Knowledge, Attitude and Practice of impact of Dengue fever infection among nursing students

Angel Rajakumari.G

Professor, Department of Obstetrics and Gynecology, Annai Dora College of Nursing, Aundipatty, Tamilnadu, India.

Abstract

This paper evaluates the knowledge, attitude and practice of impact of dengue fever infection among nursing students. A pre – experimental one group pretest – posttest design was adopted for this study. The study was conducted in Ragavendara school of Nursing, suryapet, Telugana, India. The investigator selected 60 nursing students who fulfilled the inclusion criteria were selected by using simple random sampling technique. Data was collected regarding demographic variable, knowledge, attitude practice of the nursing students on impact of dengue fever. The investigator assessed the level of knowledge, attitude and practice of the nursing students by using structured questionnaire and modified three point Likert Scale and by using checklist through one to one teaching by lecture, demonstration, video clippings and verbalization. Structured teaching programme was conducted on the same day on group wise each group consists of 20members. Data collection was done in Telugu and English the questionnaire was distributed to each first year nursing students. At the end of the teaching the doubts were cleared. Then 10 minutes was allotted for discussion. The analysis finding indicates clearly that 93.33% of students had adequate knowledge and 84% of them had positive attitude and 89% of them had good practice regarding impact of dengue fever. A well planned structured teaching programme given to the same group. The effectiveness of programme showed high level of significant at p<0.001 level. It showed that structured teaching programme was an effective method to improve the knowledge, attitude and practice there by the impact of dengue fever. The study concluded that nursing student's knowledge, attidute and practice regarding impact of dengue fever was adequate thus structured education helps to enhance the knowledge.

Keywords: Dengue fever, nursing students, Knowledge, attitude, practice

Introduction

Dengue fever (DF) is increasingly recognized as one of the world's major vector borne diseases. Dengue is prevalent in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas.1The incidence of dengue has grown dramatically around the world in recent decades. Over 2.5 billion people over 40% of the world's population – are now at risk from dengue. WHO currently estimates there may be 50–100 million dengue infections worldwide every year. Before 1970, only nine countries had experienced severe dengue epidemics. The disease is now endemic in more than 100 countries in Africa, the Americas, the Eastern Mediterranean, Southeast Asia and the Western Pacific. The American, South-east Asia and the Western Pacific regions are the most seriously affected.1Dengue fever is endemic in India & continues to be a public health concern.

In the absence of a vaccine or specific antiviral to treat dengue fever , vector control is one of the most important preventive measures in combating dengue. The recurrence of dengue fever each year and the rising number of cases with each epidemic suggest that vector control efforts are probably not carried out properly and need to be improved. Dengue vector, human knowledge & human behavior each have been reported to play an important role in the transmission of the diseases. Considering the magnitude of the problem the present study was undertaken to assess the knowledge & attitude of the nursing students regarding dengue and the preventive practices undertaken by them & to determine the relationship of dengue fever prevention practices with level of knowledge & attitude.

Dengue vaccine developments have been un- der clinical trial and vaccines are as yet not avail- able for public use. Many of the fundamental re-search questions for the prevention and control of dengue disease can be answered only by well- designed prospective epidemiological studies (Gubler, 1989). Environmental sanitation strategies were emphasized in the survey of knowledge, attitude and practice (KAP) in dengue prevention and control (Rosenbaum et al, 1995). Health education on DHF was required for the Aides control program and the main effective mass media for public health education were radio and television (Swaddiwudhipong et al, 1992).

Materials and methods

In order to accomplish the main objective of evaluating the effectiveness of an information booklet on knowledge, attitude and practice regarding impact of Dengue fever infection among nursing students in one group Pre test Post test design was adopted. The study was conducted in Ragavendra School of nursing suryapet, telugana, India. 60 frist year nursing students of Ragavendara School of nursing suryapet were selected by convenience sampling. After obtaining consent from the participants pretest was administered by using structured questionnaire and modified three point Likert Scale and by using checklist through one to one teaching by lecture, demonstration, video clippings and verbalization. After pretest researcher distributed information booklet on

knowledge regarding impact of dengue fever to participants. Seven days later post test was administered to assess the knowledge. The collected data were analysed using descriptive and inferential statistics.

Description of research tool
It consists of 4 sections.
Section A
It consists of demographic variables which include age of the individual, religion, education, type of family, previous exposure to knowledge.
Section B
Multiple choice questions to assess the knowledge of impact of dengue fever.
Part I:Questions related to dengue fever
Section C
Modified three point Likert scale to assess the attitude regarding impact of dengue fever. This section includes 10 items with choices as agree, uncertain and disagree.
Section D
It comprised of questions related to practice regarding dengue fever.

Scoring procedure
Section B
All the questions had four alternatives with one right answer. A score of "one" was given for every correct answer and score of "zero" was given for every wrong answers. The total score was converted into percentage and interpreted as follows,

Adequate knowledge	-	>75%
Moderate knowledge	-	50 – 75%
Inadequate knowledge	-	<50%

Section C
To interpret the level of attitude the score was classified as,

Positive attitude	-	>75%
Favorable attitude	-	50 – 75%
Negative attitude	-	<50%

Attitude questions consist of both positive and negative statements. The score given for positive questions were as follows,

Agree	-	2
Uncertain	-	1
Disagree	-	0

Similar for attitude negative question scored as follows,

Agree	-	0
Uncertain	-	1
Disagree	-	2

Section D
To interpret the student's questionnaire was given to collect information regarding practice on impact of dengue fever. The maximum score was 25 and minimum score was zero.

To interpret the level of practice the score was classified as,

Poor practice	-	< 50%
Fair practice	-	50 – 75%
Good practice	-	>75

Results
Table 1: Frequency and percentage distribution of level of knowledge after structure teaching programme on impact of dengue fever of nursing students

N=60

Domain	Inadequate <50%		Moderately adequate 50 – 75%		Adequate >75%	
	No.	%	No.	%	No.	%
Knowledge	0	0	4	6.67	56	93.33

Table 1 depicts the frequency and percentage distribution of level of knowledge after structured teaching programme of nursing students on impact of dengue fever. It clearly indicates that majority of them, 56(93.33%) had adequate knowledge on impact of dengue fever, four (6.67%) had moderately adequate knowledge and none of them had inadequate knowledge.
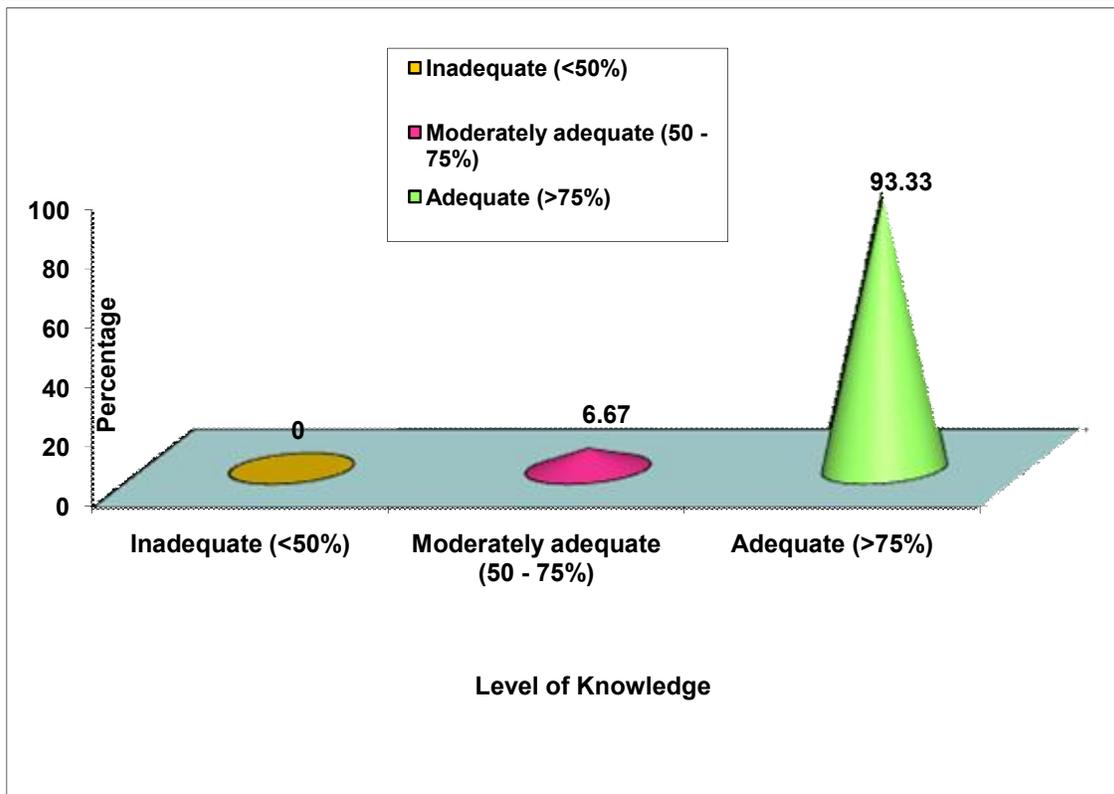
Fig. 1: Percentage distribution of level of knowledge and impact of dengue fever

Table 2: Frequency and percentage distribution of level of attitude after structure teaching programme on impact of dengue fever of nursing students

N=60

Domain	Negative attitude <50%		Moderately Favorable attitude 50 – 75%		Positive attitude >75%	
	No.	%	No.	%	No.	%
Attitude	0	0	10	16.67	50	83.33

Table 2 shows the frequency and percentage distribution of level of attitude after structured teaching programme of nursing students on impact of dengue fever. Data illustrates that majority of them 50(83.33%) had moderately favourable attitude on impact of dengue fever, 10(16.67%) had positive attitude and none of them had negative attitude.

Table 3: Frequency and percentage distribution of level of practice after structured teaching programme on impact of dengue fever of nursing students

N=60

Domain	Poor practice <50%		Fair Practice 50 – 75%		Goods practice >75%	
	No.	%	No.	%	No.	%
Practice	0	0	5	8.33	55	91.67

Table 3 illustrates the frequency and percentage distribution of level of practice after structured teaching programme on impact of dengue fever of nursing students. It indicates that majority of them, 55(91.67%) had good practice on breast self examination, five (8.33%) had fair practice and none of them had poor practice.
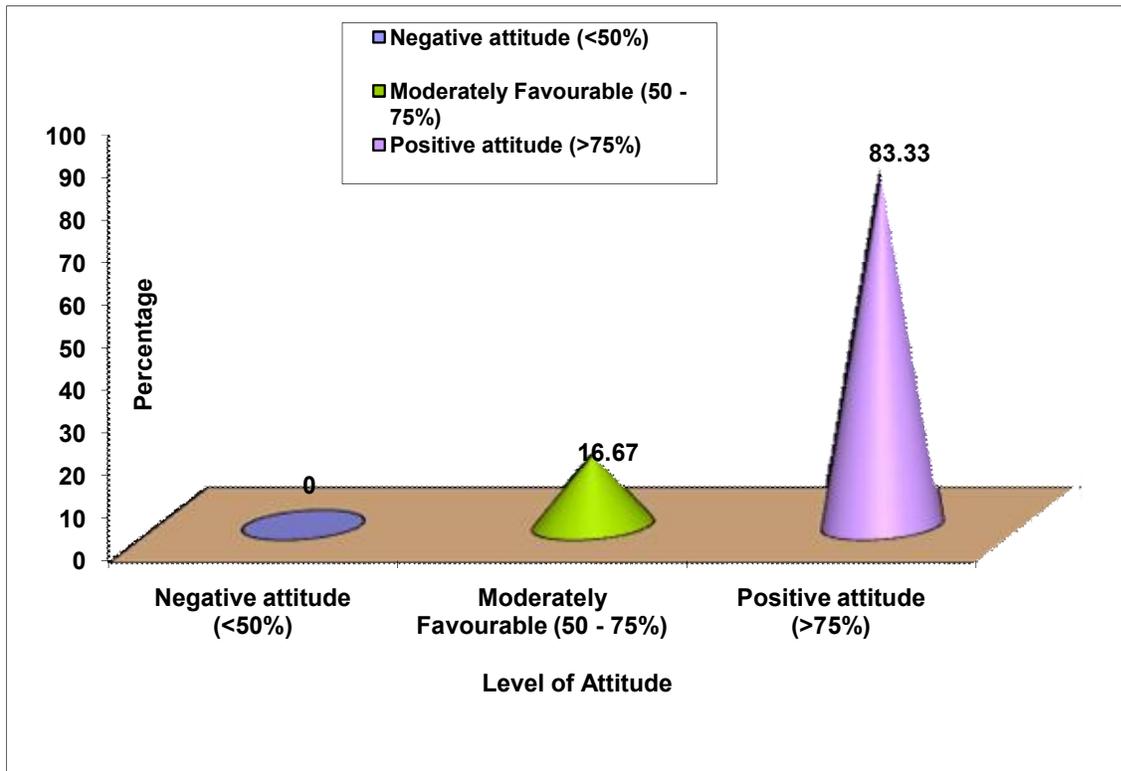
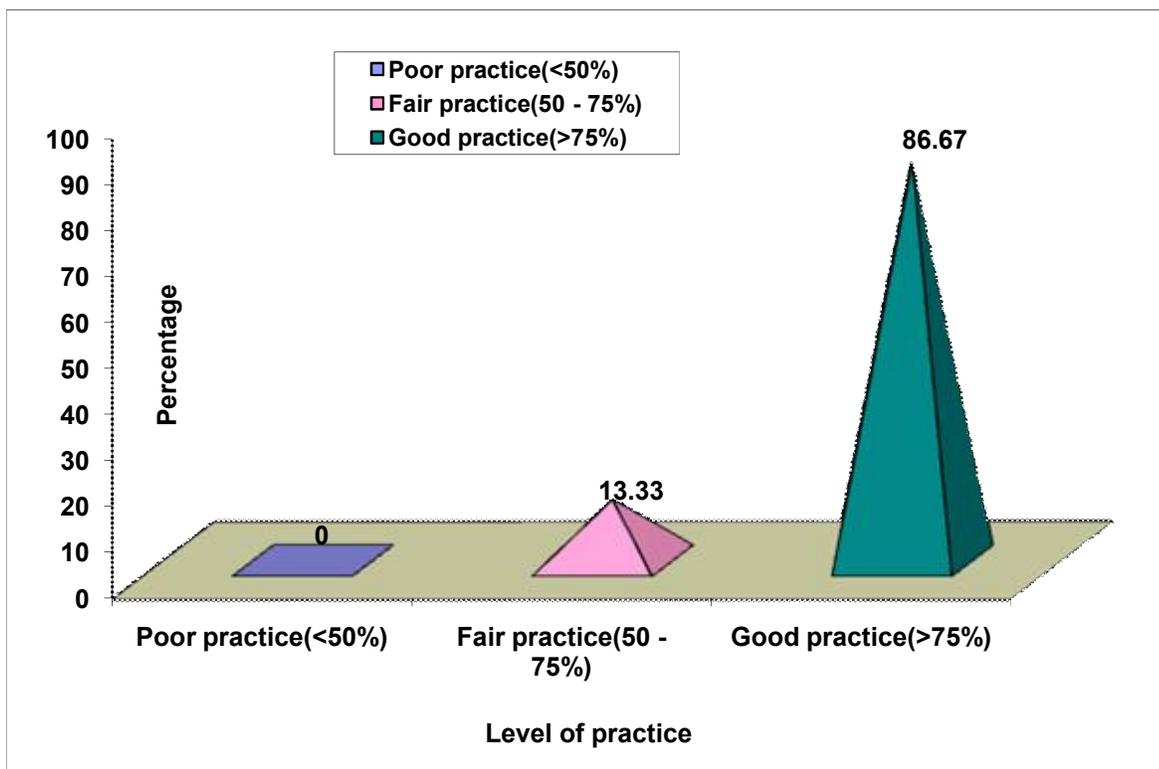**Fig. 2:** Percentage distribution of level of attitude and impact of dengue fever

Fig. 3: Percentage distribution of level of practice and impact of dengue fever

Table 4: Mean and standard deviation of knowledge, attitude and practice on impact of dengue fever of nursing students

N=60

Domain	Pretest		Posttest		't' value
	Mean	**S.D**	**Mean**	**S.D**	
Knowledge	7.37	1.142	16.31	1.04	40.92*** (S)
Attitude	8.36	1.36	8.36	1.36	11.99*** (S)
Practice	9.36	1.27	17.24	1.28	30.90*** (S)

Table 4 denotes the mean and standard deviation of knowledge, attitude and practice of nursing students on impact of dengue fever. Observing the pretest level of mean knowledge score was 7.37 with S.D 1.142 and posttest level of mean knowledge score was 16.31 with S.D 1.04 and the 't' value of 40.92 showed high level of significance. With respect to the pretest mean attitude score was 8.36 with S.D 1.36 and posttest mean attitude score was 12.43 with S.D 1.976 and the 't' value of 11.99 showed high level of significance. It clearly indicates that the pretest mean practice score was 9.36 with S.D 1.27 and posttest mean practice score was 17.24 with S.D 1.28 and the 't' value of 30.90 showed high level of significance.
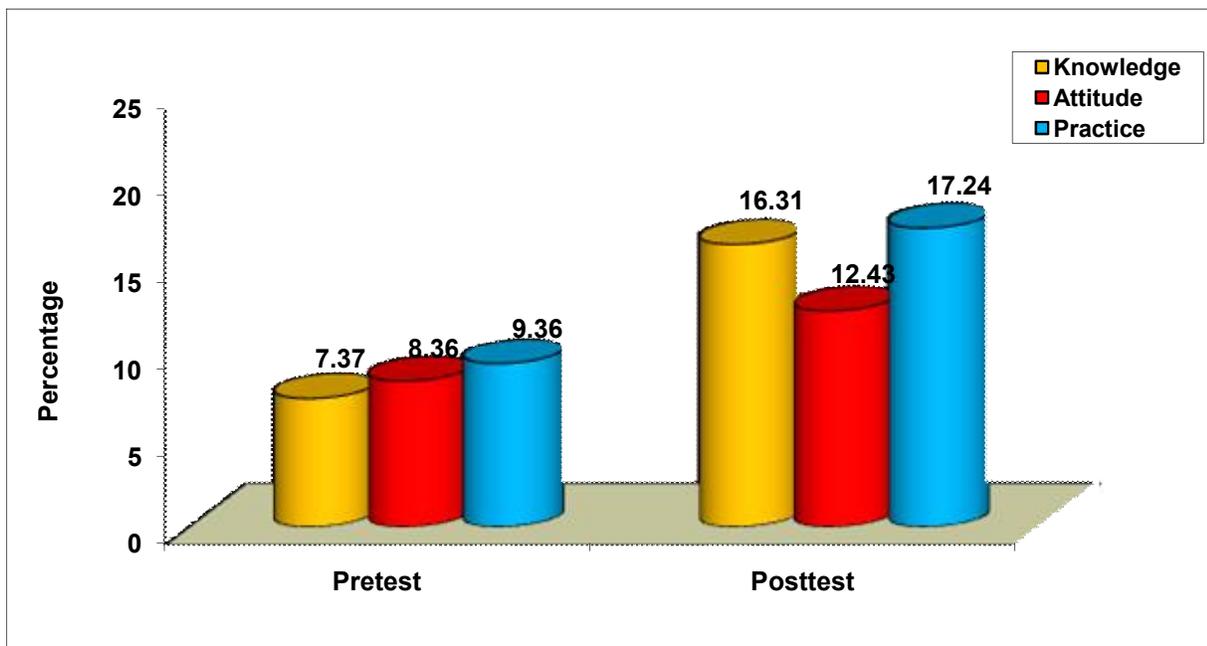

Fig. 4: Mean score of pre and post test level of knowledge, attitude and practice of nursing students.

Table 5 : Correlation of pre and posttest level of knowledge and attitude on impact of dengue fever of nursing students.

N=50

Domain	Knowledge		Attitude		'r' value
	Mean	**S.D**	**Mean**	**S.D**	
Pretest	7.37	1.142	8.36	1.36	0.88*
Posttest	16.31	1.04	8.36	1.36	0.96***

*p<0.05, ***p<0.001*

Table 5 shows the correlation of pre and posttest level of knowledge and attitude on impact of dengue fever of nursing students. The analysis reveals that the pretest level of knowledge mean score was 7.37 with S.D 1.142, the attitude mean 8.36 with S.D 1.36 and overall 'r' value was 0.88 which significant at p<0.05 level.The posttest level of knowledge mean score was 16.31 with S.D 1.04 clearly indicates a positive correlation between knowledge and attitude (r = 0.96) which is significant at p<0.001 level.

Table 6 illustrates the correlation of pre and posttest level of knowledge and practice on impact of dengue fever of nursing students. The analysis reveals that the pretest level of knowledge mean score was 7.37 with S.D 1.142, the practice mean score was 9.36 with S.D 1.27 and Overall 'r' value was 0.78 significant at p<0.05 level.The posttest level of knowledge mean score was 16.31 with S.D 1.04 and practice means score was 17.24 with S.D 1.28 clearly indicates a positive correlation between knowledge and practice (r = 0.94) which is significant at p<0.05 level.

Table 6: Correlation of pre and posttest level of knowledge and practice on impact of dengue fever of nursing students

N=60

Domain	Knowledge		Practice		'r' value
	Mean	**S.D**	**Mean**	**S.D**	
Pretest	7.37	1.142	9.36	1.27	0.78*
Posttest	16.31	1.04	17.24	1.28	0.94*

p<0.05

Discussion

This study sought to assess nursing student knowledge, attitude and practices related to dengue infection. Our study revealed that almost all respondents(94%) had heard about Dengue .Findings are similar to study conducted in OPD of AIIMS, New Delhi in which 96.3% respondent were reported to be aware of dengue7. However similar studies conducted in Brazil8 & Thailand responses are 78% & 67% respectively which is lower from our study. The possible reasons for better awareness could be repeated exposure of nursing student to health education messages on dengue and other mosquito- borne diseases by nursing teachers. In the present study, television emerges as most important source of information (37.8%). This is similar to a study from North India & south Delhi. This emphasizes upon the fact that mass media like television is a very important source of information and this can be further used to disseminate more awareness regarding dengue. Mosquito bite was cited as a cause of dengue by 80.6% respondents and results are in consonance with studies conducted by Itrat A et al in a tertiary care hospital in Karachi 11 and Chinnakali et al in AIIMS New Delhi.7 There was misconceptions amongst 9.5% respondents that dirty drinking water can cause dengue & 3.5% thought that houseflies spread dengue.

Although the nursing students were aware of good practices regarding the elimination of mosquito breeding sites only a minor percentage would inform the relevant health authorities of unattended breeding sites in their community. Knowledge application gap was noticed amongst the respondents. It was observed that preventive measures were less as compared to knowledge regarding application of them. Similar gap between knowledge and preventive practices was also observed. The findings must be interpreted in the light of several potential limitations. The most apparent of which may be the fact that a cross sectional survey assesses relationships based on one point in time. As this was a self-administered questionnaire it is possible that the participants might have provided socially desirable responses especially regarding practices. The analysis finding indicates clearly that 93.33% of students had adequate knowledge and 84% of them had positive attitude and 89% of them had good practice regarding impact of dengue fever. A well planned structured teaching programme given to the same group. The effectiveness of programme showed high level of significant at p<0.001 level.

Conclusion

The main source of information about Dengue fever was obtained from the mainstream media including both newsprint and television. The low prevalence of sufficient knowledge, based on an overall knowledge, attitude and practice score on dengue, was evident among nursing students. However, isolated knowledge on symptoms and prevention. The known preventive measures mainly focused on protection from mosquito bite. In spite of our study limitations our findings highlight the need for further information, education and communication programs in the community.

References

Chinnakali P, Gurnani N, Upadhyay RP, Parmar K,Suri TM, Yadav K. High level of awareness but poor practices regarding dengue fever control.(2012).A cross sectional study from North India. North merican Journal of Medical Sciences:pp 278-282.

Gupta P, Kumar P, Aggarwal OP.(1996) Knowledge, attitude and practices related to dengue in rural and slum areas of Delhi after the dengue epidemic.PP 107-12.

Itrat A, Khan A, Javaid S, Kamal M, Khan H, Javed S, Kalia S, Khan AH, Sethi MI, Jehan I. (2010).Knowledge Awareness and Practices Regarding Dengue Fever among the Adult Population of Dengue Hit Cosmopolitan. PLoS ONE.; 3:2620-2626.

Rosen L, Gubler DJ.(1974) The use of mosquito to detect and propagate dengue viruses. *Am J Trop Med Hyg* 23: PP 1153-60.

Swaddiwudhipong W, Lerdlukanavonge. (1992).A survey of knowledge, attitude and practice of the prevention of dengue hemorrhagic fever in an urban community of Thailand. *Southeast Asian JTrop Med Public Health* 23:PP 207-11.