A Birth weight model using Interpretive Structural modeling (ISM)

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Abstract

Introduction and Rationale

Birth weight literally follows a person from the cradle to the grave. A wide variety of studies have been done in the area of birth weights, using innumerable factors which influence birth weight. It is further surmised that the social and other behavioural variables may contribute to physical features related to the mother of the child. If it is possible to catch a feasible model involving physical features of the mother to decide the birth weight of the child, then these physical features may be the absolute necessity for prejudging the birth weight, as any other characteristics of social and behaviour content may be expected to reflect their influence through the physical characteristics.

Objective:

The aim of the study is to provide a structural model for birth weight, using easily observable parameters.

Materials and Methods

The study is a hospital based descriptive study, with pregnant women in their third trimester constituting the study subjects. Based on the prevalence of low birth weight and adding a 10% non-response (excluding multiple pregnancies), the sample size was 343.

Results :

In original ISM technique, interpretations from opinions is used. In the present work, modification is attempted by introducing correlation & partial correlation coefficients to arrive at the canonical form. From a given list of variables – prepregnancy weight, gestational weight gain, gestational age, age and height of mother, height of father along with observed birth weight are selected after initial assessment about the effectiveness as a competing complement for birth weight estimation. The acceptability of the model is further analysed using Bootstrap Methods.

Conclusion

Thus, using ISM a structural model for birth weight is proposed using easily observable parameters.

Keywords: birth weight, interpretive structural modeling, correlation, partial correlation.

Metaanalysis on Localised Cooling Treatment Versus no Treatment for Pain Relief Related to Episiotomy After Childbirth

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Abstract

Introduction and Rationale

An episiotomy is a surgical incision   used to enlarge the vaginal opening to help deliver a baby. In addition to pain and discomfort, episiotomies have the side effects like infection, bruising, swelling, bleeding, extended healing time, painful scarring etc. Other than analgesic drugs, many pain relief options were thought of since decades for the pain and discomfort associated with episiotomy. The evidence supporting the use of any specific pain relief measure stands inconsistent.

Objective:

To assess the evidence for effectiveness of localised cooling treatment and no treatment to relieve the pain and discomfort related to episiotomy after childbirth.

Materials and Methods

Research Design-Met analysis

Research Strategy

An extensive search of Literature was performed to retrieve articles describing definitive treatment for pain relief and comfort related to Episiotomy wound. Pub Med, CINAHL and Cochrane Databases were used for electronic search. Articles from a 20 year review period from 1992 to 2012 were taken. Key words for search included Episiotomy, pain, discomfort and localised ice packs.

The obtained study abstracts were reviewed for matching keywords, objectives and methodology and 10 published RCT's were included involving 1825 women for the Meta analysis.

Sample size

1825 from 10 studies.

Results :

There was no strong evidence to support the use of localised ice packs for the relief of pain and discomfort related to episiotomy after child birth.

Relevance of regression analysis model in Anxiolytics

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Abstract

Introduction and Rationale

In Nepal several research studies are reported using percentages or cross tabulation method because of the unawareness of the relevance of logistic regression model among the researchers in Nepal.

Objective:

The main objective of this study was to find the role of logistic regression analysis in the utilization pattern of anxiolytics in a tertiary care centre in hospitalized patients of Western Nepal.

Materials and Methods

This cross sectional study was carried out between at Manipal Teaching Hospital, Nepal. The diagnosis of anxiety was based on ICD-10 (Tenth revision) Classification of mental and behavioural disorders, Diagnostic Criteria for Research. We calculated odds ratios (OR) and their 95% confidence intervals (95% CI) P-value < 0.05 was considered to be statistically significant. In binary logistic regression, the outcome is coded as 0 and 1.The target is coded as 1 and the reference group as 0. The codes were used as follows < 40 yrs. 1, unemployed patients 1,female 1, Monthly income < 10000 NPR/ month, Religion others 1, Occupation others 1 and ethnicity others 1.

Results :

Psychiatrist has a 1.148 times more tendency of prescribing essential drug to a patient who have monthly income more than 10000 compared to monthly income <10000 and in case of age group >40 year 2.811 times more compared to <40 years, employed patient 0.948 times and to female patients 2.568 times more than male patients.

Conclusion

Utilization patterns of drugs for anxiolytics were according to treatment guidelines and suggested a trend towards the use of shorter acting Benzodiazepines such as Alprazolam. Binary Logistic regression plays an important role to understand the drug utilization pattern of anxiolytics in Western Nepal.

Keywords: Anxiolytics, Inpatients, Psychiatry, Drug utilization study