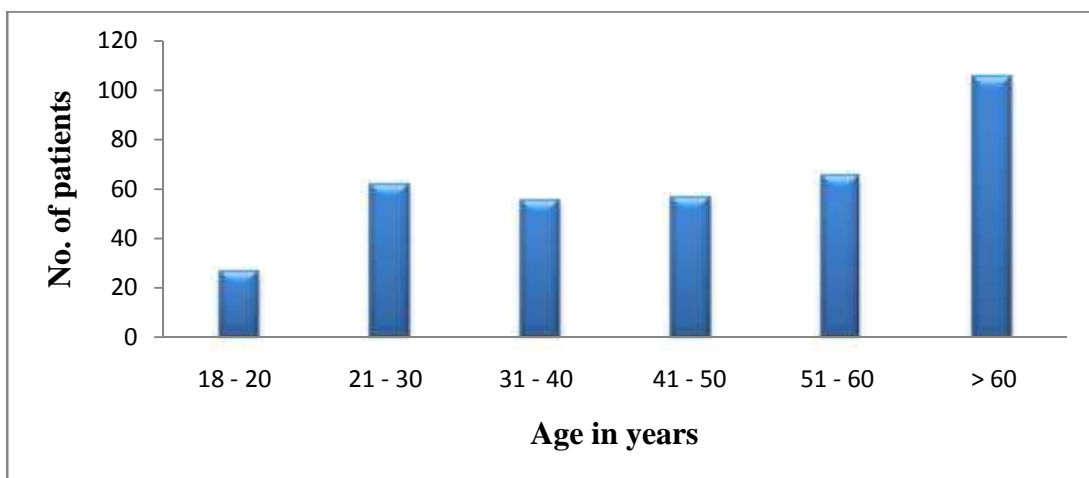


Figure 7: Age-wise distribution of chronic pruritus



The various underlying causes of chronic pruritus among the study subjects have been shown in the table 18.

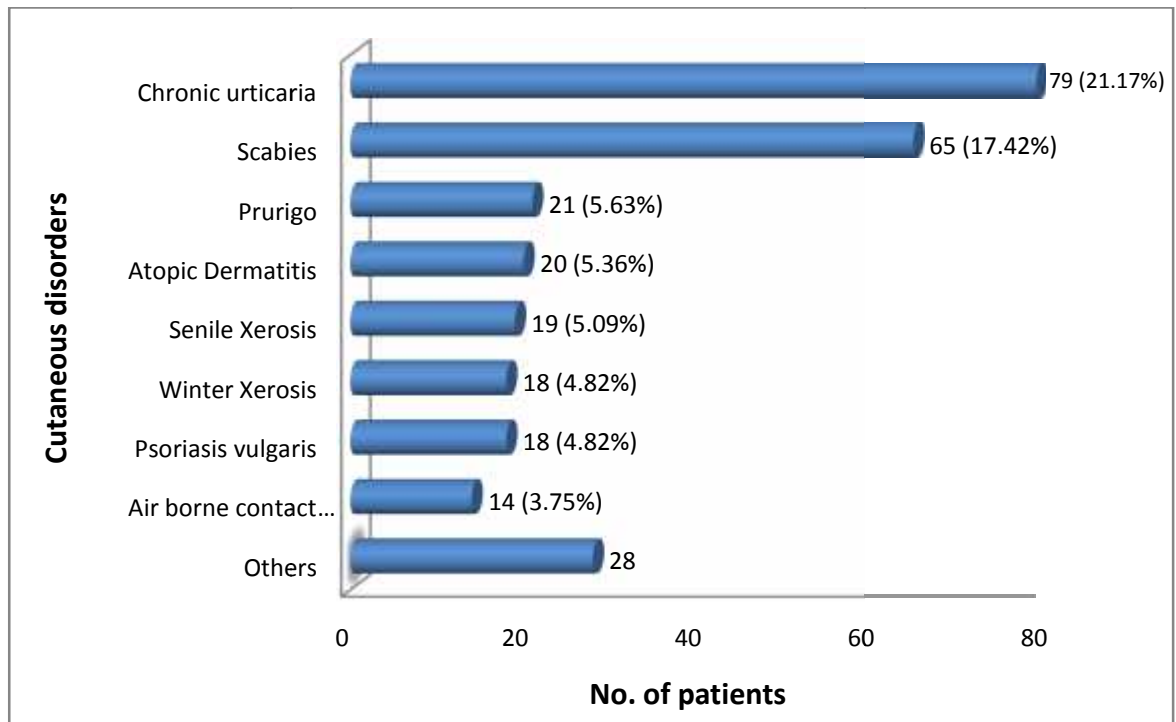
Table 18: Causes of chronic pruritus

Causes	Number of cases (%)
Cutaneous	282 (75.6)
Systemic	60 (16.08)
Unknown	31 (0.08)

Cutaneous causes of chronic pruritus

The various cutaneous causes of generalized chronic pruritus are listed in figure 8. Majority of the patients presented with chronic urticaria (21.17%) and scabies (17.42%).

Figure 8: Cutaneous causes of chronic pruritus



Systemic causes of chronic pruritus

The various systemic causes of generalized chronic pruritus are listed in table 19.

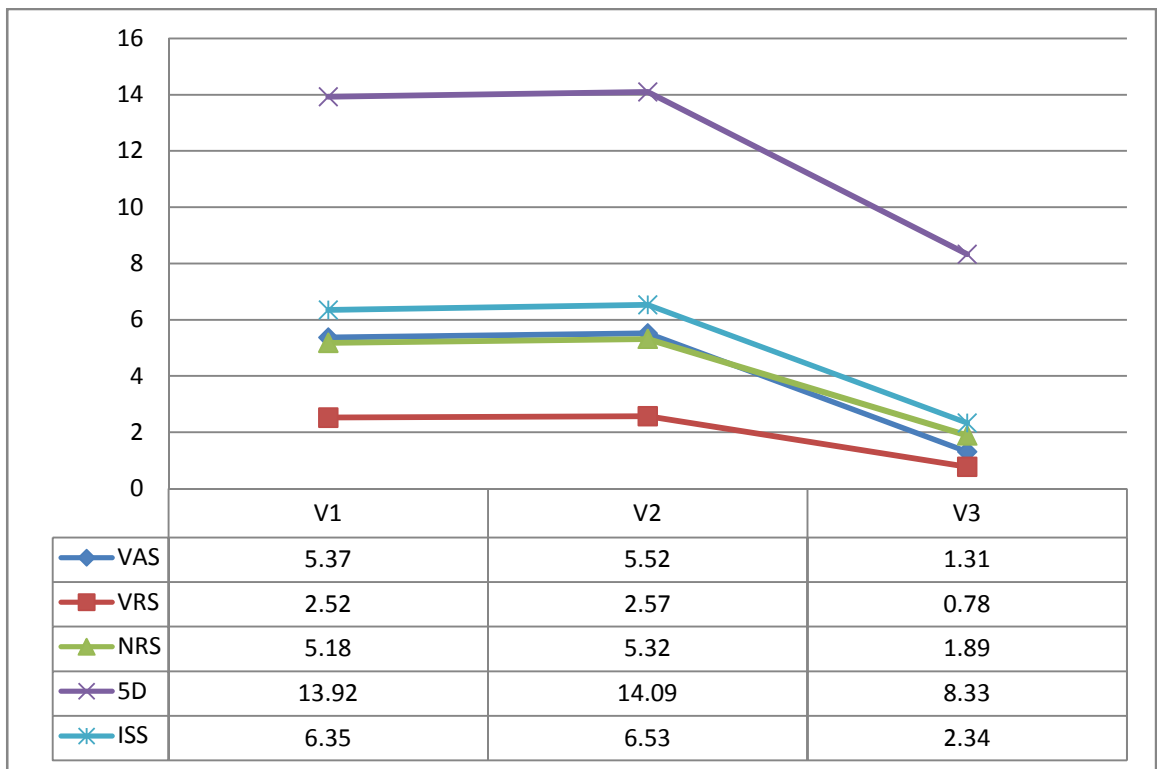
Table 19: Systemic causes of chronic pruritus

Systemic causes	Number of cases (%)
Anemia induced pruritus	26 (6.97)
Drug induced pruritus	16 (4.28)
Cholestatic pruritus	4 (1.07)
Pruritic papular eruptions of HIV	4 (1.07)
Pruruigo in HIV	3 (0.8)
Uremic itch	3 (0.8)
Atopic eruptions of pregnancy	2 (0.53)
Pruritic urticarial papules and plaques of pregnancy (PUPPP)	1 (0.27)
Intrahepatic cholestasis of pregnancy (ICP)	1 (0.27)

Assessment of pruritus intensity

The scores of all the scales taken at different intervals have been presented with mean \pm SD. The mean values of various scales (V1, V2 and V3) used in the study and the change after 6 weeks are shown in figure 9.

Figure 9: Mean values of various scales



Based on the VRS, 9 (2.41%) subjects had mild, 206 (55.22%) moderate, 111 (29.75%) severe, and the remaining 47 (12.6%) had very severe pruritus at initial presentation. It has been demonstrated in figure 10.

Patients rated pruritus slightly higher on VAS [mean (\pm SD) = 5.3788 (\pm 2.0359)] than NRS [mean (\pm SD)=5.1876 (\pm 1.8900)] at their first assessment. A difference was noted when VAS and NRS were assessed after 6 weeks; NRS values [mean (\pm SD) = 1.8992 (\pm 1.4157)] were higher compared to VAS [mean (\pm SD) = 1.3136 (\pm 1.6217)]. Degree of pruritus rated by patients using VAS and NRS has been shown in figure 11.

The mean (\pm SD) of second reading (V2) after 3hours was higher in all the scales compared to initial assessment (V1). It has been shown in figure 12.

Figure 10: Pruritus rating according to VRS (V1)

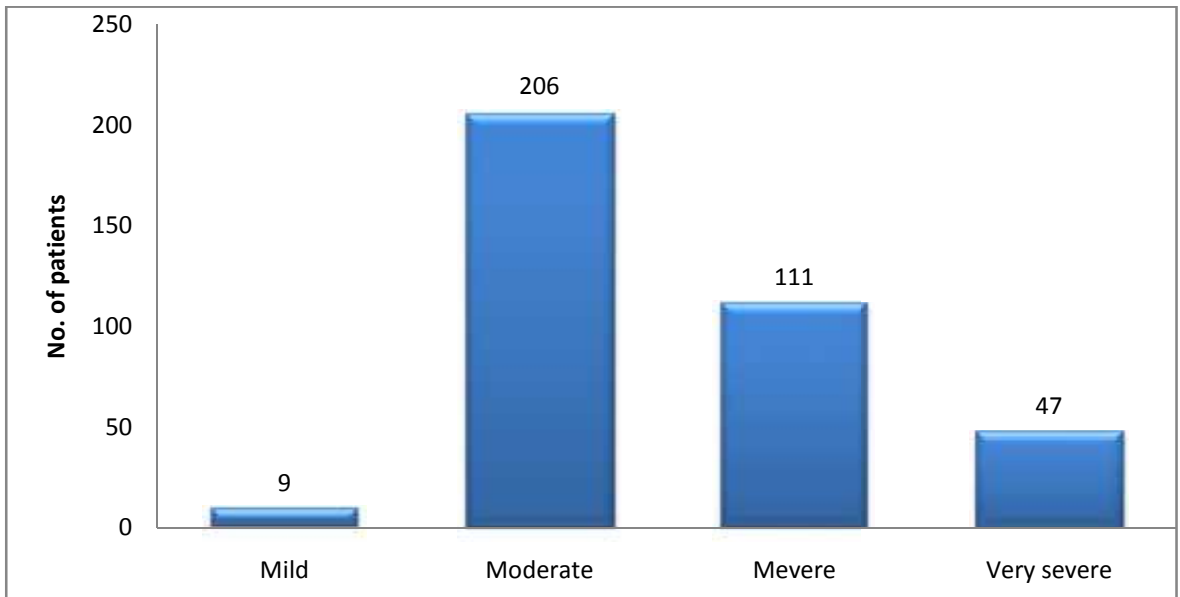


Figure 11: Comparison of mean of pruritus scores rated by patients using VAS and NRS (V1 and V2)

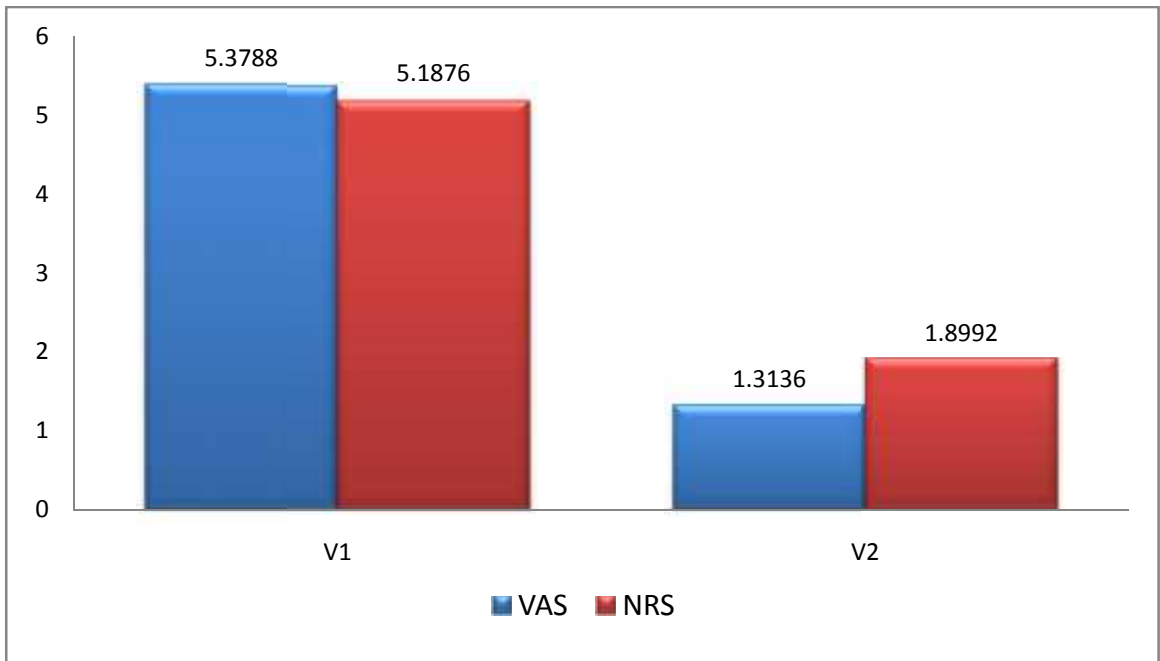
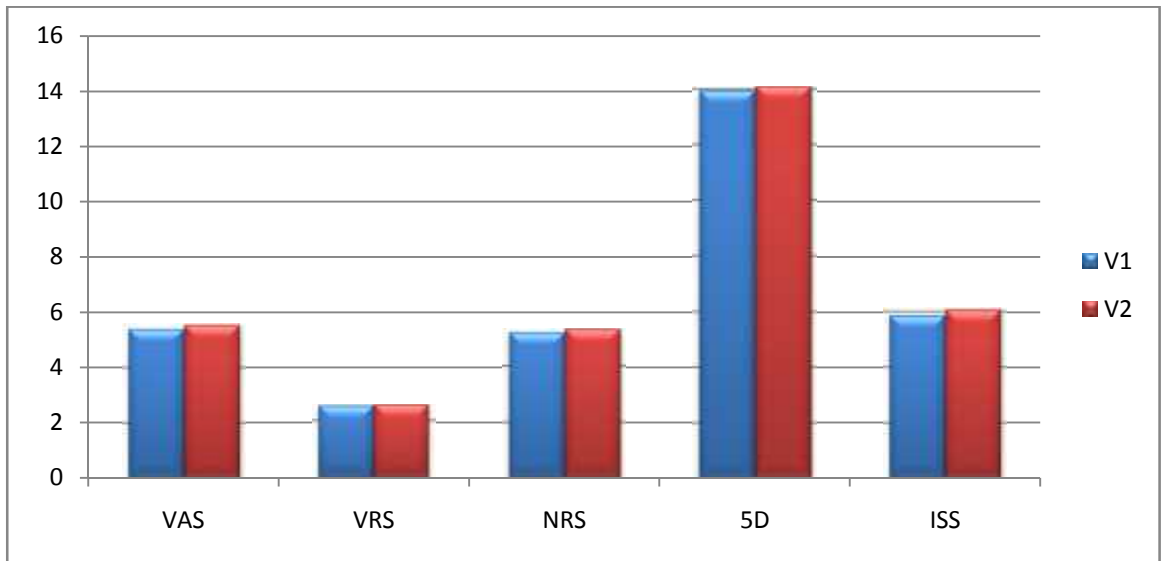


Figure 12: Comparison of mean of pruritus scores of all scales (V1 and V2)



The mean (\pm SD) of 5-D score obtained in the study group was 13.92 (\pm 2.74) with scores ranging between 8 and 19.75. Scores of each of the five domains were assessed separately and the results are as follows;

- Duration of itch: Total 161 patients (43.1%) marked duration of itch as 6 – 12 hours and about 18 patients marked it as 24 hours. This has been presented in figure 13.
- Degree of itch: According to 5D, 15 patients had “mild itch”, 162 had “moderate”, 146 had “severe” and remaining 49 had “unbearable” as shown in figure 14.
- Direction of itch: When patients were asked about direction of itch over the past 2 weeks, they responded as follows;
 - “Much better, but still present” in 103 patients,
 - “Little bit better, but still present” in 54 patients,
 - “Getting worse” in 46 patients,
 - “Unchanged” in 170 patients. It has been shown in figure 15.

- Disability due to itch: Upto 80.1% patients had atleast some affect on sleep, among them,
 - “Occasional delay in falling asleep” was seen in 83 patients,
 - “Frequent delay in falling asleep” in 109,
 - “Delay in falling asleep and occasional wake up at night” in 75,
 - “Delay in falling asleep and frequent wake up at night” in 32, and
 - “No effect on sleep” was seen in 74.

This has been presented in figure 16.

About 76.67% of patients had an effect of itch on “leisure” or “social activities” and 53.08% had effect on “household works” or “errands”. Only 36.73% of patients had effect of itch on their “work”. Figure 17 shows prevalence of disability due to itch among the study subjects.

- Distribution of itch: In distribution domain, the number of affected body parts is tallied (potential sum 0–16) and the sum is sorted into five scoring bins:
 - Sum of 0–2 = score of 1,
 - Sum of 3–5 = score of 2,
 - Sum of 6–10 = score of 3,
 - Sum of 11–13 = score of 4, and
 - Sum of 14–16 = score of 5.

In study, 364 subjects (97.5%) had a score of more than 2.

Figure 13: Duration of itch

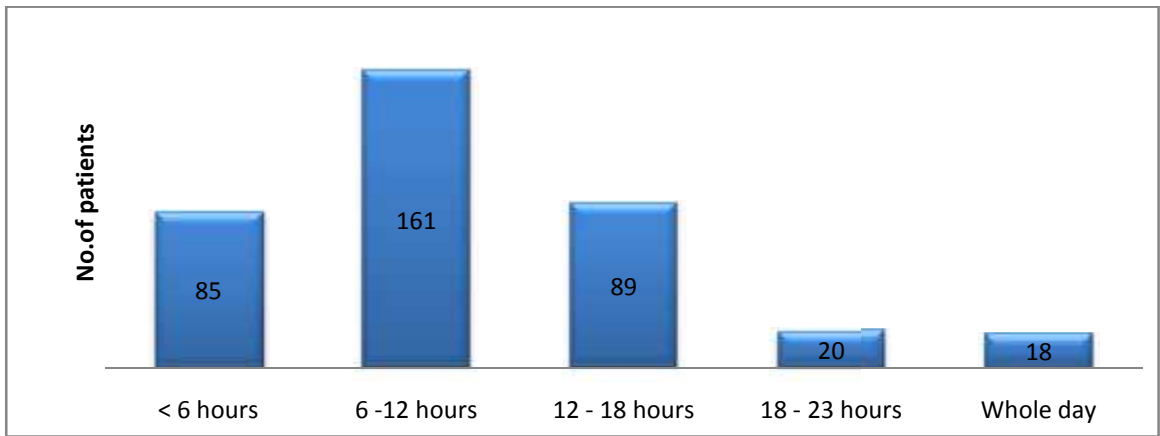


Figure 14: Degree of itch

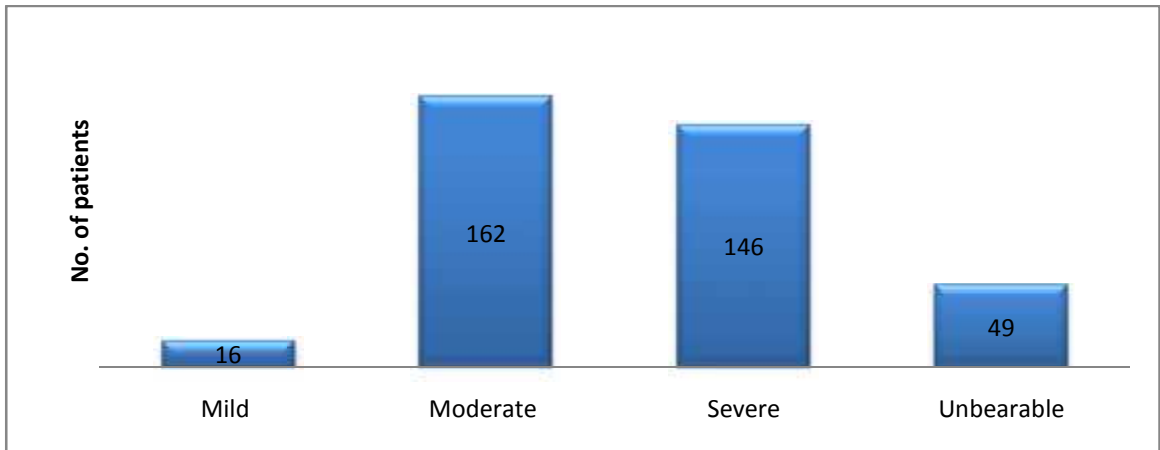


Figure 15: Direction of itch over past 2 weeks

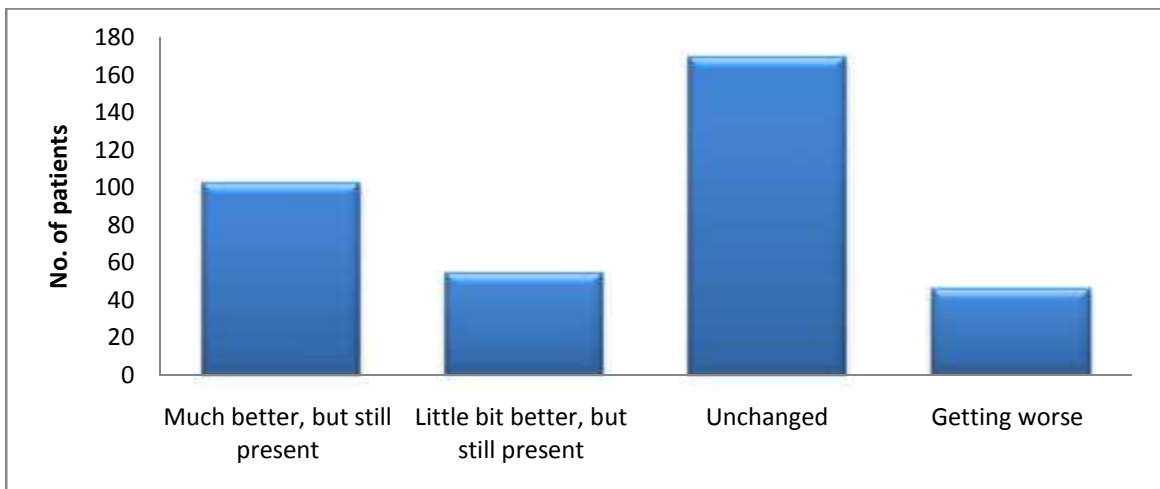


Figure 16: Effect on sleep

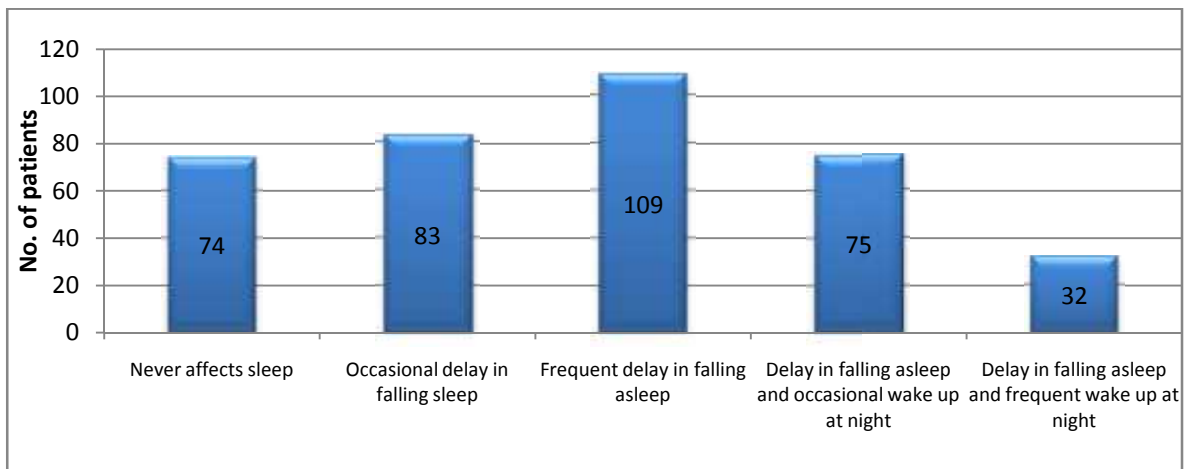
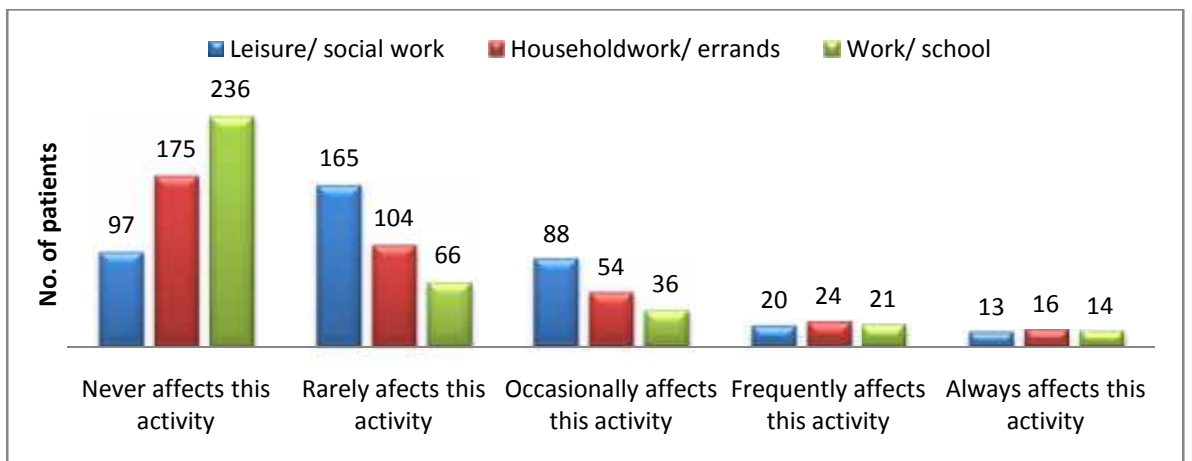


Figure 17: Disability due to itch



The mean (\pm SD) of ISS obtained in the study group was 6.3545 (\pm 2.5294) with scores ranging between 2.151 to 12.801. The assessments of 7 different components of ISS are as follows;

- Frequency of appearance of itch at various parts of the day: Patients who reported as;
 - “Always itchy” had predominance of itching during night,
 - “Often itch” or “occasional itch” had predominance during noon and evenings. This distribution has been shown in figure 18.

- Description of itch: Majority of patients expressed sensory pruritus component as ‘burning’ and ‘stinging’, except a few who described it as ‘stabbing’. This has been presented in figure 19. In the affective component, more patients described it as ‘annoying’ as compared to ‘unbearable’ and ‘worrisome’.
- Areas involved: Since the study had included patients with generalized pruritus, the score of more than 0.6, i.e > 60% of body surface area involvement was present in 58.71% patients at presentation.
- Intensity of itch: The intensity of itch was assessed as;
 - “Itch in its best state”, where patients had predominantly mild or no itch.
 - “Itch in its average state”, patients had moderate or strong itch
 - “Itch in its worst state”, patients had strong or very strong itch.

The patients’ assessment of intensity of itch has been shown in figure 20.

- Mood changes: About 9.12% of patients had change in mood due to chronic itch. Among these patients, 8 patients described it as “more agitated”, 15 as “difficulty in concentration” and 11 felt “depressed”. The effect of pruritus on patients’ mood has been shown in figure 21.
- Effect on sexual desire and function: Only 6 patients in the study group revealed to have decreased sexual desire, but none had change in their sexual function.
- Sleep disturbance and intake of sleep-inducing medications: Majority of the patients complained of;
 - “Difficulty in falling asleep due to itch” as “sometimes” or “almost always”
 - “Awakening due to itch” more often as “only sometimes”.

About 10 patients gave history of intake of sleep-inducing medications. The effect of pruritus on sleep of patients has been shown in figure 22.

Figure 18: Frequency of appearance of itch at various parts of the day

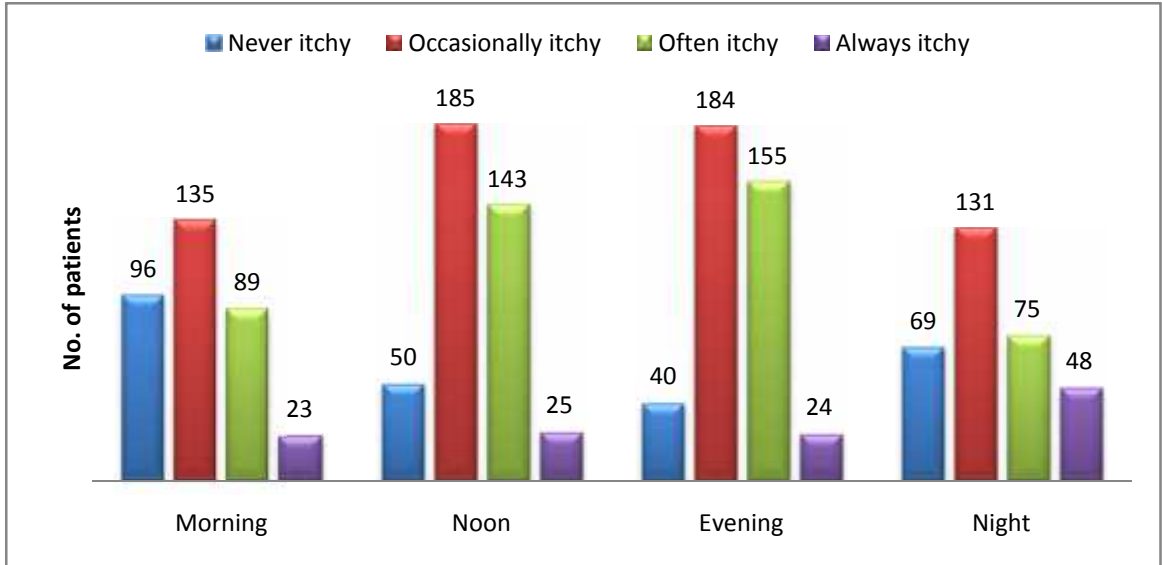


Figure 19: Description of itch

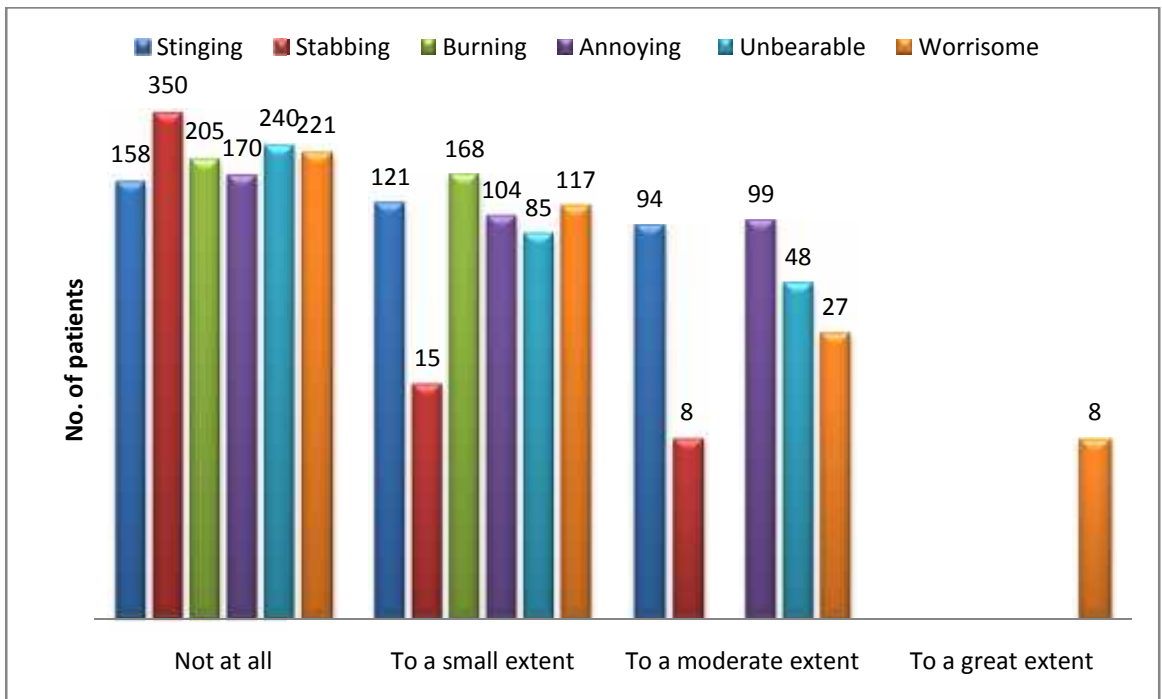


Figure 20: Intensity of itch

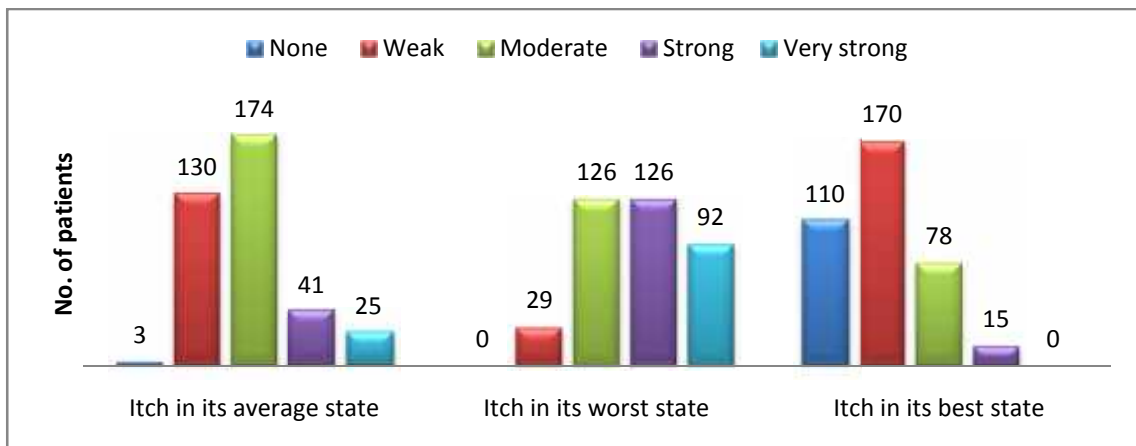


Figure 21: Mood changes of patients with pruritus

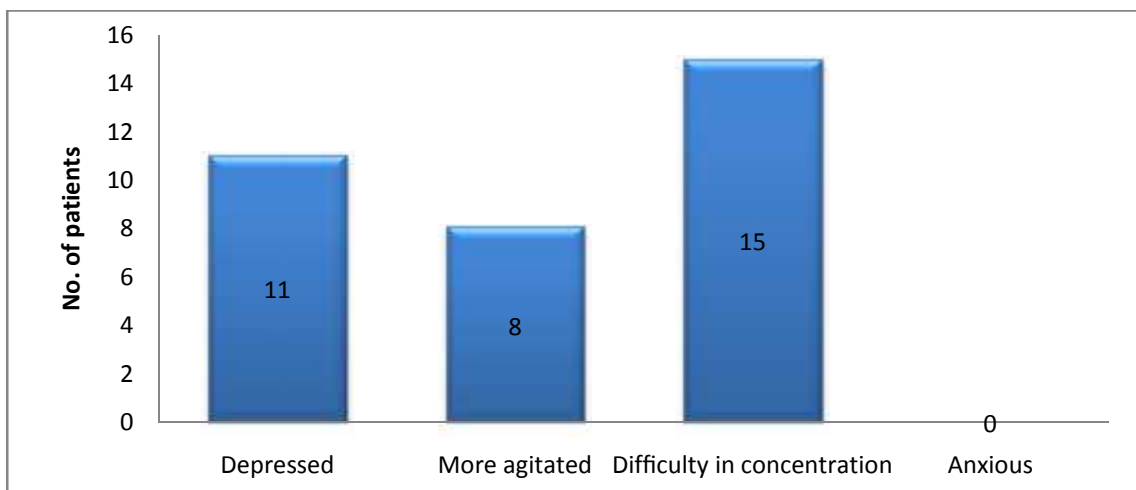
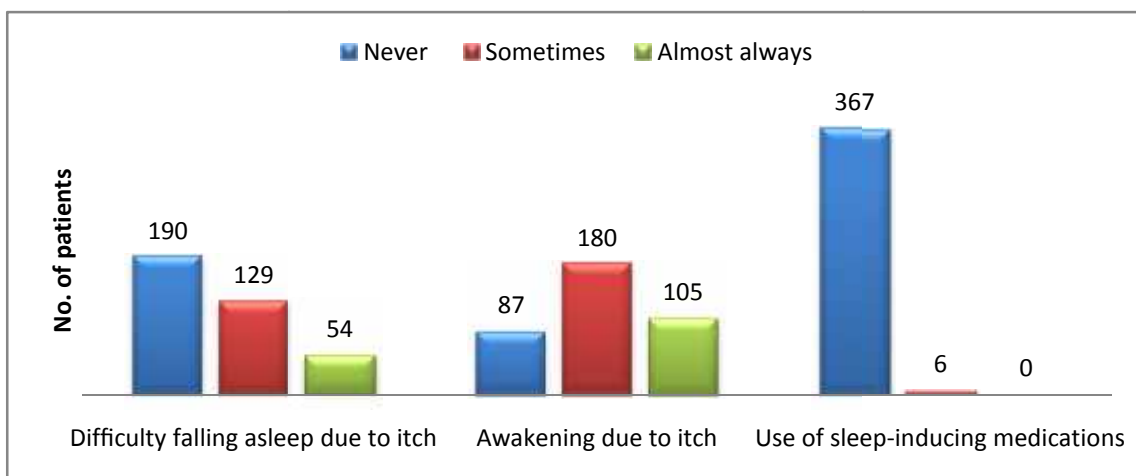


Figure 22: Effect of pruritus on patients' sleep



Comparison of various scales for pruritus assessment

Validity of unidimensional scales

Correlation of VAS, NRS and VRS by Pearson's correlation coefficient showed statistically significant higher values ($r > 0.7$; $p < 0.01$) (table 20). In particular, correlation of VAS with NRS showed high correlation coefficients ($r > 0.8$; $p < 0.01$) at each visit (V1–V3). In addition to the Pearson's correlation coefficient, Cronbach's α showed qualitatively similar high values. Least correlation among the three is seen with NRS and VRS.

The data of first (V1) and third (V3) reading has been plotted graphically in figures 23 to 28. Graphical representation has been done to show the level of linear relationship between the two variables. In these graphs, the R-square values between VAS and NRS (both V1 and V3) is very high and thus explains the high correlation coefficient.

Table 20: Validity of unidimensional scales

n	Visit	VAS -VRS		VAS-NRS		VRS-NRS	
		Pearson's correlation coefficient	Cronbach's α	Pearson's correlation coefficient	Cronbach's α	Pearson's correlation coefficient	Cronbach's α
373	V1	0.8015	0.6806	0.8608	0.9238	0.7571	0.6801
339	V2	0.7768	0.6745	0.8563	0.9221	0.7508	0.6730
139	V3	0.9168	0.8769	0.9390	0.9639	0.8858	0.8918

Figure 23: Correlation of VAS with VRS (V₁)

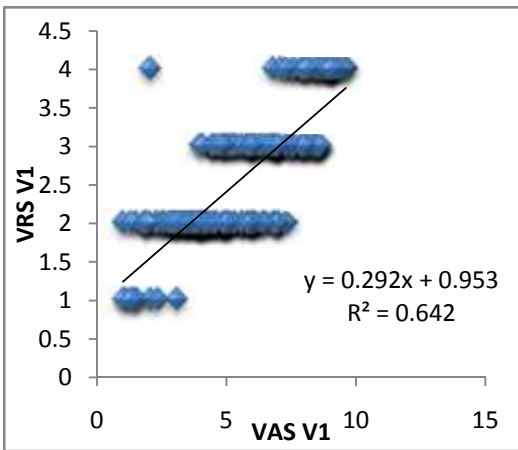


Figure 24: Correlation of VAS with VRS (V₃)

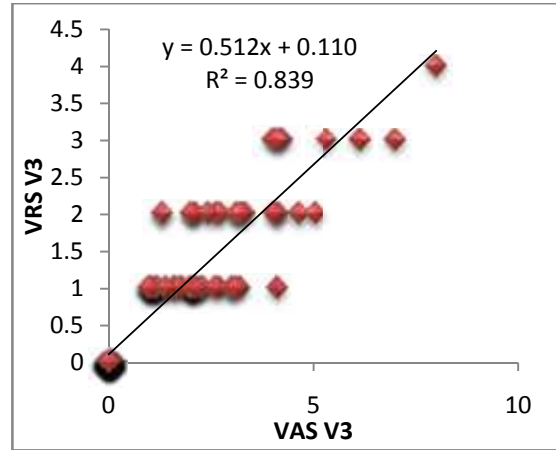


Figure 25: Correlation of VRS with NRS (V₁)

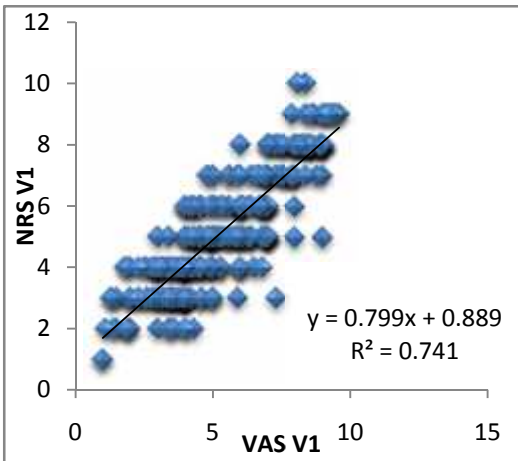


Figure 26: Correlation of VAS with NRS (V₃)

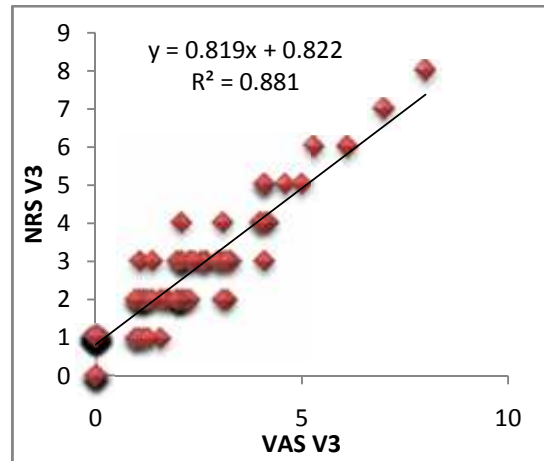


Figure 27: Correlation of VRS with NRS (V₁)

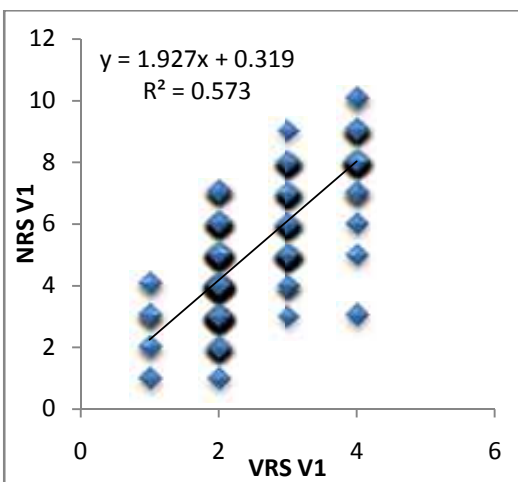
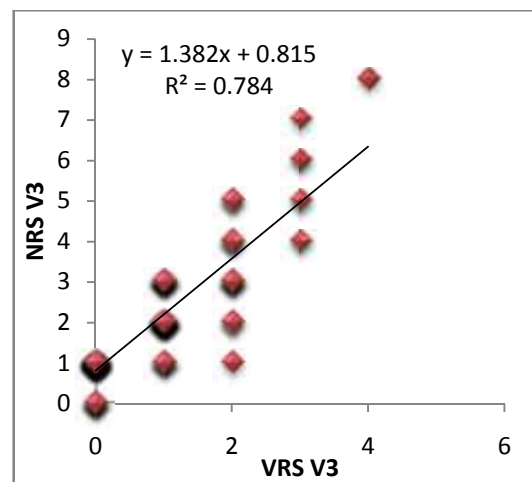


Figure 28: Correlation of VRS with NRS (V₃)



Validity of multidimensional scales

Correlation of 5D and ISS by Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$). This has been presented in table 21. The internal consistency measure, Cronbach's α also showed qualitatively similar high values.

The values have been graphically represented in figures 29 and 30.

Table 21: Validity of multidimensional scales

		5D-ISS	
N	Visit	Pearson's correlation coefficient	Cronbach's α
373	V1	0.7291816	0.841774716
338	V2	0.7108293	0.828726192
139	V3	0.8199368	0.819407456

Figure 29: Correlation of 5D with ISS (V₁)

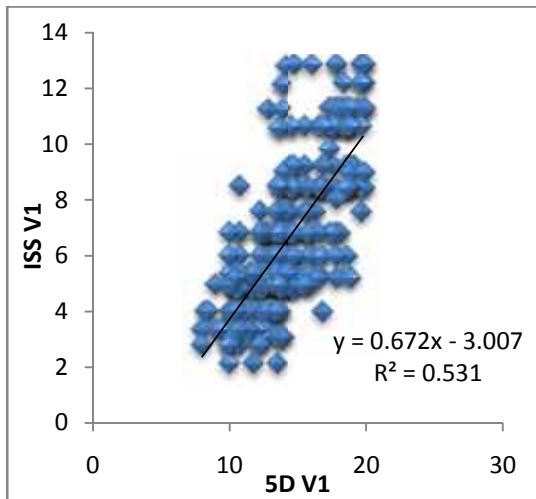
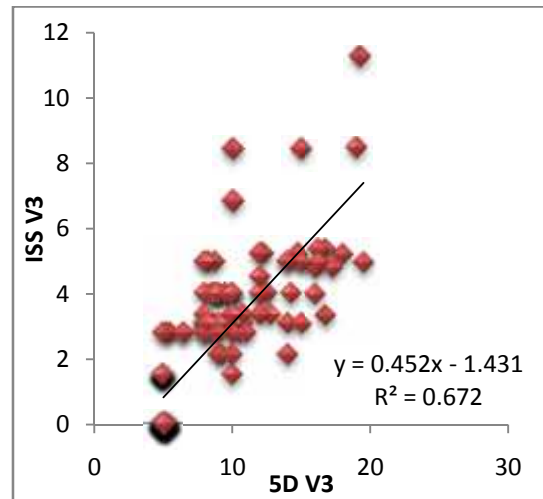


Figure 30: Correlation of 5D with ISS (V₃)



Comparison between multidimensional and unidimensional scales

Validity

The validity of 5D and ISS with various unidimensional scales has been shown in tables 22 and 23 respectively.

- Correlation of all unidimensional scales with 5D by Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$). Cronbach's α showed qualitatively similar high values also.
- Correlation of all unidimensional scales with ISS by Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$). In addition, Cronbach's α showed qualitatively similar high values.

Among all these scales, correlation of VAS with both 5D and ISS showed highest correlation coefficients ($r > 0.7$; $p < 0.01$) at each visit (V1–V3). VRS showed comparatively lower values of correlations.

The graphical representation of correlation between unidimensional and multidimensional scales has been shown in figures 31 to 42. The R-square value of graph between VAS with 5D and ISS was high, which was similar to correlation coefficient achieved. The R-square value of graph between VRS with 5D and ISS was comparatively low.

Table 22: Validity of 5D and unidimensional scales

n	Visit	VAS-5D		VRS-5D		NRS-5D	
		Pearson's correlation coefficient	Cronbach's α	Pearson's correlation coefficient	Cronbach's α	Pearson's correlation coefficient	Cronbach's α
373	V1	0.8062	0.8711	0.7357	0.5411	0.7597	0.8303
338	V2	0.7952	0.8585	0.7147	0.5245	0.7606	0.8299
139	V3	0.9078	0.7731	0.8531	0.5308	0.8341	0.6867

Table 23: Validity of ISS and unidimensional scales

n	Visit	VAS-ISS		VRS-ISS		NRS-ISS	
		Pearson's correlation coefficient	Cronbach's α	Pearson's correlation coefficient	Cronbach's α	Pearson's correlation coefficient	Cronbach's α
373	V1	0.7984	0.8763	0.7094	0.5542	0.7154	0.8138
338	V2	0.7775	0.86071	0.6952	0.5459	0.7089	0.8107
139	V3	0.8893	0.91594	0.8407	0.7412	0.8257	0.8563

Figure 31: Correlation of VAS with 5D (V₁)

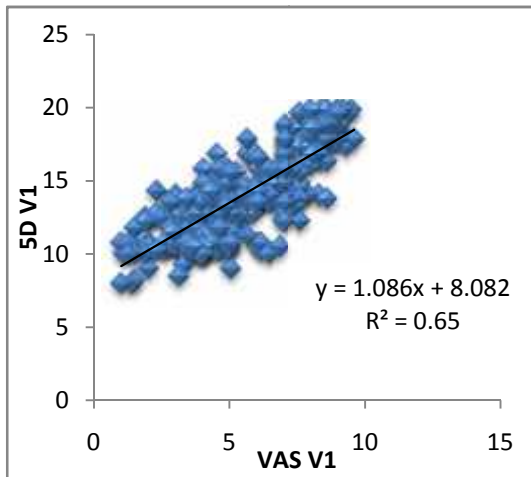


Figure 32: Correlation of VAS with 5D (V₃)

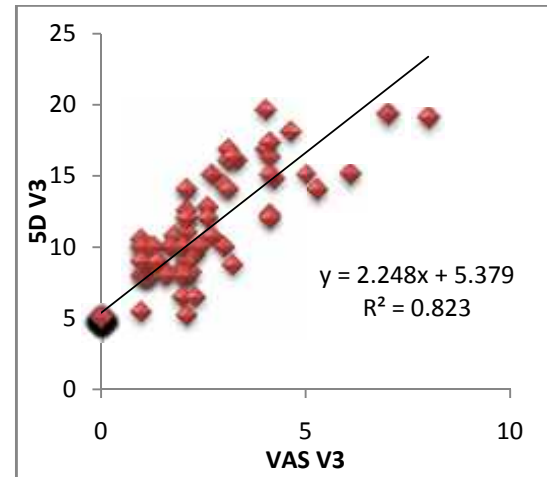


Figure 33: Correlation of VAS with ISS (V₁)

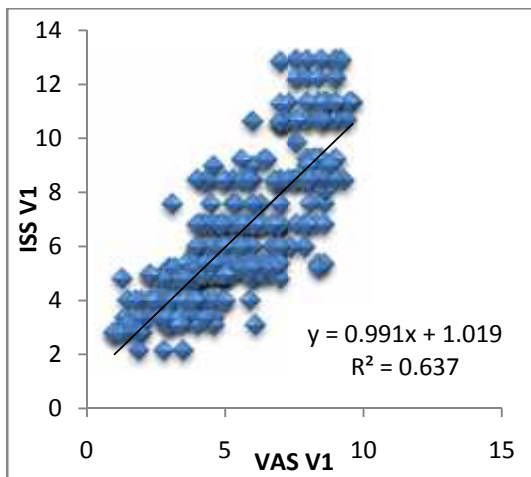


Figure 34: Correlation of VAS with ISS (V₃)

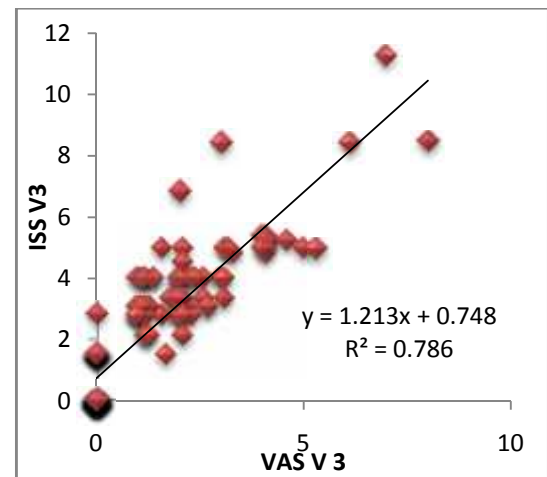


Figure 35: Correlation of VRS with 5D (V₁)

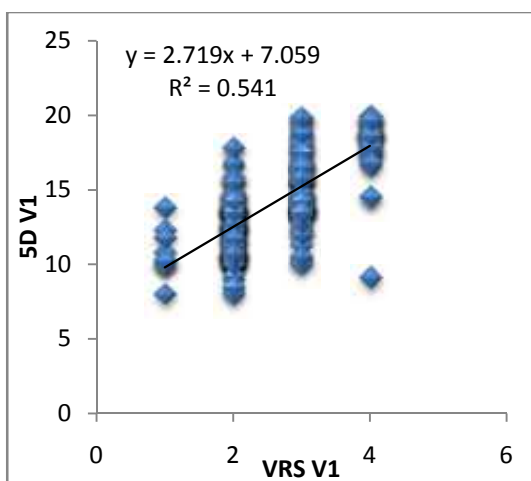


Figure 36: Correlation of VRS with 5D (V₃)

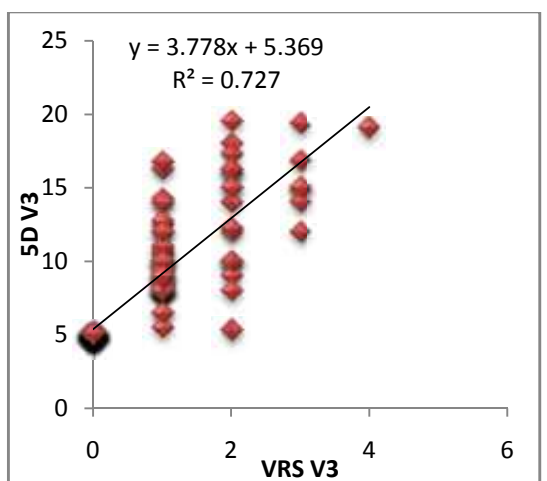


Figure 37: Correlation of VRS with ISS (V₁)

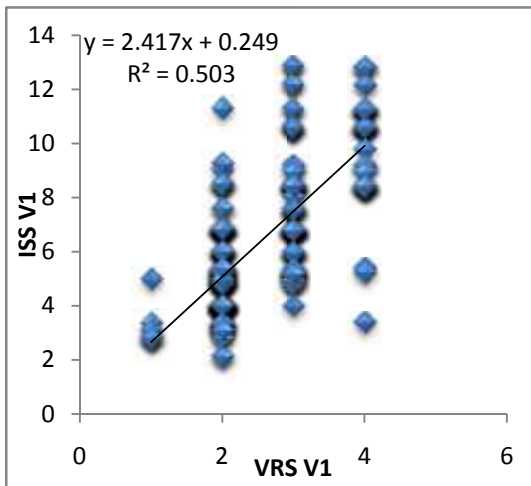


Figure 38: Correlation of VRS with ISS (V₃)

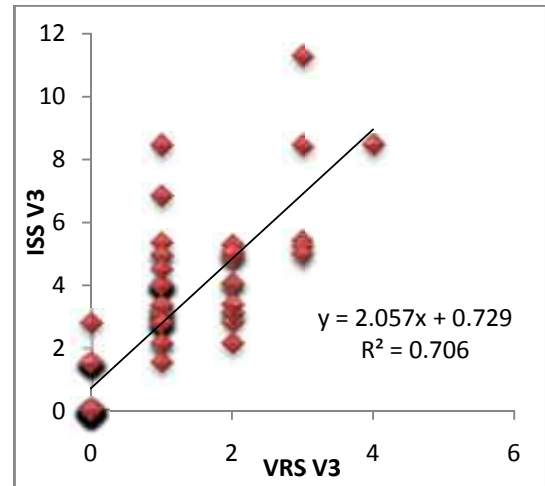


Figure 39: Correlation of NRS with 5D (V₁)

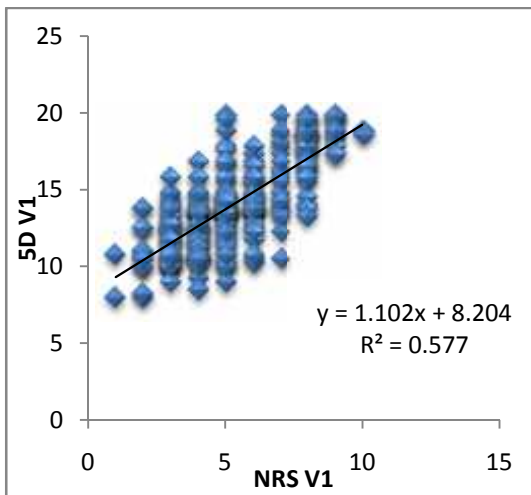


Figure 40: Correlation of NRS with 5D (V₃)

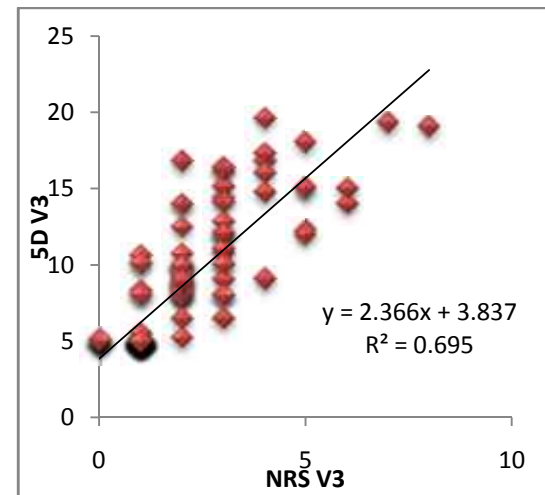


Figure 41: Correlation of NRS with ISS (V₁)

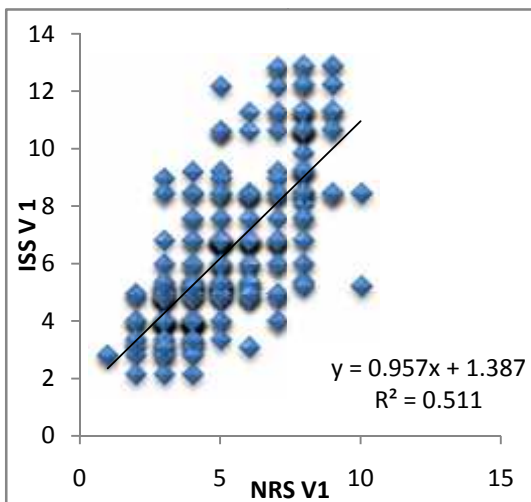
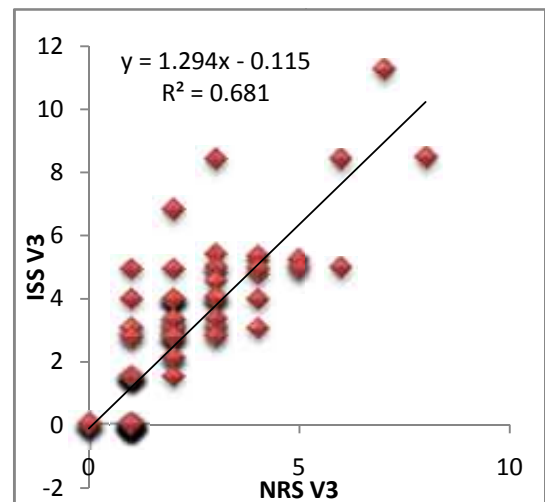


Figure 42: Correlation of NRS with ISS (V₃)



Reliability of unidimensional and multidimensional scales

All scales showed very good test retest reliability in the defined study settings ($p < 0.001$) (table 24).

- Among the tested unidimensional scales, the highest intra-class correlation coefficient (ICC) value (ICC = 0.995) was observed when pruritus was evaluated by NRS.
- Among the tested multidimensional scales, the highest ICC value (ICC = 0.995) was observed when pruritus was evaluated by ISS.

So, NRS and ISS have high reproducibility under unidimensional and multidimensional scales respectively.

Table 24: Reliability of unidimensional and multidimensional scales

	VAS	VRS	NRS	5D	ISS
V1	5.378 ± 2.035	2.525 ± 0.742	5.187 ± 1.890	13.926 ± 2.743	6.354 ± 2.529
V2	5.524 ± 1.949	2.572 ± 0.727	5.321 ± 1.871	14.093 ± 2.732	6.534 ± 2.481
ICC (V1 & V2)	0.992 ($p < 0.0001$)	0.992 ($p < 0.0001$)	0.995 ($p < 0.0001$)	0.994 ($p < 0.0001$)	0.995 ($p < 0.0001$)

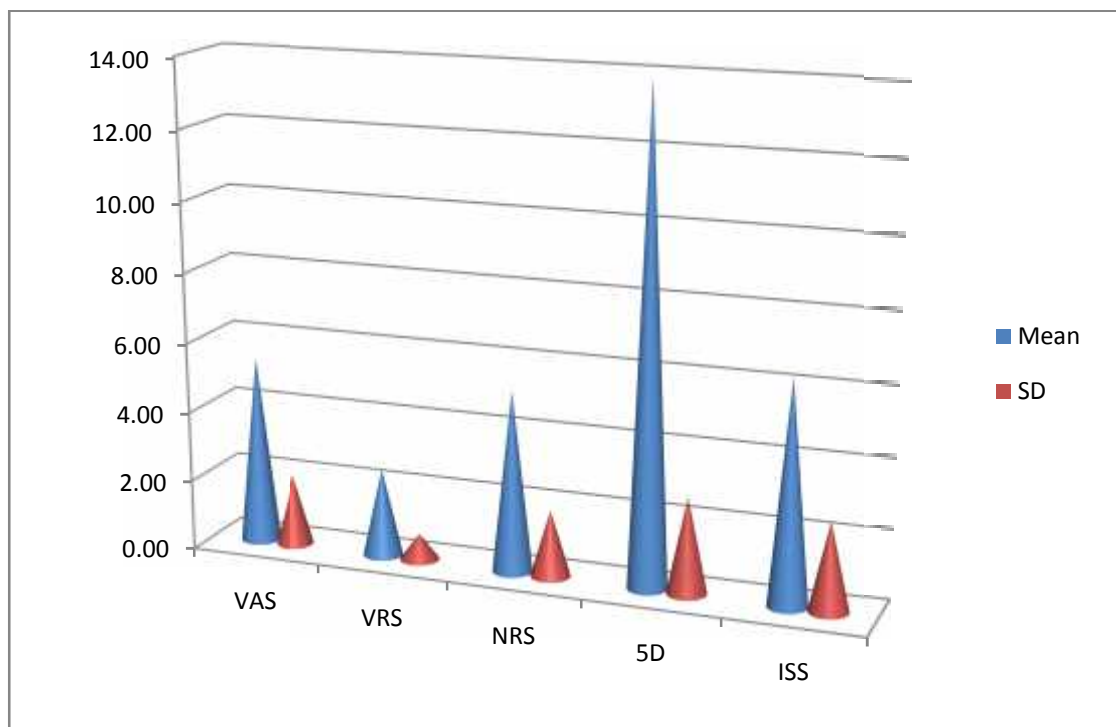
(ICC- intra-class correlation coefficient)

Standard deviation obtained from various scales has been shown in figure 43.

Among unidimensional scales, VRS had the least standard deviation of 0.742 and in

multidimensional scales, ISS had the least standard deviation of 2.529. So, accordingly VRS and ISS are most reliable scales from the study.

Figure 43: Comparison of mean (\pm SD) values of all scales



DISCUSSION

Pruritus being the predominant symptom of skin and systemic diseases has now gained attention, after years of relative neglect.² Though pruritus is universal, the prevalence of chronic pruritus is unknown. A study conducted in United Kingdom has recorded prevalence of pruritus to be approximately 20%.² In another community-based Norwegian study, the prevalence of pruritus in adults was found to be 8.4%.⁴³

Epidemiological data on pruritus are limited. The incidence of pruritus in patients over 50 years of age was reported to be 29%.⁵ In the present study, 28.4% patients with chronic pruritus were older than 60 years. So, frequency and severity-wise pruritus is more in the elderly. In a study including 132 German patients with pruritus, 73 were women, with mean (\pm SD) age 54.5 (\pm 18.1) years.⁴³ In the present study, patients had a mean (\pm SD) age of 48 (\pm 13.8) years, with male to female ratio of 1.34:1.

In a recently conducted retrospective study, 35.6% of patients with generalized pruritus had an underlying systemic disease and in 7.6% the underlying cause was unknown.² In the present study, 75.6% patients had pruritus of cutaneous origin, 16.08% had underlying systemic disease and in 0.08% cases the cause could not be detected. In a study of German patients most frequent cutaneous cause of generalized pruritus was prurigo, followed by urticaria, cutaneous T-cell lymphoma, scabies and bullous disease. Among systemic causes, renal diseases, systemic lymphoma and hepatic diseases were common.⁴³ In this study common cutaneous causes of generalized chronic pruritus were chronic urticaria, scabies, prurigo, atopic dermatitis, senile xerosis, and winter xerosis. About 26 patients had underlying anemia, 16 patients developed pruritus secondary to drug intake, 4 had cholestatic

pruritus, 3 patients had uremic pruritus, 7 had underlying HIV infection, and 4 patients were pregnant. All the patients with clinical diagnosis of anemia had hemoglobin level less than 8g/dl. In published english literature, the commonest drug giving rise to chronic pruritus was hydroxyethyl starch, followed by statins, antimalarials, penicillins, and angiotensin-converting enzyme inhibitors.³⁵ In the present study, nevirapine and ethambutol were the most common drugs giving rise to chronic pruritus.

Assessment of pruritus intensity

Pruritus is a subjective feeling, the objective measurement of its intensity is difficult.⁸ In clinical studies on pruritus it is always recommended to use at least two independent scales of itch assessment.⁸ However, this recommendation is too time-consuming for daily clinical use, and a simple and reliable method of itch intensity measurement is highly desirable.⁸

Unidimensional scales

VAS is considered as one of the most commonly used methods of pruritus severity assessment, as it provides an easy and rapid estimation of itch.⁸ The limitations of VAS are it is difficult for some patients to understand, need to transform a graphic result to a metric one, and it does not take into account other aspects of pruritus, such as the relative impact of pruritus on quality of life.^{6,8} Despite its historical use, the ability of the VAS to detect changes over time has never been validated.⁶

In a study of 471 randomly selected patients with chronic pruritus, total of 189 patients (40.1%) reported having low intensity (“1”) pruritus, 174 patients

(37.0%) moderate (“2”) pruritus, and 38 patients (8.1%) severe (“3”) on VRS scale.⁴ In another study comprising 162 Asian subjects with pruritus, 74 (45.7%) had mild, 53 (32.7%) moderate, 25 (15.4%) severe, and 10 (6.2%) had very severe itching based on VRS.⁸ In the present study, following VRS, 9 (2.41%) patients had mild, 206 (55.22%) moderate, 111 (29.75%) severe, and the remaining 47 (12.6%) had very severe pruritus at initial presentation.

NRS is usually considered as a verbal version of VAS, but the results obtained with NRS cannot be directly compared with VAS scoring. In the present study, patients rated pruritus slightly higher on VAS than NRS in their first assessment. In another study including 310 patients, pruritus was rated significantly higher with NRS [5.7 (\pm 2.6)] than with VAS [5.3 (\pm 2.9)], an observation made by other authors also during pain assessment.⁸ In the present study after 6 weeks, mean (\pm SD) value of NRS was significantly higher as compared to VAS. Pruritus intensity may vary significantly even in the same day; hence test retest comparison was performed on the same day with a 3-hour interval between the first and the second completion of the questionnaire in order to minimize the circadian changes of the pruritus intensity. In the present study, the mean (\pm SD) value of second reading (V2) after 3 hours was higher in VAS, NRS, and VRS compared to the initial assessment (V1). In a study by Reich et al⁸, V1 was higher than V2 among unidimensional scales. Slight increase in the second pruritus scoring also indicates that study subjects probably did not remember their previous answers.

Multidimensional scales

More than just an annoyance, chronic pruritus significantly reduces quality of life and may ultimately lead to severe disability. Its sequelae include sleep or work

disturbance, mood changes, embarrassment, prolonged wound healing, and secondary skin changes.⁶ Unidimensional scales provide information about itch intensity only, thus multidimensional assessment tools are more suitable, if more detailed evaluation of pruritus is needed, as these can provide comprehensive information about various aspects of pruritus. However, these instruments are usually considered to be too lengthy and not suited for repeated assessments, especially in clinical settings. Moreover, these may require some psychometric expertise and time for proper interpretation.⁸

5D scale

The 5-D itch questionnaire was found to be a measure of itch that is brief, easy to complete, easy to score (either manually at bedside or electronically as a part of large clinical trial), sensitive to the multidimensional nature of pruritus and its effect on quality of life. 5D has 3 single item domains (duration, degree and direction), the disability domain (impact of itching on daily activities: sleep, leisure/social activities, household work/errands and work/school), and the distribution domain. In a study conducted for validation of 5D scale in the United States of America, the mean (\pm SD) of 5-D score obtained was 16.5 (\pm 4.75) with scores ranging between 7 and 25.⁶ In the present study, the mean (\pm SD) of 5-D score was lower [13.92 (\pm 2.74)] with scores ranging between 8 to 19.75. Majority of the patients had itch-duration of 6 – 12 hours. About 82.57% patients had moderate to severe itching. As most of the patients with chronic pruritus were treated earlier, when asked about the direction of itch over the last 2 weeks, whether improved or worsened as compared to the previous month, majority responded as “unchanged”. In the study by Elman et al,⁶ 75% of the responders had at least some effect of itching on “sleep”,

35.9% on “leisure/social activities”, 31.2% on “house-hold work/errands”, and 14.5% on “work/school”. In the present study, 80.1% patients had effect on “sleep”, 76.67% on “leisure” or “social activities”, 53.08% on “house-hold work” or “errands” and 36.73% on their “work”. So, higher number of patients suffered from one or the other disability. Finally, in the distribution domain, 97.5% of the patients had a score of more than 2, which implied more than 3 body parts were affected.

ISS

ISS is another multidimensional scale which quantifies pruritus severity and the associated patient burden. In the study by Zachariae et al⁴⁴, the mean (\pm SD) total ISS score was 9.7 (\pm 3.9). In the present study, mean (\pm SD) of ISS obtained was 6.3545 (\pm 2.5294) with scores ranging between 2.151 to 12.801, which was much lower.

Comparison between pruritus intensity scales

Validity and reliability of various scales were evaluated to compare between various scales of pruritus intensity. Test re-test reliability was calculated to know the reproducibility of various scales in a gap of three hours.

Validity

Validity (accuracy, adjustment) measures how well the scale correlates with other (ideally gold standard) measures of the same variable. For this analysis, as no particular scale was considered a gold standard, Pearson’s correlation coefficients were estimated between the three instruments used to measure pruritus intensity. Validity also helps to know the extent to which a particular measure performs in accordance with theoretical expectations. So, it can be expected that the scores of

VAS, NRS and VRS all increase with pruritus intensity. Correlations measured with Pearson's correlation coefficient (r) were interpreted in the study by Majeski CJ et al¹ as follows: $r \leq 0.3$ was interpreted as a weak correlation, $0.3 < r < 0.5$ as a moderate correlation, and $r \geq 0.5$ as a strong correlation.

In the study by Phan et al⁴, correlation of VAS, NRS and VRS by Spearman's correlation coefficient showed statistically significant high values. In particular, correlation of VAS with NRS showed high correlation coefficients ($r > 0.8$; $p < 0.01$) at each visit (V1–V3). After repeat assessment, higher correlations observed. In addition to the Spearman's correlation coefficient, Cronbach's alpha also showed qualitatively similar high values. In the present study, correlation of VAS, NRS and VRS by Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$). Among them, correlation of VAS with NRS showed higher correlation coefficients ($r > 0.8$; $p < 0.01$) at each visit (V1–V3), followed by VAS and NRS, and least correlation was seen with NRS and VRS. In addition to the Pearson's correlation coefficient, Cronbach's alpha showed qualitatively similar high values. In the study by Reich et al⁸, the highest correlation was observed between VRS and NRS ($r > 0.82$; $p < 0.001$).

Among multidimensional scales, in a study by Elman et al⁶, the 5-D score correlated strongly with the VAS score at each observation. The Pearson's correlation coefficients were $r = 0.727$ at baseline ($p < 0.0001$), $r = 0.868$ at the 3rd day observation ($p < 0.0001$), and $r = 0.892$ at 6-weeks follow-up ($P < 0.0001$). In the present study, correlation of all the unidimensional scales with 5D by Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$). Cronbach's alpha showed qualitatively similar high values also. Among these scales, correlation of VAS with 5D showed highest correlation coefficients, [$r = 0.8062$ ($p <$

0.01)] at V1, [$r = 0.7952$ ($p < 0.01$)] at V2, and [$r = 0.9078$ ($p < 0.01$)] at V3. 5D scales also correlated well with ISS, Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$) at each visit (V1 – V3).

No studies were found regarding validation of ISS. In the present study, correlation of all unidimensional scales with ISS by Pearson's correlation coefficient showed statistically significant high values ($r > 0.7$; $p < 0.01$). In addition, Cronbach's alpha showed qualitatively similar high values. Among them, correlation of VAS with ISS showed highest correlation coefficients ($r > 0.7$; $p < 0.01$) at each visit (V1–V3).

Test-retest reliability

As pruritus intensity varies over the day and is influenced by factors such as mood, treatment, and activity level, test-retest reliability was estimated one to three hours after the first assessment. In general, test-retest reliability coefficients above 0.9 are considered as high, and between 0.7 and 0.8 are considered as acceptable for research tools.

In the study by Phan et al⁴, statistical correlation of the assessment results at one hour time interval showed high values between 0.74 and 0.80. The NRS showed the best test-retest reliability, with an intra-class correlation coefficient (ICC) of 0.801. The ICC of VAS was 0.749 and that of VRS was 0.740. Similarly, in present study, all scales showed very good test-retest reliability in the defined study settings. Among them, the highest ICC value (ICC = 0.995) was observed when pruritus was evaluated by NRS. The ICC of VAS was 0.992 and that of VRS was 0.992. In the study by Reich et al⁸, among the tested scales, the highest ICC value (ICC = 0.88) was observed when pruritus was evaluated by horizontally-oriented VAS.

In the study by Elman et al⁶, the ICC between the 5-D score obtained on day 1 and day 3 was 0.96, indicating a highly significant correlation ($p < 0.0001$). Similar

highly significant results were seen in the present study, [ICC = 0.994 (p<0.0001)]. However, among the multidimensional scales, the highest ICC value (ICC = 0.995) was observed when pruritus was evaluated by ISS.

Reliability

Reliability (consistency) of the scales was measured by the value of standard deviation obtained when scores of various scales were presented with mean. In the study by Riech et al⁸, the standard deviations of VAS was 2.6, those of VRS and NRS were 0.9 and 2.5 respectively. Similarly in present study, VRS had the least standard deviation of 0.742 among unidimensional scales. In the study by Zachariae et al⁴⁴, the standard deviation obtained was 3.9. In the study by Elman et al⁶, the standard deviation obtained was 4.75. In the present study, among multidimensional scales ISS had the least standard deviation (2.529). So, as per the results from the present study, VRS and ISS are the most reliable scales for measurement of pruritus.

CONCLUSION

Pruritus has manifold etiologies and should always be assessed with due caution, to avoid the chances of missing diagnoses of underlying disorder. Pruritus is an under-estimated symptom, especially if the quality of life of the affected patients is considered. In this regard, the patients with pruritus of unknown origin appear to suffer the most.

High validity and reliability in pruritus intensity assessment was shown not only by VAS, a traditional and widely used instrument, but also by VRS, NRS, 5D and ISS.

Patients consider NRS as a verbal version of VAS and the results of this study showed that higher correlation coefficients between VAS and NRS at each visit (V1–V3). In case of VRS, pruritus grading was dependent upon their effect on sleep, presence or absence of excoriations or marked insomnia and irritability. So, correlation of VRS with VAS and NRS was comparatively lower, but statistically significant correlation was found between all the unidimensional scales.

Among multidimensional scales, high correlation was found between 5D and ISS. The 5-D itch scale is a brief and multidimensional questionnaire. Patients answered all the single item domains (duration, degree, direction and distribution of itch) with ease and were comfortable with disability domain also, which included the impact of itching on daily activities: sleep, leisure/social activities, household work/errands and work/school. In case of ISS, it consists of 24 individual items forming 7 components: frequency, itch description, affected body surface area, intensity, effect on sleep, effect on mood, and effect on sexual desire/function. Patients had difficulty in understanding some aspects of the questionnaire and needed

more time for answering. However, ISS is a more detailed questionnaire which assesses morbidity of the patients with chronic pruritus thoroughly.

All scales showed very good reproducibility in the defined study settings. Statistically, NRS and ISS have higher ICC values under unidimensional and multidimensional scales respectively. VRS and ISS were the most reliable scales from the study as they had the least SD among unidimensional and multidimensional scales respectively.

All the scales used in the study are different in assessing the intensity of pruritus, as they cover various aspects. Therefore, it is recommended to use more than one scale and a combination of different scales to evaluate pruritus intensity. Moreover, it is preferable to have a training session for patients regarding use of VAS before starting a clinical trial. Using an unidimensional scale and a multidimensional scale together would be a better option for clinicians assessing pruritus intensity.

SUMMARY

A hospital-based, prospective study to compare the validity and reliability of unidimensional and multidimensional scales to assess pruritus intensity was conducted between October 2012 to August 2014. All patients of > 18years of age, presenting with generalized pruritus (of both dermatological and systemic origin) of > 6weeks duration were included in the study. Detailed history of pruritus, with reference to onset and duration of symptoms, recurrence, family history of atopy, and pre-existing medical illness, were taken from the patients. Each patient was subjected to a complete cutaneous and systemic examination.

Each patient was assessed thrice; twice at the first visit at interval of 1-3 hours (V1 and V2), and the third one after 6 weeks (V3).

Following are the salient findings of this study:

- Chronic pruritus was predominantly seen in patients above 60 years of age (28.4%). Male to female ratio was 1.34:1. Mean (\pm SD) age of the patients was 48 (\pm 13.8) years.
- In this study, 75.6% patients had pruritus of cutaneous origin, and underlying systemic disorders were present in 16.08% patients. Etiology remained undetected in 0.08% cases.
- Among cutaneous causes of generalized chronic pruritus, majority of the patients presented with chronic urticaria (21.17%) and scabies (17.42%). In patients with pruritus of systemic origin, anemia (6.97%) and drugs (4.28%) were common causes.

- Based on VRS, 9 (2.41%) subjects had mild, 206 (55.22%) had moderate, 111 (29.75%) had severe, and the remaining 47 (12.6%) had very severe pruritus at initial presentation.
- According to 5D scale, upto 80.1% patients had atleast some effect on “sleep”, 76.67% had effect on “leisure” or “social activities”, 53.08% had effect on “house-hold works” or “errands”, and in 36.73% patients, their “work” was affected.
- According to ISS, about 9.12% of patients had change in mood due to chronic itch. Of these patients, 8 patients described it as “more agitated”, 15 as “difficulty in concentration”, and 11 felt “depressed”.
- Correlation of all unidimensional and multidimensional scales showed statistically significant higher values. Among unidimensional scales, correlation of VAS with NRS showed higher correlation coefficients at each visit (V1–V3). In multidimensional scales, correlation of 5D and ISS showed statistically significant high values. In between all the scales, VAS showed better correlations with both 5D and ISS at each visit (V1–V3).
- All scales showed very good test re-test reliability in the defined study settings. NRS and ISS have high reproducibility under unidimensional and multidimensional scales respectively.
- Among the unidimensional scales, VRS had the least and among multidimensional scales, ISS had the least standard deviations. Accordingly, VRS and ISS are the most reliable scales, as derived from the results of this study.

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ANNEXURES



B.L.D.E. UNIVERSITY'S
SHRI.B.M.PATIL MEDICAL COLLEGE, BIJAPUR-586 103
INSTITUTIONAL ETHICAL COMMITTEE

INSTITUTIONAL ETHICAL CLEARANCE CERTIFICATE

The Ethical Committee of this college met on 18-10-2012 at 3-30 pm to scrutinize the Synopsis of Postgraduate Students of this college from Ethical Clearance point of view. After scrutiny the following original/corrected & revised version synopsis of the Thesis has been accorded Ethical Clearance.

Title "Hospital based prospective study to compare validity & reliability of unidimensional & multidimensional scales to assess pruritus intensity."

Name of P.G. student Dr Sanjay S. Desai

Dermatology

Name of Guide/Co-investigator Dr. Aparna Palit.

prof of Dermatology

DR. TEJASWINI VALLABHA
CHAIRMAN
INSTITUTIONAL ETHICAL COMMITTEE
BLDEU'S, SHRI.B.M.PATIL
MEDICAL COLLEGE, BIJAPUR.

Following documents were placed before E.C. for Scrutinization

- 1) Copy of Synopsis/Research project.
- 2) Copy of informed consent form
- 3) Any other relevant documents.

PROFORMA:

SCHEME OF CASE TAKING

B.L.D.E.U's SHRI B. M. PATIL MEDICAL COLLEGE HOSPITAL AND

RESEARCH CENTRE, BIJAPUR.

Department of Dermatology, Venereology and Leprosy.

Name: SL NO:
Age Date:
Sex IP NO/ OP NO:
Occupation:
Address:

1. Chief complaints:
2. Presenting features :

Symptoms with duration

Malaise: YES/NO Fatigue: YES/NO
Drowsiness / confusion: YES/ NO
Edema of hands and feet: YES/NO
Passing dark urine/ pale stools
Anxiety: YES/NO Depression: YES/NO
Hoarse voice: YES/NO Constipation: YES/NO
Intolerance to heat: YES/NO Intolerance to cold: YES/NO
Loss of appetite: YES/NO Loss of weight: YES/NO
Tingling/ numbness: YES/NO Loss of balance: YES/NO

3. Any history of atopy in the family YES/NO

4. Past history:

Diabetes mellitus: YES/NO

Hypertension: YES/NO

Hyper/hypothyroidism: YES/NO

Asthma: YES/NO

Drugs: YES/NO

If YES, Name of the drug -

Others:

5. General Physical Examination:

Weight:

BP:

Pulse rate:

Pallor:

Koilonychia:

Cyanosis:

Icterus:

Clubbing:

Lymphadenopathy:

Edema:

Tremor:

6. Cutaneous examination :

7. Systemic Examination

Cardiovascular system :

Respiratory system :

Central nervous system :

Abdominal examination :

8. Diagnosis:

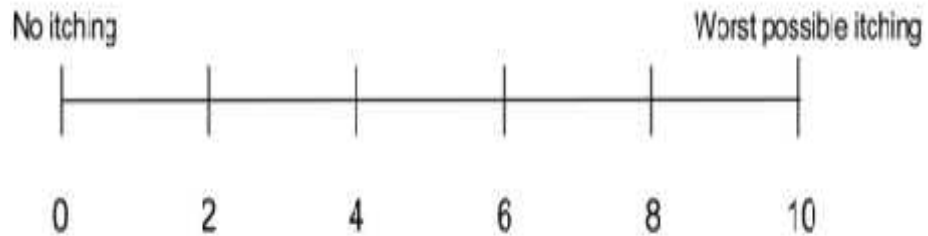
9. Investigations:

Date

- Complete hemogram.
- Peripheral blood smear.
- Random blood sugar or urine sugar.
- Liver function test

PRURITUS INTENSITY SCALES:

1) Visual analogue scale (VAS):



2) Verbal rating scale (VRS):

0- no itch, 1 = low pruritus, 2 = moderate pruritus, 3 = severe pruritus,
4 = very severe pruritus.

3) Numeric rating scale (NRS):



No itch

worst imaginable itch

4) 5-D pruritus scale:

1. **Duration:** During the last 2 weeks, how many hours a day have you been itching?

Less than 6hrs/day	6-12 hrs/day	12-18 hrs/day	18-23 hrs/day	All day
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5

2. **Degree:** Please rate the intensity of your itching over the past 2 weeks

Not present	Mild	Moderate	Severe	Unbearable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5

3. **Direction:** Over the past 2 weeks has your itching gotten better or worse compared to the previous month?

Completely resolved	Much better, but still present	Little bit better, but still present	Unchanged	Getting worse
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5

4. **Disability:** Rate the impact of your itching on the following activities over the last 2 weeks

	Never affects sleep	Occasionally delays falling asleep	Frequently delays falling asleep	Delays falling asleep and occasionally wakes me up at night	Delays falling asleep and frequently wakes me up at night	
Sleep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1	2	3	4	5	
	N/A	Never affects this activity	Rarely affects this activity	Occasionally affects this activity	Frequently affects this activity	Always affects this activity
Leisure/Social	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		1	2	3	4	5
Housework/Errands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		1	2	3	4	5
Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		1	2	3	4	5

5. **Distribution:** Mark whether itching has been present in the following parts of your body over the last 2 weeks. If a body part is not listed, choose the one that is closest anatomically.

Head/Scalp	<input type="checkbox"/>	Soles	<input type="checkbox"/>
Face	<input type="checkbox"/>	Palms	<input type="checkbox"/>
Chest	<input type="checkbox"/>	Tops of Hands/Fingers	<input type="checkbox"/>
Abdomen	<input type="checkbox"/>	Forearms	<input type="checkbox"/>
Back	<input type="checkbox"/>	Upper Arms	<input type="checkbox"/>
Buttocks	<input type="checkbox"/>	Points of Contact w/ Clothing (e.g waistband, undergarment)	<input type="checkbox"/>
Thighs	<input type="checkbox"/>	Groin	<input type="checkbox"/>
Lower legs	<input type="checkbox"/>		
Tops of Feet/Toes	<input type="checkbox"/>		

5) Itch severity scale (ISS):

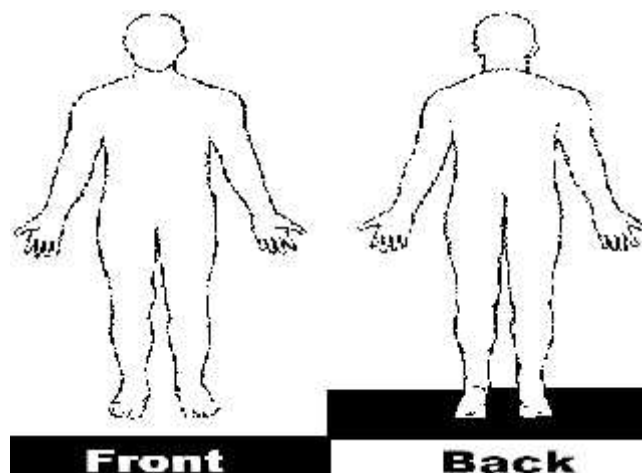
1. Frequency of appearance of itch

	Never itchy	Occasionally itchy	Often itchy	Always itchy
morning				
noon				
evening				
night				

2. Description of itch

	Not at all	To a small extent	To a moderate extent	To a great extent
stinging				
stabbing				
burning				
annoying				
unbearable				
worrisome				

3. Itchy area



4. Intensity of itch for each of the following

	None	weak	Moderate	strong	Very strong
Itch in its average state					
Itch in its worst state					
Itch in its best state					

5. Mood changes because of itch

- a) No change
- b) Depressed
- c) More agitated
- d) Difficulty in concentration
- e) Anxious

6. Effect on sexuality

	No change	decreases
Sexual desire		
Sexual function		

7. Sleep impairment

	Never	Sometimes	Almost always
Difficulty falling asleep due to itch			
Awakening due to itch			
Use of sleep medications			

SAMPLE INFORMED CONSENT FORM

BLDEU'S SHRI B. M. PATIL MEDICAL COLLEGE HOSPITAL

AND RESEARCH CENTRE, BIJAPUR-586 103

RESEARCH INFORMED CONSENT FORM

TITLE OF THE PROJECT: - HOSPITAL BASED PROSPECTIVE STUDY
TO COMPARE VALIDITY AND
RELIABILITY OF UNIDIMENSIONAL AND
MULTIDIMENSIONAL SCALES TO ASSESS
PRURITUS INTENSITY

PG GUIDE : - DR APARNA PALIT

PG STUDENT : - DR. SANJAY S DESAI.

PURPOSE OF RESEARCH:-

I have been informed that this project will be studied to measure intensity of pruritus.

BENEFITS:-

I understand that my participation in this study will help the investigator to study the various scales for pruritus intensity which helps in better assessment of patients' perception of pruritus severity as well as effectiveness of therapy.

PROCEDURE:-

I understand that relevant history will be taken and I will undergo detailed clinical examination after which necessary investigations will be done whenever required.

RISK AND DISCOMFORTS:-

I understand there is no risk involved during the procedures performed.

CONFIDENTIALITY:-

I understand that medical information produced by this study will become a part of my hospital records and will be subjected to the confidentiality and privacy regulation of the said hospital. Information of a sensitive personal nature will not be a part of the medical records, but will be stored in the investigator's research file.

If the data are used for publication in the medical literature or for teaching purposes no names will be used and other identifiers such as photographs and audio or videotapes will be used only with my special written permission. I understand I may see the photographs, videotapes and hear the audiotapes before giving this permission.

REQUEST FOR MORE INFORMATION:-

I understand that I may ask more questions about the study at any time concerned. Dr. Sanjay S Desai is available to answer my questions or concerns. I understand that I will be informed of any significant new findings discovered during the course of this study, which may influence my continued participation.

REFUSAL OR WITHDRAWAL OF PARTICIPATION:-

I understand that my participation is voluntary and I may refuse to participate or may withdraw consent and discontinue participation in this study at any time without prejudice. I also understand that Dr. Sanjay S Desai may terminate my participation in this study at any time after he has explained the reasons for doing so and has helped arrange for my continued care by my own physician, if this is appropriate.

INJURY STATEMENT:-

I understand that in the unlikely event of injury to me resulting directly from my participation in this study and if such injury were reported promptly, then medical treatment will be available to me, but no further compensation will be provided. I understand that by my agreement for my participation in this study, I am not waiving any of my legal rights.

I have explained to (patient's / relevant guardian's name) the purpose of the research, the procedures required, and the possible risks and benefits to the best of my ability in patient's own language.

Investigator / P. G. Guide

Date

I confirm that(Name of the PG guide / chief researcher) has explained to me the research, the study procedures that I undergo and the possible risks and discomforts as well as benefits that I may experience. I have read and I understand this consent form. Therefore, I agree to give my consent for my participation as a subject in this research project.

Participant / guardian

Date

Witness to signature

Date

KEY TO MASTER CHART

BSA	-	Body surface area
F	-	Female
M	-	Male
ISS	-	Itch severity scale
NRS	-	Numerical rating scale
PUPPP	-	Papular-urticarial papules and plaques of pregnancy
Sl. no	-	Serial number
VAS	-	Visual analogue scale
VRS	-	Verbal rating scale
V1	-	Visit 1 (assessment of pruritus intensity at first visit)
V2	-	Visit 2 (assessment of pruritus intensity after 1-3 hours of first reading)
V3	-	Visit 3 (assessment of pruritus intensity after 6 weeks)

MASTER CHART

1. PATIENTS DETAILS AND SCORES OF VARIOUS SCALES

SL. NO	NAME	AGE (YEARS)	SEX	OCCUPATION	DURATION (MON)	DIAGNOSIS	VAS			VRS			NRS			5-D PRURITUS			ISS		
							V1	V2	V3	V1	V2	V3	V1	V2	V3	V1	V2	V3	V1	V2	V3
1	SUVARNA HUGAR	38	F	HOUSEWIFE	6	CHRONIC URTICARIA	4	4	2	2	2	1	5	5	2	13.5	13.5	8.5	3.99	3.99	2.802
2	RENUKA M	25	F	POLICE CONSTABLE	3	CHRONIC URTICARIA	7	7	2	3	3	1	7	7	2	18.5	18.5	6.5	5.973	5.973	2.802
3	DYAMMAVVA K	25	F	FARMER	2	CHRONIC URTICARIA	8.3	8.3		3	3		8	8		16.5	16.5		8.448	8.448	
4	LALITA B	32	F	HOUSEWIFE	8	PRURITUS CORPORIS	6.7	6.7	1	3	3	1	6	6	1	15.5	15.5	5.5	5.352	5.352	2.802
5	REVATRAMAJI K	25	F	BUSINESS	3	SCABIES	4.5	4.5	2.2	3	3	1	5	5	2	10.25	10.25	8.25	4.95	4.95	3.09
6	SARADAR S	70	M	BUSINESS	4	PRURITUS CORPORIS	5			3			5			11.25			5.199		
7	PRASHANTH G	20	M	STUDENT	1.5	CHRONIC URTICARIA	7.5	7.5	3.2	3	3	1	7	7	2	17.75	17.75	8.75	8.4	8.4	4.95
8	ISHWARAPPA N	54	M	FARMER	12	PRURITUS CORPORIS	9.3	9.3	2.1	4	4	2	9	9	2	17.25	18.25	5.25	8.4	8.4	2.802
9	DANDAMMA	80	F	HOUSEWIFE	4	SENILE XEROSIS	8	8	2	4	4	1	8	8	2	18.5	18.5	8.5	8.4	8.952	3.999
10	BAPUGOUDA PATIL	43	M	FARMER	1.5	WINTER XEROSIS	5	5		2	2		5	5		9	9		4.95	4.95	
11	HUCHAPPA B	63	M	FARMER	3	ANEMIA INDUCED PRURITUS	5	5	1	3	3	1	5	5	1	13.5	13.5	10.5	5.973	5.973	2.802
12	VARAKUMAR H	49	M	FARMER	2	DRUG INDUCED PRURITUS (NEVIRAPINE)	6	6		3	3		6	6		13.75	13.75		8.448	8.448	
13	ANANTH D	57	M	SALESMAN	2	BULLOUS PEMPFIGOID	9.1	8.4		4	4		9	9		18.25	18.25		10.599	11.02	
14	SHANTABAI P	70	F	HOUSEWIFE	4	CHRONIC URTICARIA	5.1	5.4		3	3		5	5		12	12		4.95	4.95	
15	KUBERAAPA	70	M	TEACHER	1.5	ANEMIA INDUCED PRURITUS	8.4	8.4	2.1	4	4	1	8	8	2	17.5	17.5	12.5	9.189	9.189	3.999
16	IRAPPA K	72	M	FARMER	2	SENILE XEROSIS	6.8	6.8		4	4		6	6		14.5	14.5		5.352	5.352	
17	GOLLAPPA P	60	M	FARMER	2	PRURITUS CORPORIS	8.3	8.3		3	3		8	8		14	14		6.798	6.798	
18	SHANKRAMMA H	30	F	BUSINESS	2	SCABIES	7.9	8		3	3		7	7		14	12		6.798	6.798	
19	BASAPPA B	69	M	BUSINESS	2	PRURITUS CORPORIS	8	8	1	3	3	1	7	7	1	17.25	17.25	10	10.599	10.599	3.999
20	MAHADEVAPPA S	78	M	RAILWAY SERVANT	2	CHRONIC URTICARIA	9.6	9		4	4		9	9		17.75	17.75		11.25	10.599	
21	HUSENBASHA	20	M	STUDENT	2	CHRONIC URTICARIA	8	8		3	3		8	8		19	19		9.189	9.189	
22	SHRUTI K	20	F	STUDENT	6	PRURIGO SIMPLEX	6.7			3			7			13.25			5.973		
23	SAYABANNA N	70	M	FARMER	6	PRURITUS CORPORIS	4.2	4.2	0	2	2	0	4	4	1	13.75	13.75	5	6.798	6.798	1.551
24	SHARANAPPA K	85	M	FARMER	4	DRUG INDUCED PRURITUS (ETHAMBTOL)	8.4	8.4	2.3	3	3	1	8	8	3	16.5	16.5	6.5	5.352	5.352	2.802
25	SHANTABAI C	35	F	HOUSEWIFE	2	CHRONIC URTICARIA	8.6	8.1		3	3		8	8		13.75	13.75		6.798	6.798	
26	BASAGOND B	60	M	FARMER	2	AIR BORNE CONTACT DERMATITIS	4	4		2	2		5	5		10	10		3.351	3.351	
27	BOURAMMA H	38	F	HOUSEWIFE	6	SCABIES	8.2	8.2	1.6	4	4	1	8	8	1	18.75	18.75	8.25	9.189	9.189	4.95
28	RAMAJANASI K	65	F	FARMER	2	ANEMIA INDUCED PRURITUS	9.5			4			9			19.75			11.25		

29	DARAPPA S	78	M	FARMER	2	ANEMIA INDUCED PRURITUS	7.6	7.6	0	3	3	0	7	7	1	12.25	12.25	5	6.798	6.798	0
30	REKHA H	25	F	TAILOR	24	PRURIGO SIMPLEX	8.7	8.6		4	4		9	9		17.25	17.25		11.25	11.25	
31	GANGABAI S B	80	F	HOUSEWIFE	24	ANEMIA INDUCED PRURITUS	9	9	2.1	4	4	1	8	8	2	18.25	18.25	8	11.25	11.25	3.351
32	PARAPPA C B	70	M	FARMER	24	ATOPIC DERMATITIS	6.9	6.6	0	3	3	0	6	6	1	12.25	12.25	5	5.973	5.973	0
33	AKANDAPPA	72	M	RTD OFFICER	2	CHRONIC URTICARIA	9	9		4	4		9	9		19.25	19.25		11.25	10.599	
34	NILABAI M	68	F	HOUSEWIFE	24	CHRONIC URTICARIA	5	5		3	3		4	4		12.75	12.75		6.798	6.798	
35	SHASHIKALA	45	F	HOUSEWIFE	12	ANEMIA INDUCED PRURITUS	4.8	4.5		3	3		5	5		14	14		6.798	6.798	
36	JAGADISH P	25	M	STUDENT	6	CHRONIC URTICARIA	9.4	9.1		4	4		9	9		19.5	19.5		10.599	10.599	
37	LALITA P	80	F	HOUSEWIFE	4	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	7.3	7.3	2.3	4	4	1	8	8	2	18.5	18.5	9.5	10.599	10.599	3.999
38	MUDAPPAGOUDA B	50	M	FARMER	3	PRURIGO SIMPLEX	5	5	0	3	3	0	5	5	1	13.5	13.5	5	4.95	4.95	0
39	SHANTABAI C	52	F	HOUSEWIFE	4	ANEMIA INDUCED PRURITUS	4.5	4.5		3	3		6	6		13.75	13.75		7.551	7.551	
40	PAVADAPPA S	75	M	FARMER	3	UREMIC ITCH	7.6	7.2		3	3		7	7		14	14		12.801	12.801	
41	NIGAPPA K	29	M	BUSINESS	2	SCABIES	6.1	6		2	2		6	6		10.25	10.25		3.09	3.09	
42	ANAND DONAGI	20	M	STUDENT	2	SCABIES	6	5.8		3	3		5	5		14.75	14.75		8.952	8.952	
43	RAMESH T	29	M	BUSINESS	12	CHRONIC URTICARIA	5.3	5.4	0	3	3	0	5	5	1	12	12	5	4.95	4.95	0
44	RAMESH K	27	M	BUSINESS	3	SCABIES	7.6	7.5		4	4		8	8		17.25	17.25		9.789	9.789	
45	LAXMIBAI S	60	F	HOUSEWIFE	2	AIR BORNE CONTACT DERMATITIS	8.6	8.6	0	3	3	0	8	8	1	18	18	5	11.25	11.25	0
46	SUSHILA P	62	F	HOUSEWIFE	2	ATOPIC DERMATITIS	5.3	5.7		3	3		6	6		14	14		8.448	8.448	
47	SHIVAPPA D	68	M	FARMER	4	ATOPIC DERMATITIS	5.8	5.2		3	3		5	5		16.5	14.5		8.448	8.448	
48	ASMA PUNEKAR	21	F	HOUSEWIFE	3	INTRAHEPATIC CHOLESTASIS OF PREGNANCY	7.6	7.4	2.1	4	4	1	8	8	2	19.5	18.5	14	8.448	8.448	3.09
49	YANKAPPA N	48	M	FARMER	36	PRURITUS CORPORIS	2.6			2			3			10.25			3.999		
50	YALLAWWA K	55	F	FARMER	36	PRURIGO SIMPLEX	4.5	5	0	3	3	0	5	5	1	14.5	14.5	5	5.199	5.199	0
51	RAMAGOND K	30	M	FARMER	1.5	SCABIES	3	3		2	2		4	4		12	12		3.999	3.999	
52	KAILASHI S K	62	F	HOUSEWIFE	2	PRURITUS CORPORIS	1.4			1			2			8			3.351		
53	REVANSIDDAPPA	65	M	FARMER	2	PSORIASIS VULGARIS	2	2.3		1	2		3	3		12.25	12.25		2.802	2.802	
54	KRISHNA PATIL	67	M	RTD TEACHER	12	ATOPIC DERMATITIS	3	3		2	2		3	3		12	12		4.797	4.797	
55	VIDYA W	39	F	HOUSEWIFE	2	CHRONIC URTICARIA	5	5	0	2	2	0	5	5	1	13.5	13.5	5	6.798	6.798	0
56	SHIVAPPA S J	68	M	FARMER	3	PRURIGO SIMPLEX	6.3	6.4		3	3		5	5		15.5	15.5		7.551	7.551	
57	SIDRAMA B V	58	M	FARMER	3	PRURIGO IN HIV	5	5	0	3	3	0	5	5	1	13.75	13.75	5	8.4	8.4	0
58	BOURAMMA T	45	F	HOUSEWIFE	6	CHRONIC URTICARIA	4.5	4.5		3	3		5	5		14.5	14.5		5.973	5.973	
59	SABU S	35	M	FARMER	3	CHRONIC URTICARIA	7.6	7.4		3	3		7	7		14.75	14.75		8.4	8.4	
60	INDRABAI K	55	F	LABOURER	24	CHRONIC URTICARIA	5	5		2	2		5	5		13.75	13.75		6.798	6.798	
61	SHIVAGONDAPPA	60	M	FARMER	24	PSORIASIS VULGARIS	9	9	4.2	4	4	3	8	8	4	18.5	18.5	14.75	9.189	10.599	5.199
62	PARAMAPPA P	75	M	FARMER	5	SENILE XEROSIS	6	5.6	0	3	3	0	6	6	1	14.75	14.75	5	4.797	4.797	0
63	PREMANAGOUDA	50	M	FARMER	6	SCABIES	4.3			2			4			10.75			3.999		
64	PARAMANAND	57	M	OFFICER	6	PRURITUS CORPORIS	8.4	8.4	1.6	3	3	1	8	8	2	18.75	18.75	8	11.25	11.25	2.802
65	TIRAMALA ROA	58	M	CLERK	1.5	PRURIGO SIMPLEX	6.1	6		3	3		5	5		13.75	13.75		6.798	6.798	
66	SHIVANAND K	32	M	BUSINESS	3	CHRONIC URTICARIA	1.5	1.5		2	2		2	2		8.25	8.25		3.999	3.999	
67	GOURAMMA K	55	F	HOUSEWIFE	12	PSORIASIS VULGARIS	8	8	3	4	4	1	8	8	3	17.5	17.5	14.25	11.25	11.25	3.999
68	SHANKARAPPA K	55	M	FARMER	2	ANEMIA INDUCED PRURITUS	3.1	3	0	2	2	0	4	4	1	13.75	13.75	5	7.551	7.551	0

69	JYOTHI K	24	F	HOUSEWIFE	1.5	PUPPP	7.9	8		3	3		7	7		16.25	16.25		5.973	5.973	
70	DUNDAPPA P	70	M	FARMER	3	BULLOUS PEMPHIGOID	9	9		4	4		8	8		19.5	19.5		12.801	11.25	
71	MALLAN P	20	M	HOUSEWIFE	12	SCABIES	8.6	8	2	4	4	1	8	8	2	17.5	17.5	10	10.599	10.599	3.999
72	SHARANAPPA B	80	M	TEACHER	3	AIR BORNE CONTACT DERMATITIS	5.2	5		3	3		5	5		15.5	15.5		5.199	5.199	
73	SIDDANAGOUDA M	65	M	FARMER	6	PRURIGO SIMPLEX	7	7	0	3	3	0	6	6	1	15.75	14.75	5	6.798	6.798	0
74	MAHADEVI P	45	F	HOUSEWIFE	5	PRURITUS CORPORIS	7.6			3			7			13.75			12.147		
75	GOURAMMA L	30	F	HOUSEWIFE	2	ANEMIA INDUCED PRURITUS	4.5	4.6		3	3		5	5		13.75	13.75		5.199	5.199	
76	ARVAND D	72	M	HOUSEWORK	2	SENILE XEROSIS	9	9	4	4	4	3	8	8	4	17.75	17.75	16.75	10.599	10.599	5.352
77	SUMA GOLAWALA	49	F	HOUSEWIFE	2	DRUG INDUCED PRURITUS (NEVIRAPINE)	4.1	4		2	2		4	4		13.75	13.75		4.95	4.95	
78	IBRAHIM P	38	M	FARMER	2	SCABIES	5	5		2	2		6	6		12.75	12.75		4.95	4.95	
79	BHIMAPPA B	55	M	FARMER	12	PRURITUS CORPORIS	4.3	4.5	1.2	2	2	1	5	5	1	13.25	13.25	8	6.798	6.798	3.09
80	SHARANAPPA K	44	M	CLERK	4	SCABIES	6.3	6.4	1.1	3	3	1	6	6	1	14	14	8	6.798	6.798	3.09
81	KHAZI M	78	M	FARMER	18	SENILE XEROSIS	2.3			2			3			12.75			3.999		
82	BHIMARAYA I	70	M	FARMER	2	ANEMIA INDUCED PRURITUS	7.6	7	0	4	4	0	8	8	1	14.5	14.5	5	10.599	10.599	0
83	ANUSVIA P	33	F	HOUSEWIFE	3	CHRONIC URTICARIA	7	7	1	3	3	1	6	6	2	12.75	12.75	8	11.25	11.25	3.09
84	GEETA DUBALAGUNDI	23	F	HOUSEWIFE	3	CHRONIC URTICARIA	4.9	5		2	2		5	5		13.75	13.75		5.973	5.973	
85	JARINABI D	35	F	HOUSEWIFE	24	ANEMIA INDUCED PRURITUS	5.6	5.6		2	2		5	5		12.75	12.75		6.798	6.798	
86	SUMITRA TIRTHALLI	40	F	CLERK	2	DRUG INDUCED PRURITUS (ETHAMBUTOL)	7.9	8		4	4		9	9		18.5	18.5		8.4	8.4	
87	RAVICHANDRA H	45	M	FARMER	2	CHRONIC URTICARIA	5.3	5		2	2		4	4		13.75	13.75		7.551	7.551	
88	SUMANGALA B	40	F	HOUSEWIFE	1.5	SCABIES	7.6	8	4.1	3	3	1	8	8	3	13.75	13.75	16.25	12.147	12.147	5.352
89	RAMAKKA H	62	F	HOUSEWIFE	4	SCABIES	6			2			6			13.75			5.973		
90	BHAGIRAI P	60	F	HOUSEWIFE	2	CHRONIC URTICARIA	8	8	0	3	3	0	8	8	1	18.25	18.25	5	12.147	12.147	0
91	PUNDALIK T	30	M	FARMER	2	CHRONIC URTICARIA	4.9	5	0	2	2	0	4	4	1	13.75	13.75	5	5.973	5.973	0
92	YALLAWWA R	55	F	FARMER	1.5	ANEMIA INDUCED PRURITUS	6			3			6	6		13.75			6.798		
93	GURAPPA K	75	M	FARMER	2	PRURITUS CORPORIS	8.6	9	2.7	3	3	1	8	8	3	16.25	16.25	10.75	7.551	7.551	3.09
94	SAVITRI H	23	F	LECTURER	3	CHRONIC URTICARIA	4.6	4		2	2		4	4		12.75	12.75		5.352	5.352	
95	GADDIYAPPA A	75	M	FARMER	2	SCABIES	6	6		2	2		6	6		14.75	14.75		5.973	5.973	
96	SHIVAMMA G	70	F	HOUSEWIFE	2	ANEMIA INDUCED PRURITUS	6.9	6	1.3	3	3	2	6	6	1	13.75	13.75	10	6.798	6.798	3.09
97	ASHOK C	40	M	CLERK	2	CHRONIC URTICARIA	3.6			2			3			10.25			3.351		
98	BHIMARAYA B	68	M	HOUSEWORK	2	CHRONIC URTICARIA	4	4	0	2	2	0	4	4	1	15.75	15.75	5	5.352	5.352	1.551
99	SAVITA N	24	F	HOUSEWIFE	1.5	CHRONIC URTICARIA	5.1	5.1		2	2		5	5		13.75	13.75		5.973	5.973	
100	RAMACHANDRA H	45	M	TEACHER	60	UREMIC ITCH	4	4		2	2		3	3		10.75	10.75		4.95	4.95	
101	BHIMANAGOUDA H	40	M	FARMER	2	CHRONIC URTICARIA	7	7		3	3		6	6		16.5	16.5		8.4	8.4	
102	BRAMANAND B	47	M	FARMER	3	PRURIGO SIMPLEX	8.6	8.6		4	4		8	8		17.75	17.75		10.599	10.599	
103	ANUSAYA M	58	F	HOUSEWIFE	1.5	PRURITUS CORPORIS	8.4	8.4		3	3		9	9		19.75	19.75		12.147	12.147	
104	NEELAMMA	80	F	HOUSEWIFE	1.5	CHRONIC URTICARIA	2	2		2	2		3	3		10.25	10.25		3.09	3.09	
105	SANGAPPA K	61	M	FARMER	4	PRURITUS CORPORIS	7.4	7.4		3	3		8	8		13.25	13.25		5.973	5.973	
106	DANAPPA K	62	M	WEAVER	4	ATOPIC DERMATITIS	4.3	4.3	0	2	2	0	6	6	1	14.5	14.5	5	8.4	8.4	1.551
107	RAJU A	36	M	FARMER	2	AIR BORNE CONTACT DERMATITIS	4	4	0	3	3	0	5	5	1	14	14	5	4.797	4.797	0
108	ANAND M C	25	M	LABOURER	36	CHRONIC URTICARIA	8	8	2.6	4	4	1	7	7	3	18	18	12.75	11.25	11.25	3.351

109	REVANSIDDA J	28	M	FARMER	24	CHRONIC URTICARIA	1.1			1			2			10			2.802		
110	HIRU G L	70	M	FARMER	2.5	DRUG INDUCED PRURITUS (PYRAZINAMIDE)	7.1	7.1	1.8	4	4	1	8	8	2	16.5	16.5	10.75	10.599	10.599	3.351
111	SIDDARAM REDDY	56	M	FARMER	4	CHOLESTATIC PRURITUS	8.9	8.9	4.6	4	4	2	8	8	5	18.75	18.75	18	8.4	8.4	5.199
112	WANISHRI B K	19	F	STUDENT	2	CHRONIC URTICARIA	9	9		4	4		9	9		19.75	19.75		12.801	12.801	
113	TAYAVVA G	60	F	HOUSEWIFE	12	PRURITUS CORPORIS	4	4		2	2		6	6		10.5	10.5		5.352	5.352	
114	SHILPA B	18	F	STUDENT	24	CHRONIC URTICARIA	3			2			3			12.5			3.09		
115	SANGAMMA A	70	F	HOUSEWIFE	4	SCABIES	9	9	2.6	4	4	2	8	8	3	17.75	17.75	12	12.801	12.801	3.999
116	NAGAWWA K	60	M	HOUSEWIFE	6	PRURITIC PAPULAR ERUPTIONS OF HIV	1	1		2	2		1	1		8	8		2.802	3.999	
117	MALLAPPA PUJARI	44	M	STAFF NURSE	2	DRUG INDUCED PRURITUS (NEVIRAPINE)	8	8	0	4	4	0	8	8	1	18.75	18.75	5	10.599	10.599	0
118	JYOTI HUNDEKAR	30	F	HOUSEWIFE	18	ATOPIC DERMATITIS	1			1			1			10.75			2.802		
119	WARSHA MOKASHI	63	F	HOUSEWIFE	2	UREMIC PRURITUS	6	6	0	3	3	0	6	6	1	13.75	13.75	5	5.352	5.352	1.551
120	AKKUBAI DODAMANI	35	F	HOUSEWIFE	6	TINEA CRURIS AND CORPORIS	4.5	4.5	0	3	3	0	4	4	1	16.75	16.75	5	8.448	8.448	0
121	SIDDAPPA PUJARI	65	M	FARMER	3	PRURITUS CORPORIS	3	3		2	2		4	4		10.75	10.75		3.999	3.999	
122	SANTOSH RATHOD	21	M	STATIONARY WORK	3	SCABIES	5.6	5.4		3	2		6	6		16.75	16.75		8.4	8.4	
123	BASAPPA KARATE	65	M	RTD. OFFICER	4	ATOPIC DERMATITIS	8.5	8.5		4	4		8	8		18.75	18.75		9.189	9.189	
124	BASALINGAPPA SHETTY	45	M	TEACHER	3	ATOPIC DERMATITIS	9	9		4	4		8	8		18.75	18.75		9.189	9.189	
125	SHANTILAL PORWAL	77	M	HOUSEWORK	18	PRURIGO IN HIV	7	7		3	3		8	8		17.5	17.5		10.599	10.599	
126	RASHMI JADHAV	27	F	HOUSEWIFE	2	SCABIES	4	4		2	2		4	4		14.5	12.5		5.973	5.973	
127	MAYAPPA METRI	18	M	STUDENT	2	ATOPIC DERMATITIS	7	7	0	3	3	0	7	7	1	16.75	16.75	5	8.448	8.448	0
128	GODAVARI	45	F	HOUSEWIFE	30	DERMOGRAPHISM	8.6	8.1	1.7	3	3	1	8	8	2	18.5	18.5	10	5.352	5.352	1.551
129	SANDEEP GAUDAKR	27	M	BUSINESS	1.5	PSORIASIS VULGARIS	2	2		4	4		3	3		9	9		3.351	3.999	
130	SIDDAMMA RADDI	48	F	HOUSEWIFE	6	PRURITUS CORPORIS	7	7		3	3		7	7		14.75	14.75		12.801	12.801	
131	BANUBI	22	F	STUDENT	12	CHRONIC URTICARIA	4	4		2	2		3	3		10.75	10.75		3.999	3.999	
132	DATTATRAYYA KOTI	55	M	FARMER	3	TINEA CRURIS AND CORPORIS	8.6	8	0	3	3	0	8	8	1	17.75	17.75	5	8.01	8.01	0
133	INDRAWWA RABAKHAVI	70	M	HOUSEWIFE	18	DRUG INDUCED PRURITUS (ATORVASTATIN)	1.3			2			3			10.75			4.797		
134	S M MATH	36	M	FARMER	2	CHRONIC URTICARIA	5.6	5.6	1.1	3	3	1	5	5	3	14.5	14.5	8	9.189	9.189	3.09
135	REVANASIDD ISARAPPAGOL	60	M	FARMER	60	CHRONIC URTICARIA	4.3	4.2		2	2		4	4		14.75	14.75		8.4	5.199	
136	GANGABAI GORNAL	80	F	HOUSEWIFE	24	ANEMIA INDUCED PRURITUS	7.3	7	0	4	3	0	8	8	1	18.5	18.5	5	10.599	10.599	1.551
137	ANAND DEVARANAVADAGI	31	M	BUSINESS	2	PRURIGO SIMPLEX	3.2	3.2		2	2		3	3		10.75	10.75		4.797	4.797	
138	SHIRALIYAPPA M JIRALE	76	M	RTD. CLERK	2	PSORIASIS VULGARIS	4.6			2			4			11.75			3.351		
139	N. S. KAZI	75	M	RTD. AEE	3	SENILE XEROSIS	6.8	7	0	3	3	0	5	5	1	13.75	13.75	5	5.352	5.352	0
140	GODAVARI M	45	F	HOUSEWIFE	3	CHRONIC URTICARIA	2.3	2.3		2	2		3	3		12.75	12.75		4.95	4.95	
141	DANAMMA MILLAGI	73	F	HOUSEWIFE	2	PAPULO-ERYTHRODERMA OF OFUJI	3.9	4		2	2		4	4		10.75	10.75		3.999	3.999	
142	LALITA LAGALI	46	F	HOUSEWIFE	2	PRURIGO SIMPLEX	3.5	3.5		2	2		3	3		11.75	11.75		2.151	2.151	
143	NAYANA TARA	22	M	STUDENT	1.5	SCABIES	4.9	4.9	0	2	2	0	5	5	1	12.75	12.75	5	6.798	6.798	1.551
144	KENCHAMMA KWATI	19	F	STUDENT	2	CHRONIC URTICARIA WITH XEROSIS	5.6	5	0	3	3	0	5	5	1	13.5	13.5	5	5.199	5.199	0
145	ANIL B ALINGE	45	M	CLERK	2	CHRONIC URTICARIA WITH ANGIOEDEMA	3.2	3.2		2	2		4	4		12.75	12.75		3.999	3.999	
146	SHANTABAI M	60	F	HOUSEWIFE	3	DRUG INDUCED PRURITUS (NEVIRAPINE)	8	7.5		3	3		7	7		16	16		12.801	12.801	
147	S P GADADAN	42	M	BUSINESS	2	CHRONIC URTICARIA	4.3	4.3		2	2		4	4		11.5	10.5		5.352	5.352	
148	RESHMA PATIL	29	F	HOUSEWIFE	3	SCABIES	4.1	4.1	0	3	3	0	5	5	1	13.75	13.75	5	6.798	6.798	0

149	SUNITA MATH	26	F	HOUSEWIFE	1.5	PRURIGO SIMPLEX	4.6	4.4	0	3	3	0	6	6	1	13.5	13.5	5	4.95	4.95	1.551
150	SAYEETA KAMALE	30	F	HOUSEWIFE	1.5	PRURIGO IN HIV	6	6		3	3		6	6		15.75	15.75		6.798	6.798	
151	SIDDANAGOUDA N	75	M	FARMER	1.5	WINTER XEROSIS	4	4	1.2	2	2	1	4	4	2	13.75	13.75	8	5.352	5.352	2.802
152	SANGANAGOUDA PATIL	50	M	FARMER	2	DERMATITIS HERPETIFORMIS	4.9	5		2	2		5	5		10.25	10.25		3.999	3.999	
153	HANUMANTPPA KUMBER	70	M	FARMER	6	PRURIGO SIMPLEX	8.6	9		3	3		8	8		19.75	19.75		11.25	11.25	
154	HAJAPPA PADAGANNAVAR	55	M	FARMER	3	FOLLICULAR ECZEMA	3.3	3.3		2	2		4	4		9.25	9.25		3.351	3.351	
155	MAHADEV MADAR	65	M	FARMER	3	SENILE XEROSIS	7	7		3	3		5	5		15.75	15.75		6.798	6.798	
156	MADHU SUDHAKAR	22	M	BUSINESS	2	SCABIES	8.5	8.4	4.1	3	3	2	8	8	5	17.75	17.75	12.25	12.801	12.801	5.199
157	SHREEMANT BAIKRAJIND	65	M	FARMER	2	PSORIASIS VULGARIS	3			2			3			11.25			3.999		
158	LATA SINDHE	22	F	HOUSEWIFE	3	DERMOGRAPHISM	2.6	2.6		2	2		3	3		10.5	10.5		4.797	4.797	
159	JAKKAPPA	52	M	FARMER	2	WINTER XEROSIS	9	9	2.7	4	4	2	8	8	3	18.5	18.5	15	11.25	11.25	3.09
160	SHOBHA JAWALI	31	F	HOUSEWIFE	1.5	SCABIES	3.2	3		2	2		4	4		10.5	10.5		4.797	4.797	
161	SHRIDEVI TELI	25	F	HOUSEWIFE	1.5	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	6	6	1.1	3	3	1	6	6	2	13.75	13.75	10	5.199	6.798	3.09
162	DAVEED TAMBOLI	55	M	DRIVER	3	TINEA CORPORIS	5.3	5	0	3	3	0	4	4	0	14	14	5	5.973	5.973	0
163	GURAPADAYYA	60	M	FARMER	6	PRURIGO SIMPLEX	1.9	1.9		2	2		2	2		11	11		3.351	3.351	
164	KLYAN SINGH HAJERI	65	M	RTD. CLERK	1.5	SENILE XEROSIS	8	8	3.1	3	3	2	6	6	3	17.25	17.25	14	6.798	6.798	4.95
165	SANGANAGOUDA PATIL	65	M	FARMER	4	WINTER XEROSIS	5.3	5	0	2	2	0	4	4	1	12.5	12.5	5	5.352	5.352	0
166	YAMAGOUNDA	65	M	FARMER	2	SENILE XEROSIS	2.3	2.3		2	2		3	3		14.25	14.25		4.95	4.95	
167	SANGAYYA MATAPATI	58	M	FARMER	1.5	DRUG INDUCED PRURITUS (NEVIRAPINE)	7	7	0	3	3	0	8	8	1	15.75	15.75	5	5.973	5.973	1.551
168	RENUKA	18	F	STUDENT	24	PRURIGO SIMPLEX	4	4		2	2		3	3		12.25	12.25		4.95	4.95	
169	MAHANT SHETTY	86	M	WRITER	36	PRURIGO SIMPLEX	3.2	3.2		2	2		3	3		13.25	13.25		3.999	3.999	
170	LAXMIBAI	65	F	HOUSEWIFE	12	LICHEN PLANUS	5	5		2	2		5	5		13.5	13.5		6.798	6.798	
171	GANGABAI	65	F	HOUSEWIFE	2	WINTER XEROSIS	4	4		2	2		3	3		10.5	10.5		5.199	5.199	
172	JAYAGOND MAHARAJ	85	M	SWAMJI	1.5	WINTER XEROSIS	3	3		2	2		3	3		10.75	10.75		3.999	3.999	
173	GEETA YALAGOND	40	F	HOUSEWIFE	1.5	CHRONIC URTICARIA	3	3	0	2	2	0	5	5	1	12.5	10.5	5	5.199	5.199	0
174	REKHA MYAGERI	28	F	HOUSEWIFE	1.5	CHRONIC URTICARIA	4.5			2			4			12.75			3.351		
175	CHANNAMALLAPPA	68	M	RTD. CLERK	1.5	SCABIES	6.4	6.4	1.2	2	2	1	5	5	2	14.75	14.75	9	6.798	6.798	3.999
176	VISHNEE	48	M	PWD WORKER	1.5	CHOLESTATIC PRURITUS	8.3	8	1.4	3	3	1	8	8	3	16.75	16.75	9	9.189	9.189	3.999
177	BORAMMA BIRADAR	31	F	HOUSEWIFE	2	CHRONIC URTICARIA	3.2	3.2		2	2		3	3		12.75	12.75		5.199	5.199	
178	SANGEETA ALLUR	35	F	HOUSEWIFE	2	PRURIGO SIMPLEX	4	4		2	2		3	3		10.75	10.75		5.973	5.973	
179	VINOD GUBYAD	18	M	STUDENT	18	AIR BORNE CONTACT DERMATITIS	3	3		2	2		3	3		14	14		3.09	4.95	
180	SHRISHAIL	18	M	STUDENT	2	SCABIES	2	2		2	2		2	2		10.75	10.75		3.09	3.09	
181	RAMANNA PATIL	62	M	SALEEMAN	2	SENILE XEROSIS	1.9			2			2			12.5			3.351		
182	BASHA	50	M	BUSINESS	3	WINTER XEROSIS	3	3		2	2		2	2		12.5	12.5		3.999	3.999	
183	CHIDAND MASIMANAL	19	M	CLEANER	1.5	SCABIES	2	2		2	2		4	4		10.5	10.5		3.999	3.999	
184	SANDEEP PATIL	28	M	STUDENT	2	CHRONIC URTICARIA	7.6	7.4	0	3	3	0	8	8	0	15.5	15.5	5	10.599	10.599	0
185	BORAMMA PATIL	76	F	HOUSEWIFE	6	ANEMIA INDUCED PRURITUS	4.6	4.6	0	2	2	0	3	3	0	14	14	5	8.952	8.952	0
186	SHOKANT INAMDAR	65	M	BAR SERVER	2	CHOLESTATIC PRURITUS	6	6	0	3	3	0	5	5	0	14.5	12.5	5	10.599	10.599	0
187	JABEENA	25	M	HOUSEWIFE	6	SCABIES	6.4	6.5	0	2	2	0	7	7	0	15.5	15.5	5	9.189	9.189	0
188	MAHADEVAPPA	38	M	FARMER	4	AIR BORNE CONTACT DERMATITIS	1.8	1.8		2	2		4	4		12.25	12.25		3.999	3.999	

189	PARVATI	70	F	HOUSEWIFE	6	ATOPIC DERMATITIS	3.5	3.5		2	2		2	2		10	10		3.999	3.999	
190	SHITARAM KULKARNI	70	M	HOUSEWIFE	2	WINTER XEROSIS	2.6	2.6		2	2		3	3		12.5	12.5		3.999	3.999	
191	GURABAI	50	F	HOUSEWIFE	2	AIR BORNE CONTACT DERMATITIS	3			2			4			10.5			3.999		
192	KAVITA HIREMATH	18	F	STUDENT	1.5	SCABIES	4	4	0	2	2	0	3	3	0	12.5	12.5	5	4.95	4.95	0
193	RANAPPA HORGEL	45	M	COOLI	2	PSORIASIS VULGARIS	5.6	5.3	0	2	2	0	7	7	0	13.75	13.75	5	6.798	6.798	0
194	BASAVANTHARAYA DESAI	60	M	FARMER	3	WINTER XEROSIS	1.5	1.5		1	1		3	3		11.75	11.75		3.09	3.09	
195	KHADUBI BIRADAR	25	F	HOUSEWIFE	12	DERMOGRAPHISM	5.6	5.4	0	2	2	0	6	6	0	13.75	13.75	5	6.798	6.798	0
196	SIDDAPPA MADAR	53	M	CONDUCTOR	2	PRURIGO SIMPLEX	3	3		1	1		4	4		13.75	13.75		3.09	3.09	
197	MALLAPPA UPPAR	40	M	COOLI	2	CHRONIC URTICARIA	4	4		2	2		6	6		11.75	11.75		4.797	4.797	
198	MANJUNATH PATIL	54	M	ENGINEER	30	WINTER XEROSIS WITH ECZEMA	4	4		2	2		4	4		10.75	10.75		3.999	3.999	
199	POOJA MOTILAL	48	F	HOUSEWIFE	2	CHRONIC URTICARIA	9	8.4	2.1	4	4	2	8	8	4	18.75	18.75	9	11.25	11.25	3.09
200	MANJUNATH GOWDA	20	M	STUDENT	18	SCABIES	2.6			2			4			10.75			3.351		
201	UMA HIREPATRI	33	F	HOUSEWIFE	3	CHRONIC URTICARIA	3.4	3.4		2	2		5	5		13.75	13.75		3.999	3.999	
202	IBRAHIM MANAGULI	36	M	TEACHER	2	CHRONIC URTICARIA	6	6	3	2	2	1	5	5	3	13.75	13.75	10	6.798	6.798	8.4
203	SHAILAJA JALI	38	F	HOUSEWIFE	2	WINTER XEROSIS	7	7	7	3	3	3	6	6	7	13.5	13.5	19.25	10.599	10.599	11.25
204	SHARANAMA MULIMANI	60	F	HOUSEWIFE	2.5	WINTER XEROSIS	4.9			2			4			11.5			5.199		
205	KRISHANA MALIKAR	42	M	BANKING EMP	2	SCABIES	6	6	1.1	2	2	1	4	4	2	10.75	10.75	8.25	5.199	5.199	3.09
206	Y B SURYAVAR	23	M	NURSE	2	PRURITUS CORPORA	8.1	8.4	1.2	3	3	1	8	8	2	19.5	19.5	9	7.551	7.551	3.999
207	MAYAILA S	35	F	HOUSEWIFE	2	SCABIES	8.5	8	2.1	4	4	1	8	8	3	18.75	18.75	8	10.599	10.599	4.95
208	SOUMYA PUJARI	18	F	STUDENT	1.5	SCABIES	4.3	4.3		2	2		5	5		14.75	14.75		5.352	5.352	
209	MEHABUB	60	M	HOUSEWIFE	2	SENILE XEROSIS	5.1	5.1		2	2		6	6		13.75	13.75		5.352	5.352	
210	SHARANAMMA HARALAJ	38	F	HOUSEWIFE	2	SCABIES	6.1	6		2	2		5	5		10.75	10.75		4.95	4.95	
211	TIMMANNA G	66	M	FARMER	2	SCABIES	6.6	7	2	3	3	2	7	7	3	14.75	14.75	8	4.95	4.95	3.999
212	PARVATI DUBAGUNDI	56	F	HOUSEWIFE	2	WINTER XEROSIS	5.4	5.4	0	3	3	0	6	6	1	14.5	14.5	5	7.551	7.551	0
213	SUJATA KAMBLE	30	F	HOUSEWIFE	2	WINTER XEROSIS	2.9	2.9		2	2		4	4		10.75	10.75		3.999	3.999	
214	ANKEET PATIL	55	M	HOUSEWORK	2.5	WINTER XEROSIS	4			2			4			10.5			4.95		
215	KAMALABI TIKOTA	58	F	HOUSEWIFE	1.5	CHRONIC URTICARIA	3.8	3.8		2	2		3	3		11.75	11.75		3.351	3.351	
216	HANUMANT G	35	M	FARMER	2	ATOPIC DERMATITIS	4.9	4.5		2	2		5	5		11.75	11.75		4.95	4.95	
217	VIJAYALAXMIBAI NEMAL	50	F	HOUSEWIFE	3	CHRONIC URTICARIA	6.1	6		2	2		6	6		13.75	13.75		4.95	4.95	
218	ANNAPURANA HIRUR	75	F	HOUSEWORK	2	WINTER XEROSIS	3.6	3.6		2	2		3	3		12.75	12.75		5.199	5.199	
219	LAXMI KAPSI	18	F	STUDENT	1.5	PRURIGO SIMPLEX	7.3	7		2	2		7	7		13.75	13.75		11.25	11.25	
220	SHIVARAJ SOMBAD	70	M	FARMER	1.5	PRURITUS CORPORA	6	6	0	3	3	0	5	5	1	13.75	13.75	5	5.199	5.199	1.551
221	PARVATI TENHALLI	56	F	HOUSEWIFE	84	CHRONIC URTICARIA	5.3	5.3	0	2	2	0	5	5	1	12.75	12.75	5	6.798	6.798	0
222	JAYASHREE BELUR	50	F	HOUSEWIFE	2	SCABIES	6.4	6.4		3	3		5	5		13.5	13.5		6.798	6.798	
223	PRATAP	55	M	FARMER	2	SCABIES	5.8	6	0	2	2	0	5	5	1	12.75	12.75	5	6.798	6.798	0
224	RIAZ ALI KHAN	80	M	HOUSEWIFE	2	PRURIGO SIMPLEX WITH WINTER XEROSIS	3.5			2			4			11.25			3.999		
225	SUSHILA GARAJOLLI	55	F	CLERK	2	ANEMIA INDUCED PRURITUS	5	5		2	2		3	3		11.5	11.5		5.199	5.199	
226	APARNA M PATIL	26	F	STUDENT	2	CHRONIC URTICARIA	3	3		2	2		4	4		10.75	10.75		3.351	3.351	
227	MAHADEVAPPA Y	76	M	FARMER	2	SENILE XEROSIS	4.6	5	0	2	2	0	4	4	1	13.5	13.5	5	3.09	3.09	0
228	SIDANNA KONGANALLI	75	M	HOUSEWORKER	2	SCABIES	6.8	6.8	1.2	2	2	1	6	6	2	15.75	15.75	9.25	8.4	8.4	2.151

229	NANDANNA HOSAMANI	73	M	FARMER	2	DRUG INDUCED PRURITUS (NEVIRAPINE)	7	7	2.1	3	3	1	7	7	2	15.75	15.75	14	8.4	8.4	2.151
230	PRUTVI MALDAR	26	M	STUDENT	1.5	SCABIES	4	4		2	2		3	3		13.25	13.25		5.199	5.199	
231	LIMBAKKA PUJARI	30	F	WORKS IN FIELDS	2	AIR BORNE CONTACT DERMATITIS	3	3		2	2		4	4		11.75	11.75		3.999	3.999	
232	KIRAN KUMAR	20	m	STUDENT	2	SCABIES	5	5		2	2		5	5		13.25	13.25		5.973	5.973	
233	HULAGEMMA MANGULI	55	F	HOUSEWIFE	2	SCABIES	6	6		2	2		4	4		10.75	10.75		6.798	6.798	
234	PARAPPA MALGIR	40	F	BUSINESS	2	WINTER XEROSIS	3.5			2			4			11.75			4.95		
235	HEMANT S	50	M	BUSINESS`	1.5	SCABIES	3.4	3.4		2	2		3	3		11.25	11.25		3.999	3.999	
236	SHREE HARSHA	18	M	STUDENT	2	SCABIES	5.6	6		2	2		5	5		13.5	13.5		5.973	5.973	
237	RAJU LAMANI	26	M	BUSINESS	2	SCABIES	5.6	5.6	0	2	2	0	7	7	1	13.5	13.5	5	6.798	6.798	0
238	MURAGEPPA	73	M	RTD TEACHER	2	ATOPIC DERMATITIS	6	6		2	2		4	4		14.5	14.5		5.352	5.352	
239	SIDDAWWA KONTIKAL	63	F	HOUSEWIFE	3	SCABIES	4	4		2	2		4	4		11.75	10.75		5.352	5.352	
240	MANJUBAI NAIK	63	F	HOUSEWIFE	2	CHRONIC URTICARIA	7	7	0	2	2	0	7	7	1	14	14	5	4.797	4.797	0
241	KALLAPPA LIGALI	53	M	FARMER	2	WINTER XEROSIS	5.4	5.5	0	3	3	0	5	5	1	14	14	5	5.199	5.199	0
242	REKHA GANIGER	22	F	MESS WORKER	1.5	SCABIES	3.4			2			4			12.25			3.999		
243	KALLAVVA	70	F	HOUSEWIFE	2	PSORIASIS VULGARIS	2.5	2.5		2	2		4	4		12.5	12.5		3.999	3.999	
244	INDRAWWA	26	F	HOUSEWIFE	2.5	ATOPIC ERUPTION OF PREGNANCY	3.4	3.6		2	2		3	3		10.25	10.25		3.999	3.999	
245	SAVATRI GUDNALLI	50	F	HOUSEWIFE	2	CHRONIC URTICARIA	3	3		2	2		4	4		10.75	10.75		3.999	3.999	
246	IRANGANTEPPA MALNAD	70	M	FARMER	2	SCABIES	4	4		2	2		3	3		12.25	12.25		4.797	4.797	
247	YANKUB METI	20	M	FARMER	4	CHRONIC URTICARIA	4.6			2			5			10.25			5.352		
248	YAMANAPPA	29	M	STUDENT	3	SCABIES	3.7	3.7		2	2		4	4		13.5	13.5		3.999	3.999	
249	SHIVANGOURA PATIL	45	M	FARMER	4	ATOPIC DERMATITIS	5.9	5.9	0	2	2	0	3	3	1	14.5	14.5	5	4.95	4.95	0
250	POOJA DEVI	28	F	HOUSEWIFE	2	CHRONIC URTICARIA	7	7	0	3	3	0	5	5	1	16.75	16.75	5	10.599	10.599	1.551
251	GOLLAPPA ATHANUR	68	M	HOUSEWIFE	2	ANEMIA INDUCED PRURITUS	4	4		2	2		4	4		12.5	12.5		3.09	3.09	
252	MALLAPPA GHANTI	58	M	FARMER	3	DRUG INDUCED PRURITUS (ETHAMBTOL)	7	7	1.2	2	2	1	7	7	2	17.75	17.75	9	6.798	6.798	2.151
253	MUKUND KOLAR	78	M	RTD DHO	2	SENILE XEROSIS	6.9	7	1.1	3	3	1	7	7	2	14.75	14.75	8.75	6.798	6.798	3.999
254	MOULABI MULLA	45	F	HOUSEWIFE	1.5	SCABIES	6.1	6		2	2		5	5		10.75	10.75		6.798	6.798	
255	RESHMA MULLA	22	F	HOUSEWIFE	1.5	SCABIES	3.6	3.6		2	2		3	3		12.75	12.75		3.999	3.999	
256	LAKSHMIBAI POOJARI	32	F	WORK IN FIELD		LICHEN PLANUS PIGMENTOSUS	4	4		2	2		3	3		11.75	11.75		3.999	3.999	
257	NAMDEV RATHOD	36	M	CONDUCTOR	2	PRURIGO SIMPLEX	4.3	4.3		2	2		4	4		12	12		3.351	3.351	
258	SHIVARAYA PATIL	76	M	HOUSEWIFE	2	SCABIES	4	4		2	2		2	2		13.75	13.75		4.95	4.95	
259	BASAPPA YARNAL	75	M	FARMER	1.5	PRURITUS CORPORIS	3.4	3.4		2	2		2	2		12.5	12.5		4.798	4.798	
260	SAVITRI KOWLI	20	F	HOUSEWIFE	1.5	ATOPIC ERUPTION OF PREGNANCY	9	9	3.1	4	4	1	8	8	2	19.5	19.5	16.75	8.448	8.448	3.351
261	LAKSHMAN SHIGUR	77	M	RTD LAWYER	3	SENILE XEROSIS	5	5		2	2		5	5		14.5	14.5		8.448	8.448	
262	ZELAKA JUKKANA	30	F	HOUSEWIFE	2	CHRONIC URTICARIA WITH ANGIOEDEMA	4.6	4.6	2.1	2	2	1	6	6	3	12.5	12.5	12	6.798	6.798	3.351
263	SIDDAMMA INAMDAR	65	M	AGRICULTURE	2	SCABIES	3.6	3.4		2	2		3	3		11	11		3.999	3.999	
264	BASAVARAJ BAJANTRI	18	M	STUDENT	2	SCABIES	5	5		2	2		4	4		10.5	10.5		4.95	4.95	
265	VASANT BHAJANTRI	47	M	SOCIAL WORKER	2	AIR BORNE CONTACT DERMATITIS	4	4		2	2		4	4		12.5	12.5		4.95	4.95	
266	PREMA BHAJANTRI	43	F	HOUSEWORK	2	CHRONIC URTICARIA	4.5	4.5	0	2	2	0	5	5	1	12.25	12.25	5	6.798	6.798	0
267	RUKAMMA HADAPAD	45	F	HOUSEWIFE	6	ANEMIA INDUCED PRURITUS	6.4	6.7	0	3	3	0	5	5	1	10	10	5	5.352	5.352	0
268	SHANTABI JAVALAKAR	60	F	HOUSEWIFE	3.5	ATOPIC DERMATITIS	3.5	3.5		2	2		3	3		12.5	12.5		3.999	3.999	

269	BASALINGAPPA GULABAL	60	F	HOUSEWIFE	12	PSORIASIS VULGARIS	3.6	3.6		2	2		2	2		13.75	13.75		4.95	4.95	
270	SARASWATI HOLE	40	F	HOUSEWIFE	6	CHRONIC URTICARIA	2.8	2.9		2	2		3	3		11.75	11.75		4.797	4.797	
271	CHANDASAB NADAF	55	M	AGRICULTURE	2	SCABIES	3.8	3.5		2	2		4	4		12.75	12.75		3.999	3.999	
272	BATHARBI NADAF	50	F	HOUSEWIFE	2	SCABIES	2.8	2.6		2	2		4	4		13.5	11.5		2.151	3.999	
273	MALLIKARJUN BELLANGI	35	M	BUSINESS	2.5	LICHEN PLANUS	1.9			2			2			10			2.151		
274	VEERESH KALAD	20	M	PLUMBAR	2	SCABIES WITH PITYRIASIS VERSICOLOR	4	4	0	2	2	0	6	6	1	12.25	12.25	5	4.95	4.95	2.802
275	R M KOLLI	58	M	OFFICER	1.5	PRURITUS CORPORIS	4.3	4.3	0	2	2	0	5	5	1	11.5	11.5	5	5.199	5.199	1.551
276	NURJAN MUNAL	65	F	HOUSEWIFE	2	ANEMIA INDUCED PRURITUS	4.5	4.5		2	2		5	5		13.75	13.75		5.199	5.199	
277	SHRIDEVI PUJARI	21	F	HOUSEWIFE	4	SCABIES	7	7		3	3		5	5		13.5	13.5		10.599	10.599	
278	HANIRAJ	59	N	BUSINESS	12	CHRONIC URTICARIA	4.9	5	0	2	2	0	6	6	1	15.75	15.75	5	5.352	5.352	0
279	ZOHA SIDDIQUA	20	F	STUDENT	3	CHRONIC URTICARIA WITH ANGIOEDEMA	5	5		2	2		4	4		13.75	13.75		3.999	3.999	
280	ALISAB JAMADAR	50	M	FARMER	1.5	SCABIES	4.2	4.2		2	2		3	3		13.25	13.25		4.95	4.95	
281	NASIMA JAMADAR	40	F	HOUSEWIFE	1.5	SCABIES	3.5	3.5		2	2		4	4		11.75	11.75		3.999	3.999	
282	NAGAMMA VANAGMED	30	F	HOUSEWIFE	2	SCABIES	4.9	4.6	1.2	2	2	1	5	5	2	13.25	13.25	10	4.95	4.95	3.999
283	ANITA KARAZAGI	25	F	HOUSEWIFE	4	CHRONIC URTICARIA	9.2	9	3.3	4	4	2	9	9	3	19.75	19.75	16	12.801	12.801	4.797
284	HAJILAL BIJAPUR	63	M	FARMER	4	AIR BORNE CONTACT DERMATITIS	5.6	5.6	2.1	3	3	1	5	5	3	17.75	17.75	12	5.199	5.199	3.999
285	SHARANAPPA PUJARI	55	M	FARMER	6	PSORIASIS VULGARIS	5.6	5.8		2	2		5	5		11.25	11.25		5.199	5.199	
286	SURESH YAMANUR	48	M	CLERK	4	PSORIASIS VULGARIS	6			2			5			13.5			5.199		
287	KRISHNAPPA PAWAR	40	M	FARMER	12	PSORIASIS VULGARIS	4.9	4.9		2	2		4	4		13.5	13.5		5.199	5.199	
288	RAMDEVI YADGIR	50	F	HOUSEWIFE	2.5	ATOPIC DERMATITIS	2.9	3		2	2		4	4		11.5	11.5		3.351	3.351	
289	RACHAPPA KAMBAR	55	M	FARMER	1.5	DRUG INDUCED PRURITUS (NEVIRAPINE)	4.3	4	1	2	2	1	6	6	2	13.75	12.75	10	6.798	6.798	2.802
290	SHATRINA BANU BEGAM	23	F	STUDENT	2	CHRONIC URTICARIA	8	8	2	3	3	2	7	7	2	18	18	10	6.798	6.798	3.351
291	POOJA MERWADE	28	F	STUDENT	3	CHRONIC URTICARIA	4.3			2			2			11			3.999		
292	ANNAKKA KUBER	57	F	HOUSEWIFE	6	ATOPIC DERMATITIS	1.9	2.3		2	2		4	4		12.25	12.25		2.802	2.802	
293	SUVARNA SINDAGI	35	F	HOUSEWIFE	1.5	PEMPHIGUS FOLIACEOUS	3.6	4		2	2		4	4		12.5	12.5		3.999	3.999	
294	CHAITRA SALVE	48	F	HOUSEWIFE	5	CHRONIC URTICARIA	4	4		2	2		3	3		10.25	10.25		3.999	3.999	
295	MANJUNATH HANCHINAL	54	M	FARMER	6	PSORIASIS VULGARIS	3.8	3.8		2	2		4	4		11.75	11.75		5.352	5.352	
296	ANDANAPPA	80	M	FARMER	24	SENILE XEROSIS	7	7		2	2		5	5		12.25	12.25		7.551	7.551	
297	SHARANU BOGADI	40	M	CLERK (TALATI)	6	CHRONIC URTICARIA	3.6	3.6		2	2		3	3		13.25	13.25		5.352	5.352	
298	MODSINSAB ALI	40	M	MECHANIC	2	PRURITIC PAPULAR ERUPTION OF HIV	7	7	0	3	3	0	5	5	1	17.5	17.5	5	6.798	6.798	0
299	ANAND HOTAGI	48	M	BUSINESS	6	ATOPIC DERMATITIS	6.9	7.1	4.1	2	2	3	5	5	5	14.5	14.5	12	6.798	6.798	5.199
300	ABHIJIT METI	30	M	STUDENT	6	CHRONIC URTICARIA	7	7		3	3		5	5		18.75	18.75		10.599	10.599	
301	NIRUPAMA AGARWAL	48	F	HOUSEWIFE	12	ATOPIC DERMATITIS	7	7	2.1	2	2	1	6	6	3	16.5	16.5	11	6.798	6.798	2.802
302	SIDDHANAGOUDA Y.P	76	M	FARMER	6	ATOPIC DERMATITIS	4	7.1		2	2		4	4		12.75	12.75		5.199	5.199	
303	RAMA PATIL	46	F	HOUSEWIFE	2	SCABIES	6.5	6.5		2	2		4	4		14.75	14.75		9.189	9.189	
304	SHRADDHA PATIL	26	F	STUDENT	2	SCABIES	4.6	5		2	2		5	5		10.75	10.75		5.352	5.352	
305	ANANAD PATIL	22	M	STUDENT	2	SCABIES	7	7	0	3	3	0	5	5	1	16.75	16.75	5	8.4	8.4	1.551
306	SHREERAM Y PATIL	55	M	FARMER	2	SCABIES	8.6	8.6	4.1	3	3	2	8	8	4	19.75	19.75	17.25	8.4	8.4	4.797
307	SANGANABASAVA BIRADAR	60	M	FARMER	2	ANEMIA INDUCED PRURITUS	3.9	3.9		2	2		4	4		10	10		4.95	4.95	
308	BASAVARAJ HUGAR	45	M	FARMER	3	DERMOGRAPHISM	4	4		2	2		3	3		14.75	14.75		4.95	4.95	

309	SHAILESH RATHOD	38	M	CLERK	2	ATOPIC DERMATITIS	4	4		2	2		4	4		11.25	11.25		3.999	3.999	
310	MANJUNATH KEMBHAVI	55	M	COMPUTER WORK	2	PSORIASIS VULGARIS	3.6	4		2	2		4	4		10.75	10.75		3.351	3.351	
311	BHAGYA L HOSMANI	48	F	HOUSEWIFE	6	ANEMIA INDUCED PRURITUS	3.8	3.5		2	2		3	3		13.75	13.75		4.798	4.798	
312	GANGADHAR PATIL	42	M	FARMER	4	CHRONIC URTICARIA	7	7	3.1	2	2	2	5	5	4	16.75	16.75	16	5.973	5.973	3.999
313	SHARANU SAJJAN	52	M	FARMER	3	TINEA CRURIS WITH CORPORIS	3.8	3.8		2	2		3	3		12.75	12.75		3.999	3.999	
314	AJAY PATIL	30	M	BUSINESS	2	PRURIGO SIMPLEX	7	7	1.3	2	2	2	6	6	2	17.75	17.75	10	5.973	5.973	2.151
315	SOUBHAGYA METI	35	F	HOUSEWIFE	4	DRUG INDUCED PRURITUS (ETHAMBUTOL)	4	4		2	2		3	3		10	10		5.973	5.973	
316	APPAJI MULIMANI	28	M	FARMER	6	CHRONIC URTICARIA	5	5		2	2		3	3		12.75	12.75		4.95	4.95	
317	RESHMA DALWAI	34	F	HOUSEWIFE	3	CHRONIC URTICARIA	4			2			4			12.75			5.199		
318	SANTOSH HUGAR	49	M	FARMER	2	SCABIES	9	9	4.1	4	4	3	7	7	5	19.75	19.75	15	11.25	11.25	4.95
319	AFRANBEGAM P	62	F	HOUSEWIFE	3	PRURITUS CORPORIS	4	4		2	2		4	4		10.75	10.75		5.199	5.199	
320	GOLAMMA	55	F	HOUSEWIFE	3	AIR BORNE CONTACT DERMATITIS	4.6	4.3		2	2		3	3		12.75	12.75		3.999	3.999	
321	SHANKARAPPA	60	M	FARMER	2	PRURITUS CORPORIS	4			2			6			14.75			5.973		
322	KASTURIBAI	68	F	HOUSEWIFE	2	ANEMIA INDUCED PRURITUS	4.9	5	0	3	3	0	5	5	1	13.75	13.75	5	6.798	6.798	0
323	KALLAPPA SHIDHE	70	M	FARMER	3	PRURITUS CORPORIS	3.6	3.6		2	2		4	4		10.75	10.75		4.797	4.797	
324	RAVINDRA	65	M	OFFICER	2	AIR BORNE CONTACT DERMATITIS	3.4	3.4		2	2		3	3		10.75	10.75		3.351	3.351	
325	SIDRAYA KADLIMATH	60	M	FARMER	12	PAPULAR URTICARIA	6.8	7	0	3	3	0	6	6	1	14.75	14.75	5	8.4	8.4	1.551
326	GOUDAPPA ARAKERI	65	M	FARMER	2	AIR BORNE CONTACT DERMATITIS	8.8	8.4	3.2	4	4	2	7	7	3	18.75	18.75	16.25	8.952	8.952	4.95
327	GANGUBAI MANNUR	85	F	HOUSEWIFE	4	SENILE XEROSIS	4	4		2	2		4	4		13.75	13.75		8.448	8.448	
328	USMLSAB NADAF	80	M	HOUSEWORK	2	SENILE XEROSIS	6.4	6.4		3	3		5	5		14.75	14.75		5.199	5.199	
329	ANIL PATIL	36	M	BUSINESS	6	CHRONIC URTICARIA	4.3	4.3		2	2		6	6		10.75	10.75		5.352	5.352	
330	KRISHANAPPA	65	M	FARMER	2	PRURITUS CORPORIS	7	7		3	3		5	5		13.5	13.5		5.352	5.352	
331	SUVARNA SORGAVI	33	F	HOUSEWIFE	4.5	CHOLESTATIC PRURITUS	8.6	8.4	4	4	4	2	9	9	4	18.75	18.75	19.5	8.4	8.4	4.95
332	SHASHIKANT GULLADAL	74	F	RTD OFFICER	2	TINEA CORPORIS WITH FOOT ECZEMA	1.5			1			3			10			2.802		
333	SHANTABAI Y P	68	F	HOUSEWIFE	2	PRURITUS CORPORIS	1.3	1.3		1	1		3	3		10	10		2.802	2.802	
334	ABDUALHAZIZ BHAGAWAN	30	M	WORKER	4	PSORIASIS VULGARIS	4.6	4.6		2	2		4	4		15.75	15.75		4.95	4.95	
335	GOUDAYYA KAMBI	50	M	FARMER	4	PAPULO-ERYTHRODERMA OF OFUJI	8	8	2	3	3	1	5	7	2	19.75	19.75	10	8.952	8.952	6.798
336	PARVAT GOWDA	40	M	AGRICULTURE	2	PSORIASIS VULGARIS	6.4	6.4	8	2	2	4	6	6	8	15.75	15.75	19	4.95	4.95	8.448
337	SNEHA URAGAI	34	F	HOUSEWIFE	4	CHRONIC URTICARIA	4.9	5	5	3	3	2	5	5	5	14.75	14.75	15	6.798	6.798	4.95
338	BASAVARAJ HITNAL	24	M	STUDENT	4	CHRONIC URTICARIA	4	4		2	2		3	3		12.75	12.75		3.999	3.999	
339	BASAMMA PATTANASHETTI	50	F	HOUSEWIFE	4	CHRONIC URTICARIA	3.1	3.1		2	2		4	4		8.5	8.5		3.999	3.999	
340	KADISAB CHOUDARI	28	M	BUSINESS	1.5	PAPULAR URTICARIA	4.3	4.3		2	2		5	5		13.75	13.75		4.95	4.95	
341	ZEELAKHA	30	F	HOUSEWIFE	2	ANEMIA INDUCED PRURITUS	7.3	7.1		3	3		3	3		15.75	15.75		8.448	8.448	
342	DHARUBAI ZARA	39	F	HOUSEWIFE	24	SCABIES	8.4	8.3	1	4	4	1	7	7	2	18.75	18.75	9	8.448	8.448	2.802
343	SHIVA TELI	55	M	FARMER	1.5	PRURITIC PAPULAR ERUPTIONS OF HIV	5.9	6	0	3	3	0	7	7	1	16.75	16.75	5	3.999	3.999	0
344	SOUBHAGYA HOSUR	30	F	HOUSEWIFE	1.5	PRURITUS CORPORIS	4	4		2	2		2	2		10.5	10.5		3.999	3.999	
345	SURESH INDI	45	M	BUSINESS	2.5	DERMOGRAPHISM	2.3			1			4			10.25			4.95		
346	IRAPPA KEMBAVI	32	M	FARMER	4	TINEA CORPORIS WITH CRURIS	4.2	4.2	0	2	2	0	6	6	1	14.25	14.25	5	4.95	4.95	0
347	SIDAMMA PISALER	35	F	COOLI	3	PRURITIC PAPULAR ERUPTIONS OF HIV	4	4		2	2		3	3		10	10		6.798	6.798	
348	KALLAPPA POJARI	80	M	FARMER	60	SENILE XEROSIS	8.4	8.4	5.3	4	4	3	10	10	6	18.75	18.75	14	5.199	5.199	4.95

349	MUDAKAVVA HANDI	40	F	HOUSEWIFE	60	PEMPHIGUS FOLIACEOUS	4.8	4.8		3	3		7	7		13.25	13.25		4.95	5.973	
350	RUDRAGOUDA CHOUDARI	34	M	FARMER	2	SCABIES	4	4		2	2		4	4		14.75	14.75		5.973	5.973	
351	RANJI RATHOD	52	M	BUSINESS	2	ANEMIA INDUCED PRURITUS	3.6	3.6		2	2		3	3		10.5	10.5		3.999	3.999	
352	BAGAWWA	50	F	HOUSEWIFE	12	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	6.8	6.8		3	3		4	4		10.5	10.5		5.199	5.199	
353	PRAKASH L M	20	M	STUDENT	3	DERMOGRAPHISM	4	4		2	2		3	3		13.75	13.75		5.199	5.199	
354	CHANNAPPA SINDAGI	60	M	FARMER	2	PRURITUS CORPORIS	6.4	6.4		3	3		5	5		14	14		5.199	5.199	
355	RENUKA PATIL	46	F	FARMER	2	CHRONIC URTICARIA	4.3	4.3	0	2	2	0	5	5	1	14.5	14.5	5	4.95	4.95	0
356	MARAMMA	48	F	HOUSEWIFE	3	CHRONIC URTICARIA	5	5		2	2		7	6		10.5	10.5		3.999	3.999	
357	SAIBAGOUDA	60	M	FARMER	12	TINEA CORPORIS WITH CRURIS	3.9	3.9		2	2		4	4		13.5	13.5		3.999	3.999	
358	BHIMAPPA KARABAI	70	M	FARMER	1.5	DERMATITIS HERPETIFORMIS	8.1	8	1.4	4	4	1	10	10	2	18.5	18.5	9	8.4	8.4	3.999
359	SIDDANAGOUDA	68	M	FARMER	2	SENILE XEROSIS	5	5		2	2		7	7		15.5	15.5		4.95	4.95	
360	BOURAMMMMA HIREMATH	40	F	WORK IN FIELD	2	PSORIASIS VULGARIS	4.3	4.6		2	2		6	6		13.75	13.75		4.95	4.95	
361	KASHIBAI	35	F	HOUSEWIFE	3	CHRONIC URTICARIA	3.4	3.4		2	2		3	3		13.75	13.75		3.09	3.09	
362	BALAPPA HACHADAD	60	M	FARMER	2	PRURITUS CORPORIS	6.7	6.7		3	3		6	6		15.75	15.75		6.798	6.798	
363	YALLAWWA	70	F	HOUSEWIFE	12	ANEMIA INDUCED PRURITUS	5.9	6		2	2		5	5		13.5	13.5		8.448	8.4	
364	YEMANAPPA	70	M	FARMER	2.5	PRURITUS CORPORIS	8.1	8	0	4	4	0	8	8	1	16.75	16.75	5	8.448	8.448	0
365	SHOBA	48	F	HOUSEWIFE	2	CHRONIC URTICARIA	9	9	6.1	4	4	3	8	8	6	19.5	19.5	15	12.147	12.147	8.4
366	BASAPPA	61	M	FARMER	2	CHRONIC URTICARIA	4.3	4.3		2	2		5	5		14.25	14.25		5.352	5.352	
367	SHIVASHARAN M	48	M	FARMER	1.5	PSORIASIS VULGARIS	4.6	4.5		2	2		3	3		11.75	11.75		5.352	5.352	
368	LAKAPPA NARIR	60	M	FARMER	2	ANEMIA INDUCED PRURITUS	6	6.3		3	3		8	8		16.5	16.5		5.199	5.199	
369	TAMMANAPPA BADIGER	60	M	CORPORATOR	2	PRURITUS CORPORIS	7	7.2	2.1	3	3	1	8	8	3	15.75	15.75	12	7.551	7.551	4.5
370	SHIVASHANKARAPPA	65	M	MEDICAL WORKER	2	PAPULAR URTICARIA	9	9.1	2.4	4	4	2	5	7	3	19.5	19.5	10	12.147	12.147	3.999
371	ASMA BIJAPUR	20	F	STUDENT	3	CHRONIC URTICARIA	6	6.4		3	3		7	7		14.25	14.25		7.551	7.551	
372	GIRIJA MALPAD	36	F	HOUSEWIFE	1.5	SCABIES	5	5.4	0	2	2	0	3	3	1	10.75	10.75	5	8.448	8.448	1.551
373	LAKAMMA	20	F	STUDENT	2	SCABIES	6	5.9	0	3	3	0	4	6	1	13.5	13.5	5	7.551	7.551	1.551

2. SCORES OF INDIVIDUAL DOMAINS OF 5 - D SCALE (V1)

PATIENT SL. NO	DIAGNOSIS	DURATION OF ITCH	DEGREE OF ITCH	DIRECTION	EFFECT ON SLEEP	EFFECT ON LEISURE	EFFECT ON HOUSE-HOLD WORK	EFFECT ON WORK	DISTRIBUTION	TOTAL SCORE
1	CHRONIC URTICARIA	2	3	4	3	1	1	1	3	13.5
2	CHRONIC URTICARIA	3	4	5	3	1	1	1	5	18.5
3	CHRONIC URTICARIA	2	4	4	5	2	2	1	5	16.5
4	PRURITUS CORPORIS	3	4	3	5	2	2	1	4	15.5
5	SCABIES	1	4	2	2	1	1	1	2	10.25
6	PRURITUS CORPORIS	1	4	3	2	1	1	1	2	11.25
7	CHRONIC URTICARIA	2	4	5	4	1	1	1	5	17.75
8	PRURITUS CORPORIS	2	5	5	2	1	1	1	5	17.25
9	SENILE XEROSIS	2	5	5	5	2	2	1	5	18.5
10	WINTER XEROSIS	2	3	2	1	1	1	1	2	9
11	ANEMIA INDUCED PRURITUS	2	4	3	3	1	1	1	3	13.5
12	DRUG INDUCED PRURITUS (NEVIRAPINE)	2	4	3	3	2	1	1	3	13.75
13	BULLOUS PEMPHIGOID	3	5	5	2	1	1	1	4	18.25
14	CHRONIC URTICARIA	1	4	2	5	1	1	1	3	12
15	ANEMIA INDUCED PRURITUS	3	5	4	5	1	2	2	3	17.5
16	SENILE XEROSIS	2	5	4	2	2	1	1	2	14.5
17	PRURITUS CORPORIS	2	4	4	3	3	1	1	2	14
18	SCABIES	2	4	3	3	3	1	1	3	14
19	PRURITUS CORPORIS	3	4	4	2	2	3	2	4	17.25
20	CHRONIC URTICARIA	3	5	5	5	2	3	1	2	17.75
21	CHRONIC URTICARIA	5	4	3	4	3	3	2	4	19
22	PRURIGO SIMPLEX	1	4	3	4	1	3	1	3	13.25
23	PRURITUS CORPORIS	1	3	4	4	3	2	2	2	13.75
24	DRUG INDUCED PRURITUS (ETHAMBUTOL)	3	4	4	3	3	3	1	3	16.5
25	CHRONIC URTICARIA	3	4	2	4	1	1	1	3	13.75
26	AIR BORNE CONTACT DERMATITIS	1	3	2	1	1	1	1	3	10
27	SCABIES	3	5	5	5	2	3	1	3	18.75
28	ANEMIA INDUCED PRURITUS	5	5	4	5	2	3	1	3	19.75
29	ANEMIA INDUCED PRURITUS	2	4	3	2	1	1	1	2	12.25
30	PRURIGO SIMPLEX	3	5	3	4	4	3	2	3	17.25
31	ANEMIA INDUCED PRURITUS	3	5	4	5	4	3	2	3	18.25
32	ATOPIC DERMATITIS	1	4	4	2	1	1	1	2	12.25
33	CHRONIC URTICARIA	3	5	4	5	4	3	1	4	19.25
34	CHRONIC URTICARIA	2	4	3	4	3	2	2	3	12.75
35	ANEMIA INDUCED PRURITUS	2	4	4	2	2	3	1	2	14
36	CHRONIC URTICARIA	5	5	4	5	2	2	5	2	19.5
37	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	3	5	5	3	3	3	1	3	18.5
38	PRURIGO SIMPLEX	3	4	3	3	1	1	1	2	13.5
39	ANEMIA INDUCED PRURITUS	1	4	4	2	1	3	1	2	13.75
40	UREMIC ITCH	2	4	3	4	2	1	1	3	14
41	SCABIES	1	3	2	1	2	1	1	3	10.25
42	SCABIES	2	4	3	4	1	1	1	3	14.75
43	CHRONIC URTICARIA	1	4	4	1	1	1	1	2	12
44	SCABIES	2	5	4	4	3	3	1	4	17.25
45	AIR BORNE CONTACT DERMATITIS	2	4	5	2	2	3	1	5	18
46	ATOPIC DERMATITIS	1	4	4	3	3	1	1	3	14
47	ATOPIC DERMATITIS	3	4	4	4	2	2	2	3	16.5
48	INTRAHEPATIC CHOLESTASIS OF PREGNANCY	3	5	5	3	2	3	2	4	19.5
49	PRURITUS CORPORIS	2	3	2	2	1	1	1	2	10.25
50	PRURIGO SIMPLEX	2	4	3	4	2	3	1	3	14.5
51	SCABIES	2	3	4	1	1	1	1	2	12
52	PRURITUS CORPORIS	1	2	2	1	1	1	1	2	8
53	PSORIASIS VULGARIS	1	2	5	1	2	1	1	3	12.25

54	ATOPIC DERMATITIS	1	3	5	1	1	1	1	2	12
55	CHRONIC URTICARIA	3	3	2	4	1	2	2	3	13.5
56	PRURIGO SIMPLEX	3	4	3	4	1	2	2	3	15.5
57	PRURIGO IN HIV	3	4	2	3	2	1	1	3	13.75
58	CHRONIC URTICARIA	3	4	2	4	2	3	1	3	14.5
59	CHRONIC URTICARIA	2	4	2	2	3	5	5	3	14.75
60	CHRONIC URTICARIA	2	3	4	4	1	1	1	3	13.75
61	PSORIASIS VULGARIS	4	5	3	2	2	5	5	3	18.5
62	SENILE XEROSIS	2	4	4	3	2	1	1	3	14.75
63	SCABIES	1	3	3	3	2	1	1	2	10.75
64	PRURITUS CORPORIS	3	4	5	4	3	3	1	4	18.75
65	PRURIGO SIMPLEX	3	4	3	3	2	1	1	2	13.75
66	CHRONIC URTICARIA	1	3	2	2	1	1	1	1	8.25
67	PSORIASIS VULGARIS	3	5	3	5	3	5	1	3	17.5
68	ANEMIA INDUCED PRURITUS	2	3	4	3	2	1	1	3	13.75
69	PUPPP	3	4	4	5	2	1	1	3	16.25
70	BULLOUS PEMPHIGOID	3	5	4	4	2	3	5	5	19.5
71	SCABIES	3	5	4	5	3	5	1	4	17.5
72	AIR BORNE CONTACT DERMATITIS	3	5	3	3	2	3	2	2	15.5
73	PRURIGO SIMPLEX	3	5	3	3	2	5	1	2	15.75
74	PRURITUS CORPORIS	2	5	2	4	3	2	2	2	13.75
75	ANEMIA INDUCED PRURITUS	2	5	2	4	1	1	1	3	13.75
76	SENILE XEROSIS	3	5	2	5	4	5	1	3	17.75
77	DRUG INDUCED PRURITUS (NEVIRAPINE)	2	4	2	4	3	2	2	3	13.75
78	SCABIES	1	4	4	3	2	1	1	2	12.75
79	PRURITUS CORPORIS	2	4	4	2	1	1	1	2	13.25
80	SCABIES	2	4	4	2	2	2	2	2	14
81	SENILE XEROSIS	1	3	4	3	2	1	1	3	12.75
82	ANEMIA INDUCED PRURITUS	2	5	3	5	3	5	1	3	14.5
83	CHRONIC URTICARIA	1	5	2	3	2	1	1	3	12.75
84	CHRONIC URTICARIA	2	4	2	5	2	2	2	2	13.75
85	ANEMIA INDUCED PRURITUS	1	4	4	3	2	1	1	3	12.75
86	DRUG INDUCED PRURITUS (ETHAMBUTOL)	3	5	4	4	1	5	5	3	18.5
87	CHRONIC URTICARIA	2	4	3	3	2	1	1	3	13.75
88	SCABIES	2	4	3	2	1	2	2	3	13.75
89	SCABIES	2	4	3	3	2	1	1	3	13.75
90	CHRONIC URTICARIA	3	4	5	4	1	3	5	4	18.25
91	CHRONIC URTICARIA	2	4	4	3	2	1	1	2	13.75
92	ANEMIA INDUCED PRURITUS	2	4	4	3	2	1	1	2	13.75
93	PRURITUS CORPORIS	3	4	4	2	3	3	5	3	16.25
94	CHRONIC URTICARIA	2	3	3	3	2	1	1	3	12.75
95	SCABIES	3	3	4	5	4	5	1	2	14.75
96	ANEMIA INDUCED PRURITUS	2	4	2	3	1	5	1	3	13.75
97	CHRONIC URTICARIA	1	3	2	2	1	1	1	3	10.25
98	CHRONIC URTICARIA	3	2	5	1	3	2	1	4	15.75
99	CHRONIC URTICARIA	2	2	5	1	3	2	1	3	13.75
100	UREMIC ITCH	1	2	3	1	3	2	1	3	10.75
101	CHRONIC URTICARIA	3	4	4	3	3	3	1	3	16.5
102	PRURIGO SIMPLEX	3	4	4	5	2	3	5	4	17.75
103	PRURITUS CORPORIS	3	4	5	5	2	3	5	5	19.75
104	CHRONIC URTICARIA	1	3	3	2	1	1	1	2	10.25
105	PRURITUS CORPORIS	2	4	4	2	1	1	1	2	13.25
106	ATOPIC DERMATITIS	2	4	4	4	2	3	1	2	14.5
107	AIR BORNE CONTACT DERMATITIS	2	4	4	1	1	1	1	3	14
108	CHRONIC URTICARIA	3	5	4	3	5	1	1	4	18
109	CHRONIC URTICARIA	1	2	4	1	1	1	1	2	10
110	DRUG INDUCED PRURITUS (PYRAZINAMIDE)	3	5	4	2	2	1	1	3	16.5
111	CHOLESTATIC PRURITUS	3	5	4	5	2	3	5	3	18.75
112	CHRONIC URTICARIA	5	5	4	5	2	3	5	2	19.75
113	PRURITUS CORPORIS	1	3	2	2	2	1	1	3	10.5
114	CHRONIC URTICARIA	1	3	4	2	2	1	1	3	12.5
115	SCABIES	3	5	4	3	2	1	1	4	17.75
116	PRURITIC PAPULAR ERUPTIONS OF HIV	1	3	2	1	1	1	1	1	8
117	DRUG INDUCED PRURITUS (NEVIRAPINE)	3	5	4	5	3	2	5	3	18.75
118	ATOPIC DERMATITIS	1	3	2	1	2	2	1	2	10.75

119	UREMIC PRURITUS	3	4	3	3	2	1	1	3	13.75
120	TINEA CRURIS AND CORPORIS	3	4	4	3	2	3	1	3	16.75
121	PRURITUS CORPORIS	2	3	2	3	2	1	1	2	10.75
122	SCABIES	2	4	5	3	2	3	1	4	16.75
123	ATOPIC DERMATITIS	3	5	4	4	3	3	5	3	18.75
124	ATOPIC DERMATITIS	3	5	5	4	3	3	5	3	18.75
125	PRURIGO IN HIV	4	4	5	2	2	1	1	3	17.5
126	SCABIES	3	3	4	3	3	3	1	2	14.5
127	ATOPIC DERMATITIS	3	4	4	3	2	3	1	4	16.75
128	DERMOGRAPHISM	4	4	4	2	2	3	3	4	18.5
129	PSORIASIS VULGARIS	1	4	2	1	1	1	1	1	9
130	PRURITUS CORPORIS	2	4	4	3	2	1	1	3	14.75
131	CHRONIC URTICARIA	1	3	4	3	2	1	1	1	10.75
132	TINEA CRURIS AND CORPORIS	4	4	4	3	2	3	3	3	17.75
133	DRUG INDUCED PRURITUS (ATORVASTATIN)	1	3	3	3	2	1	1	2	10.75
134	CHRONIC URTICARIA	2	4	4	3	3	3	1	2	14.5
135	CHRONIC URTICARIA	2	2	5	1	3	2	1	4	14.75
136	ANEMIA INDUCED PRURITUS	2	5	5	2	3	2	3	4	18.5
137	PRURIGO SIMPLEX	1	2	4	1	3	2	1	2	10.75
138	PSORIASIS VULGARIS	2	2	4	1	3	2	1	2	11.75
139	SENILE XEROSIS	2	4	4	3	1	2	1	2	13.75
140	CHRONIC URTICARIA	2	2	4	3	1	2	1	3	12.75
141	PAPULO-ERYTHRODERMA OF OFUJI	2	3	2	3	1	2	1	2	10.75
142	PRURIGO SIMPLEX	1	3	4	2	2	2	1	2	11.75
143	SCABIES	2	3	4	2	1	2	2	2	12.75
144	CHRONIC URTICARIA WITH XEROSIS	3	4	2	3	3	2	2	2	13.5
145	CHRONIC URTICARIA WITH ANGIOEDEMA	2	3	4	2	2	2	1	2	12.75
146	DRUG INDUCED PRURITUS (NEVIRAPINE)	3	4	4	5	3	5	3	2	16
147	CHRONIC URTICARIA	1	3	4	1	2	2	1	2	11.5
148	SCABIES	2	4	4	3	2	1	1	3	13.75
149	PRURIGO SIMPLEX	2	4	4	2	2	1	1	3	13.5
150	PRURIGO IN HIV	4	4	3	4	2	3	2	2	15.75
151	WINTER XEROSIS	3	4	2	4	3	2	2	2	13.75
152	DERMATITIS HERPETIFORMIS	1	3	2	2	1	1	1	3	10.25
153	PRURIGO SIMPLEX	4	4	5	3	5	5	2	3	19.75
154	FOLLICULAR ECZEMA	2	2	2	1	2	2	1	2	9.25
155	SENILE XEROSIS	3	4	4	4	3	3	1	2	15.75
156	SCABIES	4	4	4	4	2	3	2	2	17.75
157	PSORIASIS VULGARIS	2	3	3	1	2	1	1	2	11.25
158	DERMOGRAPHISM	1	3	2	1	3	1	1	3	10.5
159	WINTER XEROSIS	3	5	4	5	1	5	3	3	18.5
160	SCABIES	2	3	2	3	1	1	1	2	10.5
161	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	2	4	3	4	3	2	2	2	13.75
162	TINEA CORPORIS	2	4	4	1	1	1	1	3	14
163	PRURIGO SIMPLEX	1	3	3	1	1	1	1	3	11
164	SENILE XEROSIS	5	4	3	3	2	3	1	3	17.25
165	WINTER XEROSIS	1	3	4	2	2	1	1	3	12.5
166	SENILE XEROSIS	2	3	3	3	2	2	2	3	14.25
167	DRUG INDUCED PRURITUS (NEVIRAPINE)	4	4	3	4	2	2	3	2	15.75
168	PRURIGO SIMPLEX	2	3	4	1	1	2	1	2	12.25
169	PRURIGO SIMPLEX	2	4	4	1	1	2	1	3	13.25
170	LICHEN PLANUS	2	4	4	2	1	1	1	2	13.5
171	WINTER XEROSIS	2	3	2	1	2	2	1	2	10.5
172	WINTER XEROSIS	2	3	2	3	2	1	1	2	10.75
173	CHRONIC URTICARIA	1	3	4	2	2	1	1	3	12.5
174	CHRONIC URTICARIA	2	3	4	3	2	1	1	2	12.75
175	SCABIES	3	4	3	4	2	2	3	2	14.75
176	CHOLESTATIC PRURITUS	3	4	4	5	2	5	3	3	16.75
177	CHRONIC URTICARIA	2	3	4	1	3	2	1	2	12.75
178	PRURIGO SIMPLEX	1	3	3	3	1	2	1	2	10.75
179	AIR BORNE CONTACT DERMATITIS	2	4	4	1	1	1	1	2	14
180	SCABIES	2	3	2	1	3	2	1	2	10.75
181	SENILE XEROSIS	2	3	4	1	3	1	1	2	12.5
182	WINTER XEROSIS	2	3	4	2	1	2	1	2	12.5
183	SCABIES	1	3	2	2	2	1	1	2	10.75

184	CHRONIC URTICARIA	4	4	2	2	4	2	2	3	15.5
185	ANEMIA INDUCED PRURITUS	2	4	4	1	1	1	1	3	14
186	CHOLESTATIC PRURITUS	2	4	4	3	3	2	2	2	14.5
187	SCABIES	2	4	4	3	5	5	2	2	15.5
188	AIR BORNE CONTACT DERMATITIS	2	3	2	4	1	2	2	3	12.25
189	ATOPIC DERMATITIS	1	3	2	1	1	1	1	3	10
190	WINTER XEROSIS	2	3	4	2	2	1	1	2	12.5
191	AIR BORNE CONTACT DERMATITIS	1	3	2	2	2	1	1	3	10.5
192	SCABIES	2	3	4	2	2	1	1	2	12.5
193	PSORIASIS VULGARIS	2	4	4	2	3	1	1	2	13.75
194	WINTER XEROSIS	2	2	4	1	3	2	1	2	11.75
195	DERMOGRAPHISM	2	4	4	3	2	1	1	2	13.75
196	PRURIGO SIMPLEX	2	2	5	1	3	2	1	3	13.75
197	CHRONIC URTICARIA	2	3	2	3	2	1	1	3	11.75
198	WINTER XEROSIS WITH ECZEMA	2	3	2	2	3	1	2	2	10.75
199	CHRONIC URTICARIA	5	5	4	3	3	4	1	2	18.75
200	SCABIES	2	3	2	3	2	1	1	2	10.75
201	CHRONIC URTICARIA	3	3	2	4	2	3	2	3	13.75
202	CHRONIC URTICARIA	3	3	2	4	2	3	2	3	13.75
203	WINTER XEROSIS	2	4	4	3	1	1	1	2	13.5
204	WINTER XEROSIS	2	3	2	2	2	1	1	3	11.5
205	SCABIES	1	3	2	3	4	3	1	2	10.75
206	PRURITUS CORPORIS	4	4	5	2	2	5	1	4	19.5
207	SCABIES	5	5	4	2	3	4	2	2	18.75
208	SCABIES	3	4	3	2	2	4	3	2	14.75
209	SENILE XEROSIS	3	4	2	2	4	2	3	2	13.75
210	SCABIES	2	3	2	3	4	2	2	1	10.75
211	SCABIES	3	4	2	3	2	3	3	3	14.75
212	WINTER XEROSIS	2	4	4	2	2	1	1	3	14.5
213	WINTER XEROSIS	1	3	3	3	2	1	1	2	10.75
214	WINTER XEROSIS	1	3	2	2	2	2	2	3	10.5
215	CHRONIC URTICARIA	1	3	2	4	3	2	2	3	11.75
216	ATOPIC DERMATITIS	1	3	2	3	2	1	1	3	11.75
217	CHRONIC URTICARIA	2	3	4	3	3	2	3	3	13.75
218	WINTER XEROSIS	2	3	4	3	2	1	1	2	12.75
219	PRURIGO SIMPLEX	2	4	3	4	2	2	3	2	13.75
220	PRURITUS CORPORIS	2	4	3	4	2	2	3	2	13.75
221	CHRONIC URTICARIA	2	3	4	2	3	1	1	2	12.75
222	SCABIES	2	4	3	3	3	2	2	2	13.5
223	SCABIES	3	3	3	3	2	1	1	2	12.75
224	PRURIGO SIMPLEX WITH WINTER XEROSIS	1	3	4	2	1	1	1	2	11.25
225	ANEMIA INDUCED PRURITUS	1	3	4	1	2	2	1	2	11.5
226	CHRONIC URTICARIA	2	3	2	1	3	2	1	2	10.75
227	SENILE XEROSIS	2	3	4	2	2	1	1	3	13.5
228	SCABIES	4	4	4	2	1	3	1	2	15.75
229	DRUG INDUCED PRURITUS (NEVIRAPINE)	4	4	3	3	2	3	3	2	15.75
230	SCABIES	2	3	4	2	1	1	1	3	13.25
231	AIR BORNE CONTACT DERMATITIS	1	3	4	3	2	1	1	2	11.75
232	SCABIES	2	4	4	2	1	1	1	2	13.25
233	SCABIES	1	3	2	1	2	1	1	3	10.75
234	WINTER XEROSIS	2	3	2	3	2	1	1	3	11.75
235	SCABIES	1	3	4	1	2	1	1	2	11.25
236	SCABIES	2	4	2	3	2	2	3	3	13.5
237	SCABIES	2	4	2	2	3	2	3	3	13.5
238	ATOPIC DERMATITIS	3	3	4	2	2	3	3	2	14.5
239	SCABIES	1	3	4	1	3	2	1	2	11.75
240	CHRONIC URTICARIA	3	3	4	1	1	1	1	3	14
241	WINTER XEROSIS	3	4	2	1	1	1	1	2	14
242	SCABIES	2	3	2	4	1	2	2	3	12.25
243	PSORIASIS VULGARIS	2	3	2	2	2	1	1	3	12.5
244	ATOPIC ERUPTION OF PREGNANCY	2	3	2	2	2	1	2	1	10.25
245	CHRONIC URTICARIA	1	3	4	3	1	1	2	2	10.75
246	SCABIES	2	4	2	2	2	1	1	2	12.25
247	CHRONIC URTICARIA	2	3	2	1	2	1	1	2	10.25
248	SCABIES	2	4	4	2	2	1	1	2	13.5

249	ATOPIC DERMATITIS	2	4	2	3	5	3	3	3	14.5
250	CHRONIC URTICARIA	4	4	4	4	1	1	3	3	16.75
251	ANEMIA INDUCED PRURITUS	2	3	4	2	2	1	1	2	12.5
252	DRUG INDUCED PRURITUS (ETHAMBUTOL)	3	3	5	3	1	1	2	5	17.75
253	SENILE XEROSIS	3	3	4	4	2	2	3	2	14.75
254	SCABIES	1	3	3	3	2	1	1	2	10.75
255	SCABIES	2	3	2	4	4	1	2	3	12.75
256	LICHEN PLANUS PIGMENTOSUS	2	3	2	4	4	1	2	2	11.75
257	PRURIGO SIMPLEX	2	3	4	1	1	1	1	2	12
258	SCABIES	4	4	2	4	3	1	3	1	13.75
259	PRURITUS CORPORIS	2	3	2	4	2	2	2	3	12.5
260	ATOPIC ERUPTION OF PREGNANCY	5	5	5	3	3	1	3	3	19.5
261	SENILE XEROSIS	3	4	2	3	3	2	2	3	14.5
262	CHRONIC URTICARIA WITH ANGIOEDEMA	2	3	4	2	2	1	1	2	12.5
263	SCABIES	1	3	4	1	1	1	1	2	11
264	SCABIES	1	3	2	1	2	2	1	3	10.5
265	AIR BORNE CONTACT DERMATITIS	2	3	4	2	2	1	1	2	12.5
266	CHRONIC URTICARIA	2	3	4	3	2	2	2	2	12.25
267	ANEMIA INDUCED PRURITUS	1	4	2	1	1	1	1	2	10
268	ATOPIC DERMATITIS	2	3	4	2	2	1	1	2	12.5
269	PSORIASIS VULGARIS	2	4	2	3	4	2	2	3	13.75
270	CHRONIC URTICARIA	2	3	2	3	2	1	1	3	11.75
271	SCABIES	2	3	2	4	3	2	2	3	12.75
272	SCABIES	2	4	4	3	2	1	1	2	13.5
273	LICHEN PLANUS	1	3	2	1	1	1	1	3	10
274	SCABIES WITH PITYRIASIS VERSICOLOR	2	3	4	2	2	1	1	2	12.25
275	PRURITUS CORPORIS	1	3	4	1	2	2	1	3	11.5
276	ANEMIA INDUCED PRURITUS	2	4	4	3	2	1	1	2	13.75
277	SCABIES	2	4	2	3	3	2	2	3	13.5
278	CHRONIC URTICARIA	4	3	3	3	4	2	2	3	15.75
279	CHRONIC URTICARIA WITH ANGIOEDEMA	2	3	4	3	2	1	1	3	13.75
280	SCABIES	2	3	4	2	2	1	1	3	13.25
281	SCABIES	1	3	4	1	3	2	1	2	11.75
282	SCABIES	2	3	5	2	1	1	1	2	13.25
283	CHRONIC URTICARIA	5	5	5	4	2	2	3	2	19.75
284	AIR BORNE CONTACT DERMATITIS	4	4	5	3	4	2	2	2	17.75
285	PSORIASIS VULGARIS	2	3	2	4	2	1	2	2	11.25
286	PSORIASIS VULGARIS	2	3	4	2	5	1	2	2	13.5
287	PSORIASIS VULGARIS	2	3	4	4	3	1	2	2	13.5
288	ATOPIC DERMATITIS	1	3	3	3	4	2	1	2	11.5
289	DRUG INDUCED PRURITUS (NEVIRAPINE)	3	3	2	3	5	2	1	3	13.75
290	CHRONIC URTICARIA	5	4	4	3	4	1	4	3	18
291	CHRONIC URTICARIA	1	3	4	1	1	1	1	2	11
292	ATOPIC DERMATITIS	2	3	4	1	2	1	1	2	12.25
293	PEMPHIGUS FOLIACEOUS	2	3	4	2	2	1	1	2	12.5
294	CHRONIC URTICARIA	1	3	2	1	2	1	1	3	10.25
295	PSORIASIS VULGARIS	1	3	4	1	2	2	2	2	11.75
296	SENILE XEROSIS	2	3	4	1	2	1	1	2	12.25
297	CHRONIC URTICARIA	2	3	4	2	1	1	1	2	13.25
298	PRURITIC PAPULAR ERUPTION OF HIV	4	4	5	3	3	4	4	2	17.5
299	ATOPIC DERMATITIS	2	3	5	3	4	1	2	2	14.5
300	CHRONIC URTICARIA	5	4	5	4	3	4	4	2	18.75
301	ATOPIC DERMATITIS	2	3	5	2	2	4	2	4	16.5
302	ATOPIC DERMATITIS	2	3	2	4	3	2	2	3	12.75
303	SCABIES	2	3	5	4	3	2	2	2	14.75
304	SCABIES	1	3	2	1	3	2	1	3	10.75
305	SCABIES	2	4	5	4	3	4	4	3	16.75
306	SCABIES	4	4	5	5	2	4	4	3	19.75
307	ANEMIA INDUCED PRURITUS	1	3	2	1	1	1	1	3	10
308	DERMOGRAPHISM	2	3	5	3	3	1	4	2	14.75
309	ATOPIC DERMATITIS	1	3	4	1	2	1	1	2	11.25
310	PSORIASIS VULGARIS	1	3	3	2	3	1	1	2	10.75
311	ANEMIA INDUCED PRURITUS	2	3	4	3	5	1	2	2	13.75
312	CHRONIC URTICARIA	2	3	5	5	2	4	4	3	16.75
313	TINEA CRURIS WITH CORPORA	2	3	4	1	2	2	1	2	12.75

314	PRURIGO SIMPLEX	4	3	5	5	2	4	4	2	17.75
315	DRUG INDUCED PRURITUS (ETHAMBUTOL)	1	3	4	1	1	1	1	2	10
316	CHRONIC URTICARIA	2	3	2	3	4	2	2	3	12.75
317	CHRONIC URTICARIA	2	3	2	3	4	2	2	3	12.75
318	SCABIES	5	5	4	4	3	4	4	3	19.75
319	PRURITUS CORPORIS	1	3	2	4	4	2	1	2	10.75
320	AIR BORNE CONTACT DERMATITIS	3	3	2	2	3	1	1	3	12.75
321	PRURITUS CORPORIS	3	3	4	4	5	3	3	2	14.75
322	ANEMIA INDUCED PRURITUS	3	3	4	3	2	1	1	2	13.75
323	PRURITUS CORPORIS	1	3	3	2	3	1	1	2	10.75
324	AIR BORNE CONTACT DERMATITIS	2	3	2	2	3	1	1	2	10.75
325	PAPULAR URTICARIA	2	4	4	4	3	1	3	2	14.75
326	AIR BORNE CONTACT DERMATITIS	4	5	4	4	3	4	4	3	18.75
327	SENILE XEROSIS	2	3	4	3	2	1	1	3	13.75
328	SENILE XEROSIS	2	4	4	3	3	2	3	2	14.75
329	CHRONIC URTICARIA	2	3	2	3	5	2	1	1	10.75
330	PRURITUS CORPORIS	2	4	2	5	2	2	1	3	13.5
331	CHOLESTATIC PRURITUS	5	5	4	2	5	4	4	2	18.75
332	TINEA CORPORIS WITH FOOT ECZEMA	1	3	4	1	1	1	1	3	10
333	PRURITUS CORPORIS	1	2	4	1	1	1	1	2	10
334	PSORIASIS VULGARIS	2	4	4	4	5	1	4	3	15.75
335	PAPULO-ERYTHRODERMA OF OFUJI	5	4	5	4	3	4	4	2	19.75
336	PSORIASIS VULGARIS	2	3	5	4	3	1	3	3	15.75
337	CHRONIC URTICARIA	2	4	4	4	2	4	1	2	14.75
338	CHRONIC URTICARIA	2	4	2	3	2	1	1	3	12.75
339	CHRONIC URTICARIA	1	3	2	1	2	2	1	1	8.5
340	PAPULAR URTICARIA	3	3	4	3	2	1	1	2	13.75
341	ANEMIA INDUCED PRURITUS	3	4	4	2	5	4	4	2	15.75
342	SCABIES	5	5	4	4	3	4	4	2	18.75
343	PRURITIC PAPULAR ERUPTIONS OF HIV	3	4	5	3	2	1	1	3	16.75
344	PRURITUS CORPORIS	1	3	2	1	2	2	1	3	10.5
345	DERMOGRAPHISM	3	2	2	1	2	1	1	2	10.25
346	TINEA CORPORIS WITH CRURIS	3	3	4	4	3	1	1	2	14.25
347	PRURITIC PAPULAR ERUPTIONS OF HIV	1	3	2	1	1	1	1	3	10
348	SENILE XEROSIS	5	5	4	4	3	4	4	2	18.75
349	PEMPHIGUS FOLIACEOUS	1	4	4	1	1	2	1	2	13.25
350	SCABIES	3	3	4	3	3	4	1	2	14.75
351	ANEMIA INDUCED PRURITUS	1	3	2	1	1	2	2	3	10.5
352	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	1	4	2	1	1	2	2	2	10.5
353	DERMOGRAPHISM	3	3	2	5	3	2	1	3	13.75
354	PRURITUS CORPORIS	3	4	4	1	1	1	1	2	14
355	CHRONIC URTICARIA	3	3	4	4	2	1	3	2	14.5
356	CHRONIC URTICARIA	1	3	2	1	1	2	2	3	10.5
357	TINEA CORPORIS WITH CRURIS	3	3	2	4	3	2	1	3	13.5
358	DERMATITIS HERPETIFORMIS	3	4	5	4	3	4	4	4	18.5
359	SENILE XEROSIS	3	3	5	4	2	1	3	2	15.5
360	PSORIASIS VULGARIS	1	4	4	1	5	2	3	2	13.75
361	CHRONIC URTICARIA	3	4	2	4	2	2	3	2	13.75
362	PRURITUS CORPORIS	3	4	4	4	3	4	4	2	15.75
363	ANEMIA INDUCED PRURITUS	3	4	2	3	2	2	3	3	13.5
364	PRURITUS CORPORIS	3	5	4	2	2	3	4	2	16.75
365	CHRONIC URTICARIA	5	5	4	5	2	4	4	2	19.5
366	CHRONIC URTICARIA	2	4	4	2	2	2	3	2	14.25
367	PSORIASIS VULGARIS	1	3	3	4	2	2	1	2	11.75
368	ANEMIA INDUCED PRURITUS	3	4	5	4	3	4	3	2	16.5
369	PRURITUS CORPORIS	3	4	4	3	2	3	3	2	15.75
370	PAPULAR URTICARIA	5	5	4	4	2	4	4	2	19.5
371	CHRONIC URTICARIA	2	4	4	3	2	3	1	2	14.25
372	SCABIES	1	3	2	1	2	2	2	3	10.75
373	SCABIES	2	4	3	2	2	1	1	2	13.5

3. SCORES OF INDIVIDUAL COMPONENTS OF ISS (V1)

PATIENT SL. NO	DIAGNOSIS	FREQUENCY OF ITCH				DESCRIPTION OF ITCH						BSA (%)	INTENSITY OF ITCH			MOOD CHANGE		EFFECT ON SEXUAL ACTIVITY		EFFECT ON SLEEP		TOTAL SCORE
		MORNING	NOON	EVENING	NIGHT	STINGING	STABBING	BURNING	ANNOYING	UNBEARABLE	WORRISOME		AVERAGE STATE	WORST STATE	BEST STATE	SEXUAL DESIRE	SEXUAL FUNCTION	DIFFICULTY IN FALLING ASLEEP	AWAKENING	USE OF SLEEP MEDICATIONS		
1	CHRONIC URTICARIA	0	2	2	1	1	0	1	0	0	45	1	2	1	0	0	0	0	0	0	3.999	
2	CHRONIC URTICARIA	0	1	2	2	2	0	1	0	0	79	2	2	1	0	0	0	0	0	1	5.973	
3	CHRONIC URTICARIA	0	2	3	2	1	0	0	2	0	45	2	4	0	3	0	0	0	1	1	8.448	
4	PRURITUS CORPORIS	0	2	3	0	2	0	1	0	0	50	2	3	1	0	0	0	0	0	1	5.352	
5	SCABIES	0	1	3	0	2	0	0	0	0	60	2	3	0	0	0	0	0	0	1	4.95	
6	PRURITUS CORPORIS	0	1	2	0	0	0	0	2	0	60	2	2	1	0	0	0	0	1	1	5.199	
7	CHRONIC URTICARIA	0	2	3	1	0	0	0	2	1	95	3	3	1	0	0	0	0	1	2	8.4	
8	PRURITUS CORPORIS	1	2	3	0	1	0	0	2	0	95	2	4	1	0	0	0	0	1	2	8.4	
9	SENILE XEROSIS	0	2	3	1	0	0	0	1	1	2	95	3	4	0	0	0	0	2	1	8.4	
10	WINTER XEROSIS	0	1	3	0	2	0	0	0	0	60	2	3	0	0	0	0	0	0	1	4.95	
11	ANEMIA INDUCED PRURITUS	0	1	2	2	2	0	1	0	0	79	2	2	1	0	0	0	0	0	1	5.973	
12	DRUG INDUCED PRURITUS (NEVIRAPINE)	0	2	3	2	1	0	0	2	0	45	2	4	0	3	0	0	0	1	1	8.448	
13	BULLOUS PEMPFIGOID	2	3	3	2	1	0	0	2	2	95	4	4	2	0	0	0	0	2	2	10.599	
14	CHRONIC URTICARIA	0	1	3	0	2	0	0	0	0	60	2	3	0	0	0	0	0	0	1	4.95	
15	ANEMIA INDUCED PRURITUS	1	2	3	2	0	2	0	1	1	98	2	4	1	0	0	0	0	1	2	9.189	
16	SENILE XEROSIS	0	2	3	0	2	0	1	0	0	50	2	3	1	0	0	0	0	0	1	5.352	
17	PRURITUS CORPORIS	0	2	3	1	0	0	0	1	1	90	1	3	2	0	0	0	0	1	1	6.798	
18	SCABIES	0	3	3	0	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
19	PRURITUS CORPORIS	2	3	3	2	1	0	0	2	2	95	4	4	2	0	0	0	0	2	2	10.599	
20	CHRONIC URTICARIA	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
21	CHRONIC URTICARIA	1	2	3	2	0	2	0	1	1	98	2	4	1	0	0	0	0	1	2	9.189	
22	PRURIGO SIMPLEX	0	1	2	2	2	0	1	0	0	79	2	2	1	0	0	0	0	0	1	5.973	
23	PRURITUS CORPORIS	0	2	3	1	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
24	DRUG INDUCED PRURITUS (ETHAMBUTOL)	0	2	3	0	2	0	1	0	0	50	2	3	1	0	0	0	0	0	1	5.352	
25	CHRONIC URTICARIA	1	2	3	0	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
26	AIR BORNE CONTACT DERMATITIS	0	1	3	0	0	0	0	1	0	55	1	1	0	0	0	0	0	0	0	3.351	
27	SCABIES	1	2	3	2	0	2	0	1	1	98	2	4	1	0	0	0	0	0	1	9.189	
28	ANEMIA INDUCED PRURITUS	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
29	ANEMIA INDUCED PRURITUS	0	2	2	2	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
30	PRURIGO SIMPLEX	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
31	ANEMIA INDUCED PRURITUS	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
32	ATOPIC DERMATITIS	0	1	2	2	2	0	1	0	0	79	2	2	1	0	0	0	0	0	1	5.973	
33	CHRONIC URTICARIA	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
34	CHRONIC URTICARIA	0	2	2	2	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
35	ANEMIA INDUCED PRURITUS	0	2	3	1	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
36	CHRONIC URTICARIA	2	3	3	2	1	0	0	2	2	95	4	4	2	0	0	0	0	2	2	10.599	
37	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	2	3	3	2	1	0	0	2	2	95	4	4	2	0	0	0	0	2	2	10.599	
38	PRURIGO SIMPLEX	0	1	3	0	2	0	0	0	0	60	2	3	0	0	0	0	0	0	1	4.95	
39	ANEMIA INDUCED PRURITUS	0	2	3	0	0	0	1	1	1	50	2	4	1	1	0	0	0	1	2	7.551	
40	UREMIC ITCH	2	3	3	3	0	0	1	2	2	90	3	4	2	2	0	0	0	2	2	12.801	
41	SCABIES	0	0	2	1	1	0	1	0	0	48	1	1	0	0	0	0	0	0	0	3.09	
42	SCABIES	1	2	3	2	0	0	0	2	0	95	2	4	0	0	0	0	0	2	2	8.952	
43	CHRONIC URTICARIA	0	1	3	0	2	0	0	0	0	60	2	3	0	0	0	0	0	0	1	4.95	
44	SCABIES	0	3	3	2	1	0	1	1	1	98	2	4	1	0	0	0	0	0	1	9.789	
45	AIR BORNE CONTACT DERMATITIS	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
46	ATOPIC DERMATITIS	0	2	3	2	1	0	0	2	0	45	2	4	0	3	0	0	0	1	1	8.448	
47	ATOPIC DERMATITIS	0	2	3	2	1	0	0	2	0	45	2	4	0	3	0	0	0	1	1	8.448	
48	INTRAHEPATIC CHOLESTASIS OF PREGNANCY	0	2	3	2	1	0	0	2	0	45	2	4	0	3	0	0	0	1	1	8.448	
49	PRURITUS CORPORIS	0	2	2	1	1	0	1	0	0	45	1	2	1	0	0	0	0	0	0	3.999	
50	PRURIGO SIMPLEX	0	1	2	0	0	0	0	2	0	60	2	2	1	0	0	0	0	0	1	5.199	
51	SCABIES	0	2	2	1	1	0	1	0	0	45	1	2	1	0	0	0	0	0	0	3.999	
52	PRURITUS CORPORIS	0	1	3	0	0	0	0	1	0	55	1	1	0	0	0	0	0	0	0	3.351	
53	PSORIASIS VULGARIS	0	1	1	0	0	0	0	1	0	45	1	2	0	0	0	0	0	0	0	2.802	
54	ATOPIC DERMATITIS	0	0	3	0	0	0	1	0	0	55	2	2	0	0	0	0	0	0	2	4.797	
55	CHRONIC URTICARIA	0	2	3	1	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
56	PRURIGO SIMPLEX	0	2	3	0	0	0	1	1	1	50	2	4	1	1	0	0	0	1	2	7.551	
57	PRURIGO IN HIV	3	2	0	1	0	0	0	2	1	95	3	3	1	0	0	0	0	1	2	8.4	
58	CHRONIC URTICARIA	0	1	2	2	2	0	1	0	0	79	2	2	1	0	0	0	0	0	1	5.973	
59	CHRONIC URTICARIA	3	2	0	1	0	0	0	2	1	95	3	3	1	0	0	0	0	1	2	8.4	
60	CHRONIC URTICARIA	3	3	0	0	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
61	PSORIASIS VULGARIS	3	3	0	2	1	0	1	1	1	98	2	4	1	0	0	0	0	0	1	9.189	
62	SENILE XEROSIS	3	0	0	0	0	0	1	0	0	55	2	2	0	0	0	0	0	0	2	4.797	
63	SCABIES	0	2	2	1	1	0	1	0	0	45	1	2	1	0	0	0	0	0	0	3.999	
64	PRURITUS CORPORIS	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
65	PRURIGO SIMPLEX	0	2	3	1	0	0	0	1	1	90	1	3	2	0	0	0	0	0	1	6.798	
66	CHRONIC URTICARIA	0	2	2	1	1	0	0	1	0	45	1	2	1	0	0	0	0	0	0	3.999	
67	PSORIASIS VULGARIS	1	2	3	2	1	1	1	1	2	95	3	4	3	0	0	0	0	2	2	11.25	
68	ANEMIA INDUCED PRURITUS	3	2	0	0	0	0	1	1	1	50	2	4	1	1	0	0	0	1	2	7.551	
69	PUPPP	0	1	2	2	2	0	1	0	0	79	2	2	1	0	0	0	0	0	1	5.973	
70	BULLOUS PEMPFIGOID	2	3	3	3	0	0	1	2	2	90	3	4	2	2	0	0	0	2	2	12.801	
71	SCABIES	2	3	3	2	1	0	0	2	2	95	4	4	2	0	0	0	0	2	2	10.599	
72	AIR BORNE CONTACT DERMATITIS	0	1	2	0	0	0	0	2	0	60	2	2	1	0	0	0	0	0	1	5.199	

73	PRURIGO SIMPLEX	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
74	PRURITUS CORPORA	2	3	3	2	2	0	1	2	2	2	95	4	4	2	0	0	0	2	2	1	12.147
75	ANEMIA INDUCED PRURITUS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	5.199
76	SENILE XEROSIS	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
77	DRUG INDUCED PRURITUS (NEVIRAPINE)	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
78	SCABIES	3	1	0	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
79	PRURITUS CORPORA	3	2	0	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
80	SCABIES	1	2	2	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
81	SENILE XEROSIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
82	ANEMIA INDUCED PRURITUS	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
83	CHRONIC URTICARIA	1	2	3	2	1	1	1	1	2	1	95	3	4	3	0	0	0	2	2	0	11.25
84	CHRONIC URTICARIA	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
85	ANEMIA INDUCED PRURITUS	1	2	2	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
86	DRUG INDUCED PRURITUS (ETHAMBUTOL)	3	2	0	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	0	8.4
87	CHRONIC URTICARIA	3	2	0	0	0	0	1	1	1	1	50	2	4	1	1	0	0	1	2	0	7.551
88	SCABIES	2	3	3	2	2	0	1	2	2	2	95	4	4	2	0	0	0	2	2	1	12.147
89	SCABIES	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
90	CHRONIC URTICARIA	2	3	3	2	2	0	1	2	2	2	95	4	4	2	0	0	0	2	2	1	12.147
91	CHRONIC URTICARIA	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
92	ANEMIA INDUCED PRURITUS	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
93	PRURITUS CORPORA	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	1	2	0	7.551
94	CHRONIC URTICARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
95	SCABIES	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
96	ANEMIA INDUCED PRURITUS	1	2	2	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
97	CHRONIC URTICARIA	3	1	0	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	0	3.351
98	CHRONIC URTICARIA	3	2	0	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
99	CHRONIC URTICARIA	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
100	UREMIC ITCH	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
101	CHRONIC URTICARIA	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	0	8.4
102	PRURIGO SIMPLEX	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
103	PRURITUS CORPORA	2	3	3	2	2	0	1	2	2	2	95	4	4	2	0	0	0	2	2	1	12.147
104	CHRONIC URTICARIA	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	0	3.09
105	PRURITUS CORPORA	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
106	ATOPIC DERMATITIS	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	0	8.4
107	AIR BORNE CONTACT DERMATITIS	0	0	3	0	0	0	1	0	0	0	55	2	2	0	0	0	0	0	2	0	4.797
108	CHRONIC URTICARIA	1	2	3	2	1	1	1	1	2	1	95	3	4	3	0	0	0	2	2	0	11.25
109	CHRONIC URTICARIA	0	1	1	0	0	0	0	1	0	0	45	1	2	0	0	0	0	0	0	0	2.802
110	DRUG INDUCED PRURITUS (PYRAZINAMIDE)	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
111	CHOLESTASTIC PRURITUS	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	0	8.4
112	CHRONIC URTICARIA	2	3	3	3	0	0	1	2	2	3	90	3	4	2	2	0	0	2	2	0	12.801
113	PRURITUS CORPORA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
114	CHRONIC URTICARIA	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	0	3.09
115	SCABIES	2	3	3	3	0	0	1	2	2	3	90	3	4	2	2	0	0	2	2	0	12.801
116	PRURITIC PAPULAR ERUPTIONS OF HIV	0	1	1	0	0	0	0	1	0	0	45	1	2	0	0	0	0	0	0	0	2.802
117	DRUG INDUCED PRURITUS (NEVIRAPINE)	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
118	ATOPIC DERMATITIS	0	1	1	0	0	0	0	1	0	0	45	1	2	0	0	0	0	0	0	0	2.802
119	UREMIC PRURITUS	3	2	0	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
120	TINEA CRURIS AND CORPORA	3	2	0	2	1	0	0	2	0	0	45	2	4	0	3	0	0	1	1	0	8.448
121	PRURITUS CORPORA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
122	SCABIES	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	0	8.4
123	ATOPIC DERMATITIS	1	2	3	2	2	0	1	1	1	98	2	4	1	0	0	0	0	1	2	0	9.189
124	ATOPIC DERMATITIS	1	2	3	2	2	0	1	1	1	98	2	4	1	0	0	0	0	1	2	0	9.189
125	PRURIGO IN HIV	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
126	SCABIES	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
127	ATOPIC DERMATITIS	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	1	1	0	8.448
128	DERMOGRAPHISM	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
129	PSORIASIS VULGARIS	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	0	3.351
130	PRURITUS CORPORA	2	3	3	3	0	0	1	2	2	3	90	3	4	2	2	0	0	2	2	0	12.801
131	CHRONIC URTICARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
132	TINEA CRURIS AND CORPORA	0	2	3	1	0	0	0	1	1	2	95	3	4	0	0	0	0	2	1	0	8.01
133	DRUG INDUCED PRURITUS (ATORVASTATIN)	0	0	3	0	0	0	1	0	0	1	55	2	2	0	0	0	0	0	2	0	4.797
134	CHRONIC URTICARIA	1	2	3	2	2	0	1	1	1	98	2	4	1	0	0	0	0	1	2	0	9.189
135	CHRONIC URTICARIA	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	0	8.4
136	ANEMIA INDUCED PRURITUS	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	0	10.599
137	PRURIGO SIMPLEX	0	0	3	0	0	0	1	0	0	1	55	2	2	0	0	0	0	0	2	0	4.797
138	PSORIASIS VULGARIS	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	0	3.351
139	SENILE XEROSIS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
140	CHRONIC URTICARIA	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
141	PAPULO-ERYTHRODERMA OF OFUJI	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
142	PRURIGO SIMPLEX	0	1	1	0	1	0	0	0	0	0	40	0	1	0	0	0	0	0	0	0	2.151
143	SCABIES	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
144	CHRONIC URTICARIA WITH XEROSIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	0	5.199
145	CHRONIC URTICARIA WITH ANGIOEDEMA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
146	DRUG INDUCED PRURITUS (NEVIRAPINE)	2	3	3	3	0	0	1	2	2	3	90	3	4	2	2	0	0	2	2	0	12.801
147	CHRONIC URTICARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
148	SCABIES	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
149	PRURIGO SIMPLEX	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
150	PRURIGO IN HIV	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	0	6.798
151	WINTER XEROSIS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
152	DERMATITIS HERPETIFORMIS																					

165	WINTER XEROSIS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	1	0	5.352
166	SENILE XEROSIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
167	DRUG INDUCED PRURITUS (NEVIRAPINE)	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
168	PRURIGO SIMPLEX	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
169	PRURIGO SIMPLEX	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
170	LICHEN PLANUS	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
171	WINTER XEROSIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
172	WINTER XEROSIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
173	CHRONIC URITARIA	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
174	CHRONIC URITARIA	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
175	SCABIES	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
176	CHOLESTATIC PRURITUS	1	2	3	2	0	2	0	1	1	1	98	2	4	1	0	0	0	1	2	9.189
177	CHRONIC URITARIA	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
178	PRURIGO SIMPLEX	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
179	AIR BORNE CONTACT DERMATITIS	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	3.09
180	SCABIES	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	3.09
181	SENILE XEROSIS	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
182	WINTER XEROSIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
183	SCABIES	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
184	CHRONIC URITARIA	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	10.599
185	ANEMIA INDUCED PRURITUS	1	2	3	2	0	0	0	2	0	0	1	95	2	4	0	0	0	0	2	8.952
186	CHOLESTATIC PRURITUS	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	10.599
187	SCABIES	0	3	3	2	1	0	1	1	1	1	98	2	4	1	0	0	0	1	2	9.189
188	AIR BORNE CONTACT DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
189	ATOPIC DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
190	WINTER XEROSIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
191	AIR BORNE CONTACT DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
192	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
193	PSORIASIS VULGARIS	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
194	WINTER XEROSIS	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	3.09
195	DERMOGRAPHISM	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
196	PRURIGO SIMPLEX	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	3.09
197	CHRONIC URITARIA	0	0	3	0	0	0	1	0	0	0	1	55	2	2	0	0	0	0	2	4.797
198	WINTER XEROSIS WITH ECZEMA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
199	CHRONIC URITARIA	1	2	3	2	1	1	1	1	2	1	95	3	4	3	0	0	0	2	2	11.25
200	SCABIES	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
201	CHRONIC URITARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
202	CHRONIC URITARIA	0	3	3	0	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
203	WINTER XEROSIS	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	10.599
204	WINTER XEROSIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
205	SCABIES	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
206	PRURITUS CORPORIS	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	1	2	7.551
207	SCABIES	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	10.599
208	SCABIES	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
209	SENILE XEROSIS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
210	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
211	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
212	WINTER XEROSIS	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	1	2	7.551
213	WINTER XEROSIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
214	WINTER XEROSIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
215	CHRONIC URITARIA	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
216	ATOPIC DERMATITIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
217	CHRONIC URITARIA	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
218	WINTER XEROSIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
219	PRURIGO SIMPLEX	1	2	3	2	1	1	1	1	2	1	95	3	4	3	0	0	0	2	2	11.25
220	PRURITUS CORPORIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
221	CHRONIC URITARIA	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
222	SCABIES	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
223	SCABIES	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
224	PRURIGO SIMPLEX WITH WINTER XEROSIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
225	ANEMIA INDUCED PRURITUS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
226	CHRONIC URITARIA	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
227	SENILE XEROSIS	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	3.09
228	SCABIES	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	8.4
229	DRUG INDUCED PRURITUS (NEVIRAPINE)	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	1	2	8.4
230	SCABIES	0	1	2	0	0	0	0	0	0	0	60	2	2	1	0	0	0	1	1	5.199
231	AIR BORNE CONTACT DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
232	SCABIES	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
233	SCABIES	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
234	WINTER XEROSIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
235	SCABIES	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
236	SCABIES	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
237	SCABIES	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
238	ATOPIC DERMATITIS	0	2	3	0	2	0	0	0	0	0	50	2	3	1	0	0	0	0	1	5.352
239	SCABIES	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
240	CHRONIC URITARIA	0	0	3	0	0	0	1	0	0	0	1	55	2	2	0	0	0	0	2	4.797
241	WINTER XEROSIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	1	1	5.199
242	SCABIES	0	2	2	1	1	0	0	0	0	0	45	1	2	1	0	0	0	0	0	3.999
243	PSORIASIS VULGARIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
244	ATOPIC ERUPTION OF PREGNANCY	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
245	CHRONIC URITARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
246	SCABIES	0	0	3	0	0	0	1	0	0	0	1	55	2	2	0	0	0	0	2	4.797
247	CHRONIC URITARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
248																					

257	PRURIGO SIMPLEX	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
258	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
259	PRURITUS CORPORA	0	0	3	0	0	0	1	0	0	1	55	2	2	0	0	0	0	0	2	4.798
260	ATOPIC ERUPTION OF PREGNANCY	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	1	1	8.448
261	SENILE XEROSIS	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	1	1	8.448
262	CHRONIC URTICARIA WITH ANGIOEDEMA	0	2	2	2	0	0	0	1	1	1	90	1	3	2	0	0	0	1	1	6.798
263	SCABIES	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
264	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
265	AIR BORNE CONTACT DERMATITIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
266	CHRONIC URTICARIA	0	2	3	1	0	0	1	1	1	90	1	3	2	0	0	0	0	1	1	6.798
267	ANEMIA INDUCED PRURITUS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
268	ATOPIC DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
269	PSORIASIS VULGARIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
270	CHRONIC URTICARIA	0	0	3	0	0	0	1	0	0	1	55	2	2	0	0	0	0	0	2	4.797
271	SCABIES	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
272	SCABIES	0	1	1	0	1	0	0	0	0	0	40	0	1	0	0	0	0	0	0	2.151
273	LICHEN PLANUS	0	1	1	0	1	0	0	0	0	0	40	0	1	0	0	0	0	0	0	2.151
274	SCABIES WITH PITIRIASIS VERSICOLOR	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
275	PRURITUS CORPORA	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
276	ANEMIA INDUCED PRURITUS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
277	SCABIES	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	10.599
278	CHRONIC URTICARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
279	CHRONIC URTICARIA WITH ANGIOEDEMA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
280	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
281	SCABIES	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
282	SCABIES	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
283	CHRONIC URTICARIA	2	3	3	3	0	0	1	2	2	3	90	3	4	2	2	0	0	2	2	12.801
284	AIR BORNE CONTACT DERMATITIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
285	PSORIASIS VULGARIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
286	PSORIASIS VULGARIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
287	PSORIASIS VULGARIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
288	ATOPIC DERMATITIS	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
289	DRUG INDUCED PRURITUS (NEVIRAPINE)	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
290	CHRONIC URTICARIA	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
291	CHRONIC URTICARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
292	ATOPIC DERMATITIS	0	1	1	0	1	0	0	0	0	0	45	1	2	0	0	0	0	0	0	2.802
293	PEMPHIGUS FOLIACEOUS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
294	CHRONIC URTICARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
295	PSORIASIS VULGARIS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
296	SENILE XEROSIS	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	0	1	7.551
297	CHRONIC URTICARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
298	PRURITIC PAPULAR ERUPTION OF HIV	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
299	ATOPIC DERMATITIS	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
300	CHRONIC URTICARIA	2	3	3	2	1	0	0	2	2	2	95	4	4	2	0	0	0	2	2	10.599
301	ATOPIC DERMATITIS	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
302	ATOPIC DERMATITIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
303	SCABIES	1	2	3	2	0	2	0	1	1	1	98	2	4	1	0	0	0	0	1	9.189
304	SCABIES	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
305	SCABIES	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	0	1	8.4
306	SCABIES	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	0	1	8.4
307	ANEMIA INDUCED PRURITUS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
308	DERMOGRAPHISM	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
309	ATOPIC DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
310	PSORIASIS VULGARIS	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
311	ANEMIA INDUCED PRURITUS	0	0	3	0	0	0	1	0	0	1	55	2	2	0	0	0	0	0	2	4.798
312	CHRONIC URTICARIA	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
313	TINEA CRURIS WITH CORPORA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
314	PRURIGO SIMPLEX	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
315	DRUG INDUCED PRURITUS (ETHAMBUTOL)	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
316	CHRONIC URTICARIA	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
317	CHRONIC URTICARIA	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
318	SCABIES	1	2	3	2	1	1	1	1	2	1	95	3	4	3	0	0	0	2	2	11.25
319	PRURITUS CORPORA	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
320	AIR BORNE CONTACT DERMATITIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
321	PRURITUS CORPORA	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	5.973
322	ANEMIA INDUCED PRURITUS	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
323	PRURITUS CORPORA	0	0	3	0	0	0	1	0	0	0	55	2	2	0	0	0	0	0	2	4.797
324	AIR BORNE CONTACT DERMATITIS	0	1	3	0	0	0	0	1	0	0	55	1	1	0	0	0	0	0	0	3.351
325	PAPULAR URTICARIA	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	0	1	8.4
326	AIR BORNE CONTACT DERMATITIS	1	2	3	2	0	0	0	2	0	1	95	2	4	0	0	0	0	2	2	8.952
327	SENILE XEROSIS	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	0	1	8.448
328	SENILE XEROSIS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	5.199
329	CHRONIC URTICARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
330	PRURITUS CORPORA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	5.352
331	CHOLESTATIC PRURITUS	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	0	1	8.4
332	TINEA CORPORA WITH FOOT ECZEMA	0	1	1	0	1	0	0	0	0	0	45	1	2	0	0	0	0	0	0	2.802
333	PRURITUS CORPORA	0	1	1	0	1	0	0	0	0	0	45	1	2	0	0	0	0	0	0	2.802
334	PSORIASIS VULGARIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
335	PAPULO-ERYTHRODERMA OF OFUJI	1	2	3	2	0	0	0	2	0	1	95	2	4	0	0	0	0	2	2	8.952
336	PSORIASIS VULGARIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	4.95
337	CHRONIC URTICARIA	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	6.798
338	CHRONIC URTICARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	3.999
339	CHRONIC URTICARIA	0	2	2	1																

349	PEMPHIGUS FOLIACEOUS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
350	SCABIES	0	1	2	2	2	0	1	0	0	0	79	2	2	1	0	0	0	0	1	0	5.973
351	ANEMIA INDUCED PRURITUS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
352	DRUG INDUCED PRURITUS (COTRIMOXAZOLE)	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	1	5.199
353	DERMOGRAPHISM	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	1	5.199
354	PRURITUS CORPORA	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	1	5.199
355	CHRONIC URTICARIA	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
356	CHRONIC URTICARIA	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
357	TINEA CORPORA WITH CRURIS	0	2	2	1	1	0	1	0	0	0	45	1	2	1	0	0	0	0	0	0	3.999
358	DERMATITIS HERPETIFORMIS	0	2	3	1	0	0	0	2	1	1	95	3	3	1	0	0	0	0	1	2	8.4
359	SENILE XEROSIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
360	PSORIASIS VULGARIS	0	1	3	0	2	0	0	0	0	0	60	2	3	0	0	0	0	0	1	0	4.95
361	CHRONIC URTICARIA	0	0	2	1	1	0	1	0	0	0	48	1	1	0	0	0	0	0	0	0	3.09
362	PRURITUS CORPORA	0	2	3	1	0	0	0	1	1	1	90	1	3	2	0	0	0	0	1	1	6.798
363	ANEMIA INDUCED PRURITUS	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	0	1	1	8.448
364	PRURITUS CORPORA	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	0	1	1	8.448
365	CHRONIC URTICARIA	2	3	3	2	2	0	1	2	2	2	95	4	4	2	0	0	0	0	2	2	12.147
366	CHRONIC URTICARIA	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
367	PSORIASIS VULGARIS	0	2	3	0	2	0	1	0	0	0	50	2	3	1	0	0	0	0	1	0	5.352
368	ANEMIA INDUCED PRURITUS	0	1	2	0	0	0	0	2	0	0	60	2	2	1	0	0	0	0	1	1	5.199
369	PRURITUS CORPORA	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	0	1	2	7.551
370	PAPULAR URTICARIA	2	3	3	2	2	0	1	2	2	2	95	4	4	2	0	0	0	0	2	2	12.147
371	CHRONIC URTICARIA	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	0	1	2	7.551
372	SCABIES	0	2	3	2	1	0	0	2	0	0	45	2	4	0	3	0	0	0	1	1	8.448
373	SCABIES	0	2	3	0	0	0	1	1	1	1	50	2	4	1	1	0	0	0	1	2	7.551