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2006/7/17   2006/3/23

__Abstract__

Measures of nine variables affect the births of the premature babies have been taken . And also the principal axis method was used then the factor analysis on the studied variables data to specify the importance of these variables to births of the premature babies . As well as , "Varimax" method was used to rotate the axis to get an easier and more specific results.

Statistic analyses, have shown the importance off all variables except the fifth variable (sex) ,and that for not showing ,this variable,any significant effect upon any of the selected factors having less communality among the variables .

For the other variables , they are the sequence of factors and the variables loading with factors and the ratio of what explain each factor from the total variance ,we find that the third variable " mother age "and the seventh variable"Number of Births" and the eightth variable" number of abortion cases "and the ninth variable "type of birth" in first place .And the first variable "premature weight" and the second variable "premature age" in second place.

Finally , the forth variable " the time that the premature has spent in The nursemaid " and the sixth variable " type of disease" in third place.

(Varimax)

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(Premature baby)

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(2.5)

, (1991,   )
"Premature"   37

(2004 ,   ) . (   )   :

1999

(100)   ,

-: (, 2004)

Premature weight	( )	X_1
Premature Age	( )	X_2
Mother Age	( )	X_3
The time that the premature has spent in the nursemaid	( )	X_4
Sex	(0= : 1 =)	X_5
Type of Disease		X_6

-:

[, ,]	D_1 :
, , ,]	D_2 :
[	
[ ]	D_3 :
[ ]	D_4 :
	X_7 :

Number of Births

	X_8 :

Number of abortion
cases

(0= :1=)	X_9 :

Type of Birth

"Varimax"

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1-   .

2-   .

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(Spss12.0)   -:

1-   (Principal Axis Method)

Analysis"   (Reduced Correlation Matrix) (Principal Component

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(2000,   ) ,

(Communality)

-:

Square Multiple Correlation Method

(SMC)

(m-1)

h_j^2 '

(R) R^{-1}

SMC   J   (Harman,1976) :

$$SMC = R^2(j = 1,2,3,...,m) = 1 - \frac{1}{r_{jj}} \qquad ....(1)$$

r_{jj} R^{-1}

r_{jj} -:

$$R_j^2(m-1) \le h_j^2 \le R_{jj} \qquad .... (2)$$

2-

(FA)   (Factors)

(Variations)

(Response Variables)

(2003,)

(2000).

$$X_j = L_{j1}F_1 + L_{j2}F_2 + ... + L_{jp}F_p + e_j \qquad .... (3)$$

P :   P   m

      $(\lambda_j > 1)$.

F_K :   K=1,2,...,p

L_{JK} :   Factor Loadings   j

k , $L_{jk} > 0.5$

(Afifi & Clark,1984) .

e_j :   (Unique Factors)   j ,

-:

$$Var(X_j) = 1 = L_{j1}^2 + L_{j2}^2 + ... + L_{jp}^2 + U_j^2 \qquad .... (4)$$

(h_j^2)

(4)

-: (2002,)

$$0 \le h_j^2 = L_{j1}^2 + L_{j2}^2 + ... + L_{jp}^2 \le 1 \qquad ....(5)$$

U_j^2 :   -:

$$U_j^2 = b_j^2 + e_j^2 \qquad\qquad ....(6)$$

b_j^2 :   j .

(Varimax Rotation)   .

(Spss V12.0)   (

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($\lambda_j > 1$)   (

(1987   -:

(1)

31.121	31.121	2.801	1
49.993	18.872	1.699	2
61.278	11.284	1.016	3

2-

(0.5   )

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	3	2	1	
	-0.075	0.890	0.081	X_1
	-0.069	0.887	0.039	X_2
	0.062	0.106	0.922	X_3
	0.745	-0.126	-0.030	X_4
	0.078	-0.045	-0.191	X_5
	0.754	0.001	0.104	X_6
	0.092	-0.027	0.840	X_7
	0.051	-0.057	0.850	X_8
	-0.089	-0.074	-0.634	X_9

(3)

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(3)

0.805	0.669
0.792	0.657
0.865	0.804
0.572	0.365
0.045	0.062
0.579	0.371
0.715	0.723
0.727	0.690
0.415	0.453

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30.398%   ,

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60%

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31%

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18%

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13%   .

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1- (2000): " ".

2- (1991) " "

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3- (1987): "   ."

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4-   ,   (2004) :"

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5-   (2003):"   (SPSS) ."

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6-   (1984) "   "

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7-   ,   (2002) :"

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8-   (2000) :"

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ب‍ـ المصادر الإنكليزية
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