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Study the importance of validation of rubrics by Bayesian theorem through complete repertory

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Abstract
A study was conducted to find out caliber of validation of rubrics by Bayesian theorem to finding out importance of rubrics through complete repertory. Complete repertory by Robert Von Zandvoort is largest among all the repertories with all particulars and continuous confirmation it contain all rubrics and remedies. This study was single arm non randomized study total of 30 patents age group between 45-80yr both gender are considered and both acute and chronic cases was considered.

Keywords: Homoeopathy, Bayesian theorem, Rubrics, Repertory, Similimum

1. Introduction

Homeopathic medicines are shortlisted in repertories for a given symptom/condition (rubric), based and graded (typeface) on occurrence in proving and casual clinical experience [1]. Kent used 3 grades in his repertory1:1. Bold (3 marks)/first grade: found frequently in ''all or The majority'' of provers, confirmed by reproving, and verified clinically on the sick2 [1]. Italics (2 marks)/second grade: symptoms found in few provers, confirmed by reproving, but occasionally verified clinically on the sick3. Plain roman (1 mark)/third grade: symptoms experienced ''now and then'' in proving, not yet confirmed by reproving but verified by curing patients-so accepted as clinical symptom only this method of constructing repertories has so far remained qualitative, and this absolute grading in place of relative ones Without any consistent rule or quantification poses a substantial threat to their reliability [1]. However, this structural shortcoming may be resolved by evaluating rubrics prospectively and by systematic analysis using bayes' theorem and likelihood ratio (Lr) that generate reasonable certainty that the given medicine shall work in the given condition. The grading should depend on the difference between medicine-population and rest of the population. Bayes' theorem predicts that the chances of success with a medicine increase if a symptom is frequently present in patients who are cured by that medicine, more frequently than in other patients. 2 and Lr is the modern epidemiological tool for determining the characteristic and keynote symptoms of medicine [1].

The importance of a symptom to the prescription of anhomeopathic medicine on the basis of repertorisation is expressed by its grading. Grades can be determined by clinical evaluation of a proving symptom, by the number of observations of this symptom related to the total number of symptoms of the medicine, and by likelihood ratios (LR). In 'polar symptoms,' where if a symptom is mentioned in opposite rubrics, the grading also determines their polarity. It is thus very important how carefully a symptom is introduced into the material medical. if a patient responds well to a specific homeopathic medicine the characteristic symptoms of that patient are regarded as an indication to prescribe this medicine in the future. The symptom 'amelioration from motion' is regarded as an important indication for the medicine rhus toxicodendron (rhus-t) because many doctors have experienced that patients responding well to rhus-t are often characterized [2].

By 'amelioration from motion'. This medicine is therefore entered in bold type (similar to boenninghausen'shigh grades) in kent's repertory-rubric 'amelioration from Motion' (radar 10.0, full synthesis). But rhus-t is also, in plain type (corresponding to boenninghausen'slow grades), represented in the rubric 'aggravation from motion' [1]. This means that there are also patients with aggravation from motion who respond well to rhus-t, but much less than with the opposite symptom. From a statistical point of view this is not surprising; random variation is normal in all observations and especially in living systems [1]. But does the symptom 'aggravation from motion' confirm the choice of rhus-t?

Every homeopathic physician knows that the repertory has misleading entries. Such misleading entries are expected more often regarding frequently prescribed medicines. This is one of the reasons that many homeopathic repertorisation software packages offer the opportunity to exclude the most frequently prescribed medicines from the repertorisation. This is a rather crude way to suppress misleading information and does not tackle the real problem. Another way to handle this problem is 'polarity analysis' (pa). pa is a further development of boenninghausen's concept of contra-indications. In this paper we investigate the source of the problem, its extent and possible methods to deal with it [2]. Complete repertory is one of the most favorite repertory of modern time is based on kent's philosophy of general to particular [4]. The method of repertorisation follows the kent's method of repertorisation. Cases with general or characteristic particular or having only characteristic particular can be repertories by complete repertory. All most any type of cases can be repertories by using complete repertory [5].

2. Methodology

2.1 Study Design – single armed, non-randomized study carried out in Bharati Vidyapeeth homoeopathic hospital, Research center, Pune, Maharashtra, INDIA from 2018-2019(12months). The research project was sanctioned by 'Ethics Committee'.

The patient will be informed & enrollment with the consent will be done & all the 30 cases with 5 follow ups will be in respective OPD and peripheral OPD as well.

2.2 Case definition

After giving informed consent cases requiring treatment is given, whether acute or chronic diseases will be selected for study. Patient of 40-80 ages& both sexes will be considered.

2.3 Inclusion criteria
- Chronic as well as acute cases will be considered.
- Patient who are willing to take treatment & will co-operate with regular follow up.
- Patients of both sexes and age of 40-80 ages.
- Patients who are full filling the case definition.

2.4 Exclusion criteria
- Patient who requires emergency medical treatment.
- Patient not taking medicines as per direction or not co-operating for follow up.
- Systemic diseases with its complications.
- Patient suffering from life threatening diseases.

2.5 Outcome Assessment
Marked: when there is more than 75% disappearance of the symptoms.
Moderate: when the patient has symptomatic relief with more than 50% reduction
Mild: when the patient has symptomatic relief with less than 50% reduction.

Table 1: Oridl grade (outcome related to impact on daily living) scale

Cured Back To Normal	+4
Major Improvement	+3
Moderate Improvent, Affecting Daily Living	+2
Slight Improvement, No Effect On Daily Living	+1
No Change/Unsure	0
Slight Deterioration, No Effect On Daily Living	-1
Moderate Deterioration, Affecting Daily Living	-2
Major Deterioration	-3
Disastrous Deterioration	-4

3. Statistical techniques & data analysis

The data will be expressed in terms of means ±SD the graphs & figures will be provided with the help of Microsoft excel 2007.

4. Result

The primary objectives of the study was to see the utility of LR (likelihood ratio) necessary for the prior and posterior probability of work of medicine. The trial shows efficacious conclusion of homoeopathy when prescribed on the basis of rubric validation total no of patient was 45 and 30 (table-1) patient were enrolled in study. Proper diet and regimen was given and auxiliary line of treatment given if required. In the study my main purpose was to perceive the significance of validation of rubrics. I had tried to interpret the value of rubric validation by Bayesian theorem through complete repertory. 30 patient were enrolled the treatment was given to every patient by perceiving the rubric validation. Gender wise distribution in the research out of 30, 22 females and 8 males were taken (table-2). Age wise distribution was more between the age group of 50-60 years followed by 40-50 years and 60-70 years and last 70-80 years. Each viewed for 13, 7, 7, 3 cases out of 30 respectively (table-3). I have seen that in my research work prescribing symptoms are more important than persistent and predominant symptoms.

Hitherto entries have been added to a rubric in the repertory when patients responding well to a specific medicine showed the corresponding symptom. Continuing like this, theoretically every medicine will eventually appear in every rubric. Absolute grading system of homeopathic repertories poses substantial threat to reliability; however, it may be resolved by evaluating rubrics prospectively using likelihood ratio (LR). The authors evaluated few ''physical general'' rubrics from kent's repertory—''chilly,'' ''hot,'' ''Ambi thermal,'' ''preference for hot/cold food,'' ''desire/aversion for fish/egg/meat/sour/pungent/salt/sweet/bitter''—prospectively in west Bengal, India, for 1.5 years using the outcome related to impact on daily living scale. Per. Symptom/rubric, LRs< 1.5 were discarded. A total of 2039 encounters were analyzed for thermal relations and 4715 for desires/ aversions for specific food items. Comparison with kent's repertory revealed discrepancies. One new rubric with corresponding medicines was suggested to be introduced, new entries of medicines were

recommended, and some seemed to maintain their ascribed importance. The authors refrained from converting Lr into typefaces prematurely; still they propose introducing LR to repertories for a structural update, changing its use, and enabling homeopaths to make more reliable Predictions.
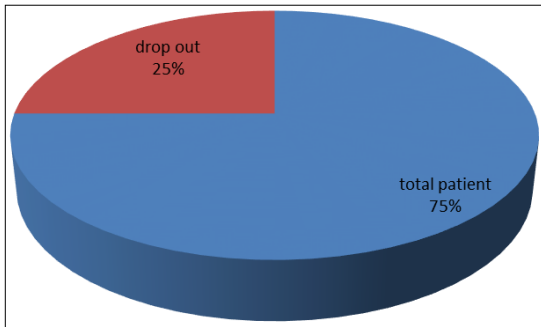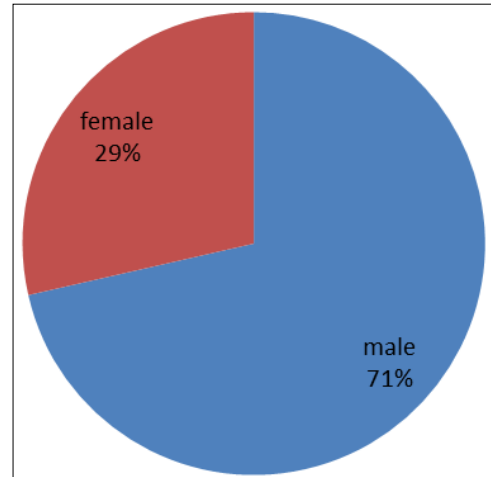

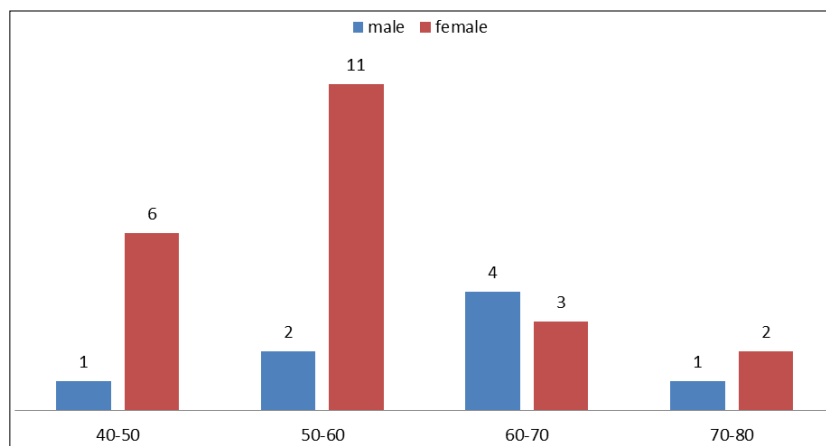**Fig 1:** Patient dropout ratio

Fig 2: Male female ratio

Fig 3: Age wise distribution of male female ratio

Table 5: Odds ratio value of rubrics used during study

S. No.	Rubrics	Odds Ratio
1	Extremities pain -fever during	1.8
2	Extremities pain- exertion, slight after	1
3	Extremities- numbness, lower limb, sitting while	1
4	Back- weakness, lumbar region	3.4
5	Back- stiffness, stool, after agg.	0.75
6	Back- pain, tearing spine	1
7	Stomach- appetite diminished	1.85
8	Stomach- desire, sweet	1
9	Stomach- fullness distention	1
10	Eye- redness	1
11	Eye- itching, morning	0.2
12	Eye- pain, reading	0.2

Table 6: Oridl grade (outcome related to impact on daily living) value

S. No	Rubrics	Before	After
1	Extremities pain -fever during,	-1	+4
2	Extremities pain- exertion, slight after	-2	+3
3	Extremities- numbness, lower limb, sitting while	-2	+3
4	Back- weakness, lumbar region	-2	+4
5	Back- stiffness, stool, after agg.	-2	+2
6	Back- pain, tearing spine	-1	+4
7	Stomach- appetite diminished	-3	+4
8	Stomach- desire, sweet	-3	+4
9	Stomach- fullness distention	-2	-1
10	Eye- redness	-1	+4
11	Eye- itching, morning	-1	+3
12	Eye- pain, reading	-2	+4
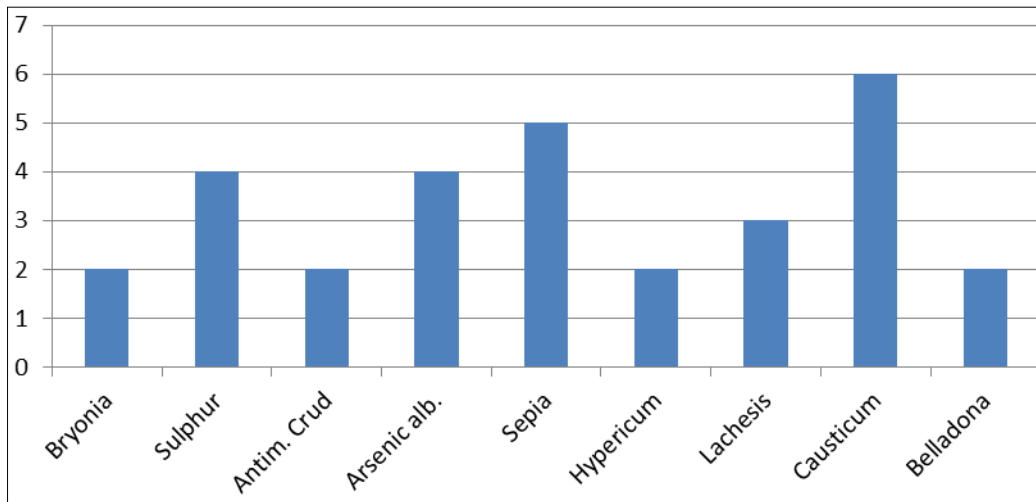
Fig 4: No. of medicine used in study

Table 7: % Value of Medicine

S. No	Medicine	% Value
1	Bryonia	6.6%
2	Sulphur	13.3%
3	Antimcrudum	6.6%
4	Arsenic album	13.6%
5	Sepia	16.6%
6	Hypericum	6.6%
7	Lachesis	10%
8	Causticum	20%
9	Belladona	6.6%

5. Conclusion
The research indicates a accurate role of validation of rubrics for selecting similimum scrutiny with repertorisation within administration of cases the present outcome are a constituent beneficial which dispensed associate specified the action of remedy, this study was single arm non randomized study.

6. Conflict of interest
There was no point of conflict of interest between the authors.

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