

# Effectiveness of Structured Teaching Module (STM) on Knowledge Regarding Health Hazards of Plastic Waste among Housewives Residing in Rural, Maharashtra

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**Abstract:** *Aim of the study:* The study aims to find the effectiveness of structured teaching module (STM) on health hazards of plastic waste among housewives residing in rural Maharashtra. *Objectives of study:* **Primary objective-**To assess the effectiveness of STM on knowledge regarding Health hazards of plastic waste among housewives residing in rural, Maharashtra. **Secondary objectives-**1. To assess the knowledge of housewives regarding health hazards of plastic waste among housewives residing in rural Maharashtra. 2. To find out the effect of STM on health hazards of plastic waste among housewives residing in rural Maharashtra. 3. To find out the association between posttest knowledge score of housewives and the selected demographic variables of housewives residing in rural Maharashtra. *Method:* Quasi experimental one group pretestposttest design and quantitative approach was carried out on 150 housewives selected by simple random sampling technique to test effectiveness of structured teaching module. The data was collected by using structured questionnaire consists of 30 items. *Results:* The presents study evaluates and found that demographic variables, Majority 36% of housewives were in the age group of 18-27 years, Education level revealed that majority (52%) of them had educated up to primary education. Majority of 67% of them were from Hindu religion. Majority (59%) of them had monthly income between 10001 to 15000. Majority (60%) had information regarding plastic waste management from broadcasting media. *Interpretation and conclusion:* The data were analysed by applying descriptive and inferential statistics. The result of the study indicated that after intervention there was an improvement in the knowledge and they gain good knowledge about health hazards of plastic waste. Analysis data shows that highly significance difference found between the pre -test and post- test knowledge scores at the level of ( $P < 0.05$ ). The hypothesis are proved and accepted.

**Keywords:** structured teaching module, STM, health hazards, plastic waste, housewives of Maharashtra

## 1. Introduction

Plastic products have become an important part of our daily life, encouraging its production to cross 150 million tonnes per year globally in India, plastics waste is a significant portion of the total municipal solid waste. The Central Pollution Control Board (CPCB) estimates that 56 lakh tonnes of plastic waste is generated in every year. It is estimated that out of 15,342 tons of plastic waste generated daily in India about 60% are collected and recycled.<sup>1</sup>

Rural areas consume biodegradable waste more efficiently than urban areas but plastic and electronic wastes have emerged as major problems in rural areas. With its inception in 1957, the Indian plastics industry has also shown a significant growth and currently employs about 4 million people. The utilization of plastics ranges from toys to aircrafts, from dolls to hosepipes, from soft drink bottles to refrigerators, from gramophone records to television sets. Packaging represents the single-largest sector of plastics use and accounts for 35% of plastic consumption.<sup>2</sup>

No authentic estimation is available on total generation of plastic waste in the country however, considering 70% of total plastic consumption is discarded as waste, thus approximately 5.6 million tons per annum of plastic waste is generated in country, which is about 15342 tons per day.<sup>3</sup>

Bisphenol A (BPA) are present in many plastic items that come in direct contact with food, including plastic

packaging, kitchenware and the inner coatings of beverages. BPA is metabolized in the liver to form BPA and it exits our body through our urine.<sup>4</sup>

BPA has been found in the urine of 95% of Canadians. The main problem is that as previously mentioned BPA is an endocrine disruptor. The human endocrine system regulates a number of essential body functions including metabolism, heart rate, digestion, fertility. BPAs released from plastic pollution cause severe health effects, leading to consumer movement's worldwide demanding BPA-free packaging.<sup>5</sup>

## 2. Need for the Study

The rising needs of the middle class, and abilities of plastics to satisfy them at a cheaper price as compared to other materials like glass and metal, are the reasons for the increase in the consumption of plastics in the last few years.<sup>6</sup>

Waste management is a difficult process for local agencies and lack of proper planning on the supply of are major challenges to the local governments. Since heavy investment is required to reduce, recover and recycle, despite many agencies involved in controlling plastic wastes including government campaign, non-governmental organizations and educational institutions success rate is very less with regard to the control of plastic wastes.<sup>7</sup>

Mechanical recycling refers to operations that aim to recover plastics waste via mechanical processes (grinding, washing,

separating, drying, re-granulating and compounding), thus producing recycles that can be converted into new plastics products, often substituting virgin plastics. Collection and sorting of PET bottles used for drinks packaging, grinding, washing, separating, drying and processing into polyester fibers, sheets or containers.<sup>8</sup>

### 3. Review of Literature

A descriptive study was conducted among joint family members resided in northeastern part of India. Manufacturing or burning of plastics cause emissions of toxic gases and release a toxic carcinogen called dioxin. The dioxin affects the function of the reproductive and immune system. It also causes hormonal disruption and growth problems. A study conducted by an NGO regarding the use of plastic bag and environmental hazards and disposal technique. It reveals that the city has increased from 1.8 crore kg per year in 2004 to 5.4 crore Kg per year in 2014.<sup>9</sup>

According to NIEHS Funds Human BPA, low-dose BPA to problems such as obesity, diabetes, reproductive disorders, asthma, sexually dimorphic behaviors, cardiovascular diseases, and prostate, breast, and uterine cancer.<sup>10</sup>

Ingestion of BPA is the primary form of exposure. Exposure to Bisphenol A can also occur from skin contact with thermal paper. Environmental exposure Bisphenol A concentrations Health Measures Survey indicate that Bisphenol A (BPA) was detected in the urine of 90% of Canadians aged 3 to 79.<sup>11</sup>

A quantitative research was conducted among the ward 16 of keezhmadu panchayat at Aluva sample of the study includes housewives residing keezhmadu panchayat at using purposive sampling techniques 30 housewives were selected a structure knowledge questionnaire was use to collect the data this study shows that there is 13.34% had poor knowledge, 76.6% had average knowledge, and 10% had good knowledge in pretest. In posttest 96.6% had good knowledge .3,34% had average knowledge This shows that there is significant difference in knowledge score before and after teaching program.<sup>12</sup>

#### 3.1 Assumption

- 1) Housewives may have some knowledge on health hazards of plastic waste.
- 2) The demographic variables may influence on knowledge of housewives with regard health hazards of plastic waste.
- 3) STM on health hazards of plastic waste may enhance the knowledge of housewives

#### 3.2 Limitations

- 1) Assessment of knowledge with regard to health hazards of plastic waste
- 2) The sample size is limited to 150 housewives.
- 3) Married women who stay at home and willing to participate in the study.

### 3.3 Hypothesis

- **H<sub>1</sub>**: There is a significant difference between pretest and posttest knowledge score on health hazards of plastic waste among housewives.
- **H<sub>2</sub>**: There is a significant association between posttest knowledge score on Plastic health hazards among house wives and selected demographic variable.

### 4. Methodology

**Research approach:** An experimental research approach was used for the study

**Research design:** Quantitative, quasi-experimental one group pretestposttest design

**Variables under study:** Dependent Variable: -knowledge on health hazards of plastic waste. Independent Variable: - Structured teaching Module **on health hazards of plastic waste.**

**Accessible population** housewives are present at the time of research study were accessible populations

**Sample and sampling technique**

**Sample:** Housewives residing at rural Maharashtra were the samples for present study.

**Sample size:** Samples size was 150 calculated based on sample size determination formula

**Sampling technique:** The convenient sampling technique was used to select the housewives residing in rural Maharashtra. As per the tentative schedule of data collection, the investigator has selected the housewife conveniently on first come first basis after informed consent.

#### Inclusion criteria

- Housewives who will give consent to participate in the study
- Housewives who will be available at the time of data collection

#### Exclusion criteria

- Housewives who do not understand Marathi.

#### Tool preparation:

Tool used for the research study was structured knowledge questionnaire on health hazards of plastic waste. The tool was prepared after extensive review of literature search, consultation with experts, and based on the past experience of the investigator.

#### Development of tool

The research instrument consists of two parts:

**Part A-Demographic data:** It is related to seeking information on demographic variable of housewives such as Age, Education, Religion, Monthly income, Source of information.

**Part B- Structured knowledge questionnaires and observational checklist:** -It is related multiple choice questions on health hazards of plastic waste. This multiple-choice question (MCQ) Total 25 items. The questionnaire has 4 areas i.e. Health hazards of plastic waste, Impact of plastic waste Cause illness in human being, Knowledge of

housewives on health hazards of plastic waste, Prevention of health hazards of plastic waste.

**Validation of the tool:** To ensure The Content validity of SAQ and STM were established in consultation with 10 experts from the field of Community health nursing, preventive and social medicine expert, statistician, language expert. The experts were requested to give their opinions and suggestions regarding the relevance, adequacy and appropriateness of the tool. Their suggestions were taken into consideration in the preparation of the tool and structured teaching module (STM)

**Reliability:** In order to establish reliability of the tool, test re test method was used. Reliability of the tool was **0.78 and 0.88** which showed that tool was highly reliable.

**Feasibility of the study:** The investigator conducted a Pilot study.

**Pilot study:** The pilot study was conducted from 18/10/2019 to 25/10/2019 on after prior permission from concerned authority. Fifteen (15) housewives were selected using convenient sampling technique from selected rural area of Maharashtra state. To assess the feasibility of the study and to decide the plan for analysis

#### Data collection procedure

The investigator has obtained formal permission from consent authorities in selected rural, Maharashtra for the conduct research study. The inform consent was obtained from each housewives for their wiliness to participate in the study and data will be kept confidential. The period of data collection was from 9th November 2019. The data were collected by the investigator. Pre-test was conducted on the housewives of rural Maharashtra. Who fulfilled the inclusion criteria soon after the pre-test structured knowledge questionnaires was administered. Investigator dictates and one by one and put (✓) mark on the right option mentioned below each question. If they required. On the same day of pre-test, given one module to the housewives to teach regarding the health hazards of plastic waste. Told them about posttest after 7 days. The post test was conducted by using the same tool used for pre-test on 7th day of the intervention.

#### **Plan for data analysis**

(1) Description of demographic characteristics of the housewives was computed by using frequency and percentage. (2)Mean, Standard deviation of pre and post-test knowledge scores was computed.(3) “t” test was applied to determine the significance of mean difference between mean pre-test and post- test knowledge scores. (4) Chi-square test was used to find the association of knowledge score with demographic variables and the findings were documented in tables, graphs and diagram.

**Scoring mode:** Score 1 was given to every correct answer. 0 was given to every wrong answer. Based on the percentage

of scores, level of knowledge was graded as **Poor-** 6 to below **Average-** 7 to 12, **Good-** 13 to 18. **Very good-** 19 to 24, **Excellent** – 25 to 30

## 5. Results

**Organization of the data:** The collected data is tabulated, analyzed, organized and presented under the following sections:

### Section I:

**Table 1.1:** Distribution of housewives according to their demographic variables,  $n=150$

Demographic Variables	No. of housewives	Percentage (%)
<b>Age (yrs)</b>		
18-27 yrs	54	36.0
28-37 yrs	46	30.7
38-47 yrs	31	20.7
≥48 yrs	19	12.7
<b>Education</b>		
No formal education	2	1.3
Primary Education	79	52.7
Secondary Education	52	34.7
Graduate and above	17	11.3
<b>Religion</b>		
Hindu	101	67.3
Christian	6	4.0
Muslim	28	18.7
Others	15	10.0
<b>Monthly Income(Rs)</b>		
<5000-10000 Rs	46	30.7
10001-15000 Rs	89	59.3
15001-20000 Rs	13	8.7
≥20001 Rs	2	1.3
<b>Source of information</b>		
Print Media	18	12.0
Broadcasting Media	90	60.0
Govt. Plastic Awareness Campaign	18	12.0
Health Care Providers	24	16.0

**Section-II:** Assessment of knowledge regarding health hazards of plastic waste among housewives before intervention

**Table 1.2:** Percentage distribution and Mean and standard deviation of knowledge on health hazards of plastic waste among housewives before intervention,  $n=150$

Sr. no.	Level of knowledge	No of housewives	Percentage Of knowledge	Mean	SD
1	Excellent	1	0.67%	25.00	.
2	Very Good	8	5.33%	19.75	0.70
3	Good	52	34.67%	14.75	1.70
4	Average	76	50.67%	10.13	1.76
5	Poor	13	8.67%	4.92	1.18
Overall		150	39.6%	11.89	3.98

**Table 1.3:** Area wise percentage distribution and Area wise Mean & Standard deviation of knowledge on health hazards of plastic waste among housewives before intervention,  $n=150$

Sr. no	Area	Item	Percentage of knowledge	Mean	SD
1	General information on plastic waste	6	39.77%	2.38	1.27
2	Health hazards arising due to plastic waste	8	44.33%	3.54	1.66
3	Plastic waste disposal	6	34.66%	2.08	1.04
4	Prevention of health hazards due to plastic waste	10	38.80%	3.88	1.63
Overall		30	39.6%	11.89	3.98

**Section III:** Assessment of knowledge on health hazards of plastic waste among housewives after intervention

**Table 1.4:** Percentage wise distribution of knowledge on health hazards of plastic waste among after intervention housewives,  $n=150$

Sr.no	Level of knowledge	Pre-test		Post-test		Difference in Percentage
		Frequency	Percentage	Frequency	Percentage	
1	Excellent	1	0.67%	10	6.67%	+6%
2	Very good	8	5.33%	63	42%	+36.67%
3	Good	52	34.67%	59	39.33%	+4.66%
4	Average	76	50.67%	14	9.33%	-41.34%
5	Poor	13	8.67%	4	2.67%	-6%
Overall		150	39.64%	150	59.77%	20.13%

**Table 1.5:** Mean SD & Mean percentage of knowledge on health hazards of plastic waste among housewives after intervention,  $n=150$

Sr. No	Level of knowledge	Pretest		Posttest		Difference in mean %	
		Mean± SD	Mean%	Mean± SD	Mean%	Mean± SD	Mean%
1	Excellent	25.00±0.0	0.67%	25.80±1.03	85.99	0.8 ±1.03	+6%
2	Very good	19.75±0.70	5.33%	21.25±1.51	70.84	1.5 ±0.81	+36.67%
3	Good	14.75±1.70	34.67%	15.88±1.81	52.93	1.13±0.11	+4.66%
4	Average	10.13±1.76	50.67%	10.71±1.48	35.71	0.58±0.28	-41.34%
5	Poor	4.92±1.18	8.67%	1.50±3.00	5.00	-3.42±1.82	-6%
Overall		11.89±3.98	39.6%	17.93 ± 5.02	59.77%	9.29±1.98	20.13%

**Table 1.6:** Area wise percentage distribution, Mean SD & % of knowledge on health hazards of plastic waste among housewives after intervention,  $n=150$

S. No	Area wise percentage distribution					Areas wise Mean SD & %					
	Areas	Item	Pretest %	Post-test %	Difference in %	Pretest		Post-test		Difference in mean %	
						Mean ± SD	Mean%	Mean ± SD	Mean%	Mean± SD	Mean%
1	General information on plastic waste	6	39.77%	59.97%	+20.2%	2.38±1.27	39.77%	3.59±1.35	59.97%	1.21±0.08	20.2%
2	Health hazards arising due to plastic waste	8	44.33%	62.84%	+18.33%	3.54±1.66	44.33%	5.02±1.65	62.84%	1.48±-0.01	18.51%
3	Plastic waste disposal	6	34.66%	63.15%	+28.49%	2.08±1.04	34.66%	3.78±1.60	63.15%	1.7±0.56	28.49%
4	Prevention of health hazards due to plastic waste	10	38.80%	58.15%	+19.35%	3.88±1.63	38.80%	5.88±1.98	58.84%	02±0.35	20.04%
Overall		30	39.6%	59.77%	+20.17%	11.89±5.6	39.39%	13.86±6.58	61.2%	1.97±-.98	21.81%

**Section -IV:** Effectiveness on a health hazards of plastic waste among housewives after intervention

**Table 1.7:** Area wise effectiveness of STM on health hazards of plastic waste among housewives,  $n=150$

Sr. No.	Area of knowledge	Pre test	Post test	t value	p value
		Mean ±SD	Mean ±SD		
1	General information on plastic waste	2.40±1.28	3.59±1.35	9.66	0.0001 S.p<0.05
2	Health hazards arising due to plastic waste	3.56±1.68	5.02±1.65	9.69	0.0001 S.p<0.05
3	Plastic waste disposal	2.07±1.04	3.78±1.60	12.98	0.0001 S.p<0.05
4	Prevention of health hazards due to plastic waste	3.87±1.63	5.88±1.98	10.45	0.0001 S.p<0.05
Overall		11.9±5.63	18.27±6.58	14.97	0.0001 S.p<0.05

**Table 1.8:** Overall Effectiveness of STM on health hazards of plastic waste among housewives, *n*=150

Sr no	Level of knowledge	Pre-test	Post-test	t value	p value
		Mean ± SD	Mean ± SD		
1	Excellent	25.00±0.0	25.80±1.03	9.66	0.0001 S.p<0.05
2	Very good	19.75±0.70	21.25±1.51	9.69	0.0001 S.p<0.05
3	Good	14.75±1.70	15.88±1.81	12.98	0.0001 S.p<0.05
4	Average	10.13±1.76	10.71±1.48	10.45	0.0001 S.p<0.05
5	Poor	4.92±1.18	1.50±3.00	9.66	0.0001 S.p<0.05
	Overall	11.89±3.98	17.93 ± 5.02	14.97	0.0001 S.p<0.05

With Student's paired' test applied at 5% level of significance 't' value was

**Section -V:** Association between posttest knowledge score health hazards of plastic waste and demographic variables of housewives.

**Table 1.9:** Association of posttest knowledge score on health hazards of plastic waste among housewives with their demographic variables, *n*=150

		No. of housewives	Mean posttest knowledge score	F-value	p-value
Age (years)	18-27 yrs	54	16.33±4.33	3.66	0.014 S, p<0.05
	28-37 yrs	46	18.19±4.34		
	38-47 yrs	31	19.80±6.19		
	≥48 yrs	19	18.78±5.29		
Education	No formal education	2	12±1.41	5.73	0.001 S, p<0.05
	Primary Education	79	16.63±5.17		
	Secondary Education	52	19.71±4.73		
	Graduate and above	17	19.23±2.92		
Religion	Hindu	101	18.55±4.15	5.55	0.001 S, p<0.05
	Christian	6	22±3.16		
	Muslim	28	14.96±6.23		
	Others	15	17.66±6.30		
Monthly income of family	<5000-10000 Rs	46	14.21±5.29	16.22	0.0001 S, p<0.05
	10001-15000 Rs	89	19.66±3.63		
	15001-20000 Rs	13	19.53±5.26		
	≥20001 Rs	2	16±8.48		
Source of information	Print Media	18	19.11±5.99	1.04	0.37 NS, p>0.05
	Broadcasting Media	90	17.54±4.34		
	Govt. Plastic Awareness Campaign	18	19.33±4.02		
	Health Care Providers	24	17.45±6.97		

**Testing of Hypothesis**

**H<sub>1</sub>:** There is a significant difference between pre-test and post-test knowledge score on health hazards of plastic waste among housewives.

In the present study, a significant difference (t=14.97; p=0.001 at 0.05level of significance) between pre-test and post-test knowledge score among Housewives was observed and hence, it is inferred that the STM was effective in improving the knowledge of Housewives regarding Health hazards of plastic waste and the Research Hypothesis H<sub>1</sub> Accepted.

**H<sub>2</sub>:** Significant- p<0.05

For the variable like **Age, education, religion, monthly income** the p value of the chi square test with knowledge and skill was less than 0.05. Concludes that there was significant association except **Source of information** of these demographic variables with the knowledge of the housewives at the time of pretest.(H<sub>2</sub>) **hypothesis was accepted.**

**6. Summary**

- Majority (36%) of housewives were 18-27years
- Majority (52.70%) of housewives had primary education
- Majority of (67.30%) housewives belongs to Hindu religion
- Around (59%) of housewives had monthly income between 10.000to 15000
- Around (60%) of housewives had information from broadcasting media.
- Before intervention, overall knowledge among housewives was around 39.6%
- Before intervention, the housewives had mean knowledge score of 11.89 ± 3..98
- After intervention, overall knowledge among housewives was around 79.5%
- After intervention, the housewives had mean knowledge score of 17.93 ± 5.02
- There was a significant difference between mean pre-test and post test scores of knowledge among housewives (t=14.97,p= 0.0001 p>0.05).
- There was significant association (F=3.66, p<0.05) between knowledge scores and age in years of housewives
- There was significant association (F=5.73, p<0.05) between knowledge scores and education of housewives
- There was significant association (F=5.55, p<0.05) between knowledge scores and religion of housewives
- There was significant association (F=16.22, p<0.05) between knowledge scores and monthly income of housewives
- There was no significant association (F=1.04, p>0.05) between knowledge scores and source of information of housewives
- The demographic variables such as age, education, religion, monthly income, source of information are having association with pre -test knowledge on health hazards of plastic waste.

- Highly significance difference found between the pre - test and post- test knowledge scores at the level of ( $P < 0.05$ ).
- Structured teaching module proved to be effective in improving the knowledge of housewives regarding health hazards of plastic waste.

## 7. Conclusion

A structured teaching program on health hazards of plastic waste was used among conveniently selected 150 housewives serving in selected rural area of Maharashtra. The post-test knowledge scores on health hazards of plastic waste has shown highly significant difference in “t” value ( $t=14.97, p= 0.0001$   $p > 0.05$  among housewives residing at rural Maharashtra . Therefore, the structured teaching module on health hazards of plastic waste was effective among housewives.

## 8. Recommendations

The present study recommends the following in different areas –

- A similar study can be done on large scale
- comparative study can be undertaken to find out the difference in knowledge among housewives urban and rural areas
- A similar study can be undertaken with a control group.
- A similar study can be undertaken on domains of practice.
- A similar study can be conducted among adults.
- A similar study can be conducted by using self-instructional module

## References

- [1] Swachh Bharat 164.100.228.143. 2020. Plastic Waste Management Issues, Solutions & Case Studies. [online] Available at: <http://164.100.228.143:8080/sbm/content/writereaddata/SBM%20Plastic%20Waste%20Book.pdf>
- [2] Hussain T., 2017. Plastic Pollution: A Growing Concern. [online] Rising Kashmir. Available at: <http://www.risingkashmir.co/news/plastic-pollution-a-growing-concern>
- [3] Khushiparisara.in. 2020. Website Material On Plastic Waste Management. [online] Available at: <http://www.khushiparisara.in/wp-content/uploads/2016/11/An-overview-on-Plastic-Management.pdf>
- [4] U.S. Food and Drug Administration. 2018. Bisphenol A (BPA): Use In Food Contact Application. [online] Available at: <https://www.fda.gov/food/food-additives-petitions/bisphenol-bpa-use-food-contact-application#:~:text=back%20to%20top-,Background,based%20food%20and%20beverage%20cans.>
- [5] Narayan, T., 2019. Plastic Pollution Affects Human Health In Unseen Ways - Goan Observer. [online] Goan Observer. Available at: <https://www.goanobserver.in/2019/10/11/plastic-pollution-affects-human-health-in-unseen-ways/>

- [6] Iswa.org. 2020. CONVERTING WASTE PLASTICS INTO A RESOURCE. [online] Available at: [https://www.iswa.org/uploads/tx\\_iswaknowledgebase/WastePlasticsEST\\_AssessmentGuidelines.pdf](https://www.iswa.org/uploads/tx_iswaknowledgebase/WastePlasticsEST_AssessmentGuidelines.pdf)
- [7] Rajendran R. Plastic Waste Management With Special Reference to Poly Bags Management in the Households of Tiruchirappalli City Municipal Corporation of Tamilnadu India. Available Recourse: <https://shodhganga.inflibnet.ac.in/handle/10603/224182>
- [8] Docs.european-bioplastics.org. 2020. FACT SHEET JUL 2020-MECHANICAL RECYCLING. [online] Available at: [https://docs.european-bioplastics.org/publications/bp/EUBP\\_BP\\_Mechanical\\_recycling.pdf](https://docs.european-bioplastics.org/publications/bp/EUBP_BP_Mechanical_recycling.pdf)
- [9] Kakoti R. Uses of plastic bags and environmental hazard-A study in Guwahati city. Int. J. Appl. Res.. 2017;3(46):1088-94.
- [10] Spivey A. Research issues and initiatives: NIEHS funds human BPA research.
- [11] Wwww150.statcan.gc.ca. 2021. *Bisphenol A concentrations in Canadians, 2012 and 2013*. [online] Available at: <https://www150.statcan.gc.ca/n1/pub/82-625-x/2015001/article/14208-eng.htm>
- [12] Swamilaksita PD, Sitoayu L, Simarmata N. Knowledge, Attitude, and Behavior of Housewives in Using Styrofoam Packaging in West Jakarta. KnE Life Sciences. 2018 Jun 19;4(5):627-34