A Report On Knowledge, Attitude, Use- Pattern And Availability Of Jeevan Jal (Pre-Packaged Oral Rehydration Slts) In Baitadi

*Dr. B. K. Suvedi,
M. B. (Hons)**

Abstract

A study regarding the knowledge, attitude, use pattern and availability of Jeevan Jal JJ was undertaken in the remote hilly district of Baitadi of Far Western Development Region of Nepal. The study shows that the females are less aware (38.7%) about Jeevan Jal than the males (76%). 57.3% of the total respondents had knowledge about Jeevan Jal, 42% know the use of it and 28.3% consider it should be given in diarrhoea accordingly as recommended. 64.5% of those, who have seen JJ(116/172) had prepared its solution, but only 27.6% (32/116) can make it correctly, (and the males leading again- 17.3% versus 4% females, that is only 10.6% of the total,) and 62.9% know that it must be used within 24 hours of preparation of the solution. 98% of the respondents found it is not available in the villages and suggested that it should be placed in the village panchayat office or worker (31.2%) and/or centrally located home in the village (29.5%).

**Medical officer, HMG, MDH.*

Address for correspondence: P. O. Box: 3400, GPO, Kathmandu, Nepal.

Introduction

The oral rehydration solution (ORS) plays a vital role in the management of acute diarrhoeal diseases (ADD). Diarrhoea is a major killer disease in the children of Nepal and the mortality from ADD is usually due to dehydration and the ORS is the main weapon to prevent and treat dehydration.

Jaavan Jal (JJ), a proprietary name of the ORS, produced in Nepal by Royal Drugs Limited is a WHO-formulated oral rehydration salt powder for rehydration purpose in the management of mild to moderate degree of dehydration. In Nepal, as estimated, there is on an average 6.1 episode of diarrhoea each year in under five children. Calculated the under five population of Nepal and estimated episode of diarrhoea per year and provided one packet of JJ for each diarrhoeal episode, JJ is needed in a quantity of 17 million packets for one year. The limited production of JJ, its non availability and very limited supply in the remote hilly districts of Nepal make JJ relatively unknown to the villagers and very rarely available in the villages. Besides this the attitude and use pattern of JJ varies among those, who know about JJ. This study was performed to find the actual state of knowledge, attitude, use pattern and availability in Baitadi district.

Aims of the study

The aims of the study was to find out the:

1. awareness and knowledge about JJ, the source of information about it,
2. attitude regarding JJ,
3. the place of availability of JJ,
4. the use pattern of JJ.

Methods and materials

A formal interview method was adopted taking 300 (males- 150 and females- 150) randomly selected respondents from 25 village panchayats of Baitadi district, and who reside in Baitadi at least for one year. Awareness was assessed by showing a packet of JJ to the selected respondent and asked all the other questions. The following questions were asked:

1. Have you ever seen such packet ? if yes, what is this ?
2. If you have seen such a packet before, then who and where you were informed ?
3. Does anybody beside you in the family knows about JJ ?
4. Have you ever prepared JJ solution ? or at least know to prepare ? If yes, how would you prepare ?
5. And in which conditions JJ solution may be used ?

6. Would you give JJ solution in diarrhoea ?
7. For how many days JJ solution may be kept and used ?
8. And how do you give JJ solution to the sick children ?
9. Is JJ available in your village ? If it is made available where would you prefer it to be placed for the use of villagers ?

Almost half of the respondents were visited to their houses at different villages especially the females and the rest interviewed at the health post and hospital, who came to the health institution with diarrhoea.

Findings

The variety of the respondents and their characteristics is summarised in the table number 1, below.

Table- 1

Characteristics of the respondents.

Characteristics		Male	Female	Total	%
Total respondents		150	150	300	100%
I. Education	illiterate	19	112	131	43.7
	literate	131	38	169	56.3
II. Occupation	Agriculture/housewife	55	134	189	63.0
	Service/Teachers	42	11	53	17.7
	Students	30	4	34	11.3
	Shopkeepers	11	1	12	4.0
	Others (mistris)	12	—	12	4.0
III. Distance from the hospital					
Within 6 miles' radius from hospital		64	57	141	47.0
Beyond 6 miles' radius " "		66	93	159	53.0

The table number 2 below shows the number of respondents, who have seen JJ before, at least for one time.

Table- 2

Respondents, who have seen JJ previously.

	Male	Female	Total	%
Had seen JJ before	114 (76%)	58 (38.7%)	172	57.3
Seeing JJ first time	36 (24%)	92 (61.3%)	128	42.7

From this table we find that 57% of the total respondents have seen JJ previous to this study. The males seem to know two times more (76%) than the females, which shows that the mothers are quite unaware about JJ. 114 of the males named it is JJ, while 4 just guessed it may be a drug powder and just mentioned they have not seen this compared to 58.5 and 87 respectively for females.

Who and where the respondent was informed about JJ is summarised in the table 3 below:

Table- 3

Place and source of information about JJ					
Place	Source of information	Male	Female	Total	%
Hospital/Health post	Health personnel	72	48	120/162	69.8
Medical shops	Shop-keepers	5	--	5/172	2.9
Through patients & their relatives		13	10	23/172	13.4
Through radio- broadcasting knew about JJ		15	—	15/172	8.7
(Where seen can't remember)					
Just don't remember where seen		9	—	9/172	5.2

From this table it is found that the health institutions of the district (hospital and health posts) are the main places and health personnel main source of information- 69.8% (120 out of 172). Patients and relatives also had some impact- especially in the females, 13.4% in total, radio- broadcasting and shop keepers are also found as the informer: 8.7 and 2.9% respectively. What is interesting here is that they informed only male halves.

The table 4 below shows awareness in the family beside the respondent.

Table- 4

Awareness	Male	Female	Total	%
Yes, at least one in the family knows	55	24	79/300	26.3%
No, they don't	86	98	184/300	61.3%
Do not know exactly	9	28	37/300	12.3%

This table shows us that 26.3% of the respondents know that at least one in the family knows about JJ, beside the respondent himself meaning that around 74% have no idea about JJ.

On the question "Have you ever prepared JJ or at least know how to prepare its solution? If yes, how would you prepare it?" the following was found, :

Table— 5

1. Preparation of JJ solution

Response	Male	female	Total	%
Yes, had prepared	76	35	111/172	64.5%
Knows how to prepare	5	—	5/172	2.9%
Does not know	69	115	184/300	61.3%

2. Method of preparation of JJ solution

Right method & right quantity of water	26	6	32/116	27.6%
Wrong method, but " " " "			15/116	12.9%
Right method, but wrong " " "			16/116	13.8%
Wrong method and wrong " " "			48/116	41.4%
Does not remember, how to prepare			5/116	4.3%

This table shows us that among the 300 responses, 37% had prepared JJ before, 1.7% known how to prepare and the rest (61.3%) do not know how to make JJ solution. Among those, (116 persons), who have prepared or at least know how to prepare JJ solution, only 26.6% know the right quantity of water to mix with the JJ powder. Others have either wrong method, (boiling the solution), or the quantity of water in which the JJ powder is mixed, is different than recommended being almost individual answer to the measuring unit: mana, glass, litre, lota, kettle, kuruwa, etc., And 4.3% just forgot how to make it!

Regarding the use of JJ, the following was found.

Table— 6

Conditions, described by the respondents, to be given JJ

Conditions	Male	Female	Total	%
Diarrhoea &/or vomiting	81 (54%)	45 (30%)	126/300	42.0%
Abdominal pain/discomfort	6	7	13/300	4.3%
Fever	3	3	6/300	2.0%
Weakness	4	2	6/300	2.0%
Other (Allergy/malaria)	6	3	9/305	3.0%
Do not know	50 (33.3)	90 (60.)	140/300	46.7%

From this table we find that 42% of the total respondents know that JJ is used in diarrhoea and or vomiting, the males have 54% compared to 30% of the females. knowledge about its use. 46% had no idea of its use, and the rest had misconception about its use.

On the queries that would the respondent give JJ solution in case of diarrhoea to a sick child the following responses were found:

Table— 7

Responses on the use of JJ in diarrhoea in children.

Responses	Male	Female	Total	%
Yes, it should be given	68	17	85/300	28.3%
If drugs added, may be	17	16	33/300	11.0%
No, should not be given	10	23	33/300	11.0%
Do not know	55	94	149/300	49.7%

From this table we come to know about the feeling of the respondents towards the use of Jeevan Jal in case of diarrhoea. 28.3% of the total respondents were of the view that JJ should be given in diarrhoea, (the males- 45.3%, compared to the females 11.3%), 11.0% thought that it may be given, added some other drugs (tables and syrup), another 11.0% thought it should not be given in case of diarrhoea, (males- 6.7%, compared to 15.3% female, and 49.7% could not answer whether to give or not)

The following table shows us the responses on for how many days the JJ solution may be used and kept and used.

Table- 8

Responses on time for JJ solution for use

Responses	Male	Female	Total	%
Less than 12 hours	21	16	37/116	31.9%
12-24 hours (1 day)	28	8	36/116	31.0%
2 and more days	21	22	43/116	37.1%
Do not know	80	104	184/300	61.3%

This table shows us that among those (116), who prepared JJ solution 36.1% think it may be used for more than 2 (even 15) days after making the solution. The respondents, who have not prepared JJ solution, could not tell the time, for use of JJ.

Responses on the mode of using JJ solution is shown on the following table number 9.

Table- 9

Responses on mode of using JJ solution

Responses	Male	Female	Total	%
According to demand of patient	12	6	18/84	21.1%
" " frequency of stool	8	5	13/84	15.5%
" " acceptance by the patient	7	8	15/84	17.8%
Other (very individual answers)	23	15	34/84	45.2%
Do not know	100	116	216/300	72%

This table shows us that how to give JJ solution is really a problematic one for the respondents, even for those who have used it already. Only 55% (64 out of 116) answered it in their own modification, though almost reaching to recommended or taught method.

The table below shows us the respondents' view regarding the availability of JJ and their preference to be placed.

Table- 10

1. Availability and preference for placement of JJ in the villages.

Responses	Male	Female	Total	%
Yes, JJ is available here	4	2	6/300	2%
No, it is not available	146	148	294/300	98%

Preference for placement of JJ

In the village panchayat office or Village panchayat workers	35/112	31.2%
Centrally located home in the village	33/112	29.5%
Health post/hospital is best	27/112	24.0%
In the school	13/112	11.6%
In the local shops	4/112	3.6%
Do not know	188/300	62.7%

This table shows that village Panchayat building and village panchayat workers are preferred by 31.2% respondents, 29.5% prefer a centrally located home for easy access, and 24.0% prefer the health posts or hospital, as it may give better service. The local school is preferred by only 11.6% and shops by 3.6%. Though 62.7% of the total respondents could not name any place.

Discussion

Diarrhoea is considered as a major problem and oral rehydration therapy (ORT) a vital intervention measure in infant mortality and morbidity. The effectiveness of oral rehydration therapy is now been well recognised, the only problem related with this is proper health education regarding knowledge, attitudes, and availability of the basic ingredients.

Jeevan Jal (JJ) is in use in Nepal for 15 years, (since 1972), and what is the situation like for this production, its use, and mixing was the main to provoke us for this study. In the remote areas of Nepal, where the means of mass media and communication (as radio and newspapers) rarely reach the baseline population, what is the real situation and what do the villagers think about JJ, how do they prepare it, and in which conditions it is used and is it available in the villages aroused all this reporting.

Though no such study in Nepal was available to me in the literature, it seemed worthwhile to study and report about the knowledge, attitudes, use pattern and availability of JJ and compare this with the available literature, though at times not much appropriate.

The knowledge about JJ was assessed by showing a packet of Jeevan Jal to the respondent and it was found that 76% of the males have seen or heard about JJ before, compared to 38.7% of the total females, almost half of the females. The Dadhikot study (4) showed that 51.2% of the households know about JJ/ORS, and Pokhara study shows that it was 3.2% for "packet fluid."

About the source of information it was found that in Pokhara (5), the relatives were in 22.2% cases, radio 20.4% cases, VHW, hospital and health posts- 33.4%, and similar study in Baitadi with Nun-chini pani showed that friends and relatives accounted for 14.3% cases, radio-14.3% and health personnel- for 38.1%. For JJ, the hospital and health post staffs played the main role to make it popularize (69.8%), with patients and relatives (13.4%) and relatives (13.4%) and radio-8.7%. Which means that the JJ is known by the rural population from the health institutions. What is interesting is the finding that the radio broadcasting is mentioned only by the males, meaning the female half of the population are quite unaware of radio-information.

Regarding the awareness in the family, it was found that 26.3% of the respondents answered that at least one in their family, beside the respondent himself, knows about JJ, which is a good indicator.

Now, about the preparation of JJ solution: Dadhikot study (4) showed that 53.58% of the respondents had actually prepared ORS, and 21.13% only knew the correct method. The Pokhara study (5) showed that 55.8% had prepared it but only 41.8% among them could prepare it correctly. This study of ours shows us that 38.7% of the total respondents have prepared JJ solution, only 27.6% know to prepare it correctly among those, who know to prepare, it is somewhat less than the Pokhara study. The sad fact, found during this study was that only 4% of the females, and 17.3% males (in total 10.6%) know how to prepare JJ correctly. It may be compared with the findings of Indonesia, where it was reported that the women who had heard of oral rehydration solution but not received personnel instruction did not know how to mix solution correctly from the packets.

The response, in which conditions, JJ solution may be used 42.6% of the total were for diarrhoea and/or vomiting, and 46.7% did not know when to use. 11.3% had wrong concept. This figure may be compared to Nun-chini-pani study, where it was found that 27.8% of the total respondents (1), know the use. It was reported that the Respondents VHW thought that JJ (R. D. Sol) stops diarrhoea, 14% had the idea of replacement of fluid loss and 30% had no clear idea (6), is comparable to our findings that 73.2% of those, who about JJ know its use.

To give JJ solution in diarrhoea or not was a different question, and we got the responses as follows: 28.3% agreed that it should be given, 11% thought it may be given, added some other drugs, and 11% refused to give, the majority of these being women. The males had (45.3%) the idea of its use.

About the use of JJ solution, after it is made, 62.9% of those who have prepared it know to use it within 24 hours of making the solution. The problem being only how to give it to the patient. The responses were different, but majority of them being correct (54.7%), and others had very individual answers (2 or 3 spoons a day, and like that)

The JJ packets are not available, 98% of the respondents confirm this, and asked if they were supplied with JJ packets, where they would like to place it for their use in the villages. 31.2% preferred it in the village panchayat office or village panchayat worker, and 29.5% preferred it should be placed in a centrally located home of the village, which is also a good idea.

Limitations of the study: Limitations of the study must be considered, as there is i) dependence on respondents, memories and willingness to take participation in this study, and (ii), bias in questionnaire survey implied to the village people especially the females, who were very often found reluctant to answer all the question and just answered "I don't know", but we have tried our best to be as correct as possible.

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Conclusion

1. Literacy and occupation plays significant roles in the awareness and knowledge about Jeevan Jal.
2. Distance from the health facilities and contact with the health workers also.
3. 57.3% had seen JJ, and at least 64.5% of them had prepared its solution, but only 37.6% of them know the correct method of preparing it.
4. Health personnel were found the main source of information, 69.8%, and 26.3% had at least one person in the family, who knows about the JJ.
5. 42.0% know the use of Jeevan Jal, 28.3% consider it should be given in diarrhoea, and 38.7% consider it should be given within 24 hours of preparation, is significant in the awareness.
6. 28% use the solution as recommended.
7. The JJ is not available in the villages was mentioned by 98% and 31.2% suggested that it should be kept with village panchayat workers or centrally located house in the village (29.5%)

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