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**Title: The role of Qualitative Methods in the Design of Contingent Valuation
Surveys - Willingness-to-pay for women's groups in rural Nepal**

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Introduction

Nepal is a low income country in the Himalayan region of South Asia where 81% of the population are Hindu, and less than 27% of women are literate ¹. The majority of the population live in rural areas, with a subsistence economy, and limited road access given the difficult topography. Women's groups have been used widely by government and non-governmental organizations (NGOs) as a means of raising awareness and encouraging community participation in social issues, such as health care, in Nepal. However, little is known about how they are perceived and how much they are worth to communities. Willingness-to-pay has been used to a limited extent in developing countries; ²⁻⁴, and the challenges are recognized ⁵ but this particular cultural and contextual setting, as well as the nature of the service to be valued made the following question more pressing: how does one go about designing a contingent valuation survey to measure the value of women's groups to poor, rural communities?

Willingness-to-pay is commonly measured using the direct technique of contingent valuation (CV) both in the environmental⁶ and, increasingly so, in the health sector ^{7 8}. In contrast to indirect methods which simply infer WTP from individual behaviour, the CV method estimates WTP through a survey of selected individuals. CV surveys can be used to value a good or service that is not yet available in the market ³, or a good or service or an aspect of it (process) that is already in existence e.g. ^{9,10 11}.

A CV questionnaire involves a number of components, including a description of the good or service to be valued, the method and frequency of payment and a question to elicit an individual's maximum WTP. This is often referred to as the 'scenario', which has the objective of creating a hypothetical market which is as realistic and credible as possible to promote a meaningful and accurate elicitation of preferences and associated values ^{7,12,13}.

To ensure content validity, or realism and accuracy of the valuation task, the use of qualitative research methods is recommended as a means of appropriately matching scenarios with respondents' 'mental assumptions about how this and similar issues are

normally decided upon' ¹⁴. Qualitative methods can also be used to explore how much respondents already know and gauge the type of information and language needed to define commodity characteristics. This is important given respondent sensitivity to the amount of information provided ^{15 16 17}. Part of the challenge lies in bridging the gap between the researcher's conceptualisation of the problem and the respondent's own understanding, their socio-cultural, linguistic framework.

We were involved in an economic evaluation of a community-based participatory intervention consisting of twelve locally recruited women facilitating women's groups in a rural area of Nepal, one in each VDC (village development committee), covering 60 square kilometres, a population of about 7,000 and around nine women's groups ¹⁸. The facilitators guided group members through a participatory planning cycle of ten meetings, enabling the assessment of problems in pregnancy and childbirth, sharing experiences and planning strategies (such as emergency loan funds, stretchers and safe delivery kit production) to address these problems. The aim was to improve birth outcomes. Given that community programmes of this kind can contribute to the social and economic infrastructure of a community, as well as improving health, our aim was to measure the total benefit of these women's groups to the affected communities. Willingness-to-pay was felt to be a tool that in theory could be used to measure the total worth of the programme to the community. However, the use of the technique to value a service that people were already using, in a distinct cultural and linguistic setting with high rates of illiteracy and a limited cash economy, represented significant challenges, justifying exploratory work to assess the feasibility of designing a meaningful contingent valuation survey. Yet when seeking guidance from the health economics literature, little was available from published studies.

Against this background, the objective of this paper was to: 1) review available evidence on how to incorporate qualitative methods into the design of contingent valuation surveys; 2) report on the methods and results of using group discussions to design our survey in Nepal; and 3) raise questions for how qualitative work could be more systematically conducted and presented within contingent valuation studies in the future.

The Use of Qualitative Methods in CV Surveys – Available Evidence

A recent review of CV surveys in health care studies indicated that 84% did not provide any indication of where commodity description and information was derived from (e.g. ^{19 11 10}). Only four studies^{17,20-22} indicated that qualitative methods were used: either focus group discussions or Delphi panels. Fourteen studies developed the scenario from the literature, results of a trial²³ and/or expert opinion⁷. In the environmental sector, numerous studies were identified that used the technique of verbal protocol analysis. In this section, we review two approaches: verbal protocol analysis and focus group discussions, and make brief reference to in-depth interviews.

Verbal Protocol Analysis

A few studies have assessed the cognitive processes leading to CV responses in the environmental field using the verbal protocol approach^{24 25 14}. This consists of asking respondents to ‘think out loud’ as they decide upon their maximum WTP. Similar work is being carried out in order to validate willingness-to-pay and conjoint analysis methods in health care²⁶. In another study, individuals were asked over the phone about strategies used to make decisions, factors influencing choices and asked to explain what was meant by attributes²⁷. In all these cases, verbal protocol analysis was valuable in helping to interpret the numbers generated by the surveys. However, despite recognition of this being a valid technique in assisting questionnaire design more generally²⁸, only one study was identified that used verbal protocols to design the survey. This approach was used to amend the questionnaire, reduce the risk of scenario rejection and maximise credibility and content validity²⁹ rather than simply explaining answers retrospectively.

Group Discussions

Focus group discussions are a more straight forward approach that have been promoted to explore ‘a broad spectrum of individual views’ and widely used prior to conducting a CV survey^{7,30 31}. These discussions, typically conducted prior to developing a CV scenario, involve between 4-12 individuals chaired by a moderator. They are most commonly structured to identify perceptions and attitudes with regards to the good or service to be

valued. Similar information can be derived from individual semi-structured interviews³² although, the group approach benefits from interaction between participants and a more informal environment.

A few studies were identified that used group discussions^{33 32} to identify and classify the most valued aspects of information derived from ultrasound. This fed into the interview protocol¹⁷ and was used to select appropriate elicitation mechanism and choice of language⁴. One study used focus group discussions to investigate the nature and extent of benefits to rural transit³³ and to decide on the payment vehicle.

In no cases were the question guides from any of the studies made readily available. In very few cases the findings from these discussions were reported, making it hard to draw lessons or make comparisons with future studies.

Furthermore, the use of the technique was often limited in scope. For example, they tended not to address issues such as choice of vocabulary, nature of the scenario, how payment should be made, and how frequently, as well as to identify perceptions of the service to be valued. In the next section of the paper we describe the use of group discussions to design a CV survey to value women's groups in rural Nepal.

Methods

Prior to designing the survey tool and methods, two sets of group discussions were conducted. The first aimed to ascertain how the intervention was perceived by different stakeholder groups; how to communicate what it is we wanted them to value; and to uncover exactly what they were valuing or likely to value about the intervention (key attributes).

The second set of discussions aimed to inform the scenario design, in terms of use of language and payment and elicitation methods. The first challenge was to find a way of effectively communicating what is meant by willingness-to-pay to both respondents and

field workers. The concept is not intuitive even in Western settings, where populations are better sensitized to the concept. In different cultural and/or linguistic environments, the problem can be further compounded⁵. To address this concern, an exercise was introduced, which allocated ten stones to each participant and then asked them to in turn attach a value of between 0 (no value) and ten (maximum value) for each of a number of services: the local traditional healer; the local school and; the women's groups. From this process, the notion of 'giving something up' was introduced. Thereafter, group participants were asked how they thought the groups could continue in the absence of government and donor support. This encouraged them to suggest possible scenarios for how the community could fund the continuation of such programmes.

The group discussions were also used to decide on the most appropriate method of payment. Conventionally, WTP studies ask respondents about monetary contributions towards a good or service. However, the maximum one 'would give up' could in principle be measured in time or material resources, or any tradable item that can be translated into money. Two examples were identified where respondents were asked if they 'were willing to contribute money to a fund and/or to give up labour time for constructing monitoring and maintaining the programme³⁴ or give baskets of rice³⁵. Group participants were also asked about the most acceptable frequency of payment. Whilst a one-off payment has commonly been used⁷ in the context of women's groups meeting on a monthly basis, repeated payment may be more realistic, as an ongoing commitment by community members is required to sustain the intervention.

The last point to explore was the choice of elicitation method. As we were considering an intervention that currently existed, an option was to elicit willingness to accept (WTA) compensation if the intervention were to stop.

Given the risk of shyness and fear during face to face interviews (field researchers were not known to the communities), the group discussion approach was adopted, to facilitate the discussion and maximize on understanding. Discussions were held with different stakeholder groups (women users, women non-users and husbands) based on the prior

belief that they would be affected either by the intervention and have preferences for it, or they would not know about the intervention but would construct preferences for it once it was described to them.

Two female field workers were employed and trained in the study objectives and methods during a one-week period. In the first stage of research, one women's group was selected on the basis of proximity to the district headquarters and four group discussions were held with each of the following stakeholder groups: women attending meetings (4 participants), their husbands (6 participants), women not attending meetings living near to the meeting place (13 participants) and women not attending living far from the meeting place (17 participants). In the second stage, another women's group was selected, and a further four group discussions were held, with 11 women attending meetings, 5 husbands, 6 women not attending meetings living nearby, and 5 women living far away. Lastly, nine women's group members from a poorer community were gathered for a group discussion to assess the acceptability of payment methods. Whilst more group discussions would have given a broader assessment of perceptions and beliefs, we were limited by available time and resources.

The people knew each other in most of the groups and can therefore be described as 'natural groups' in the sense that they formed independently of the research. This was deemed preferable to encourage open dialogue amongst discussants. The discussions took place where the meeting would conventionally be held, or in a neutral plot of land such as in front of a school. Participants were assured of the confidentiality of their responses. All discussions were tape recorded, transcribed and translated from Nepalese to English.

Analysis

Given the objective was to inform questionnaire design, the system we used for coding reflected the research questions. We were interested in: 1) references to the women's group programme (description of what it is or does, how it affects the community, reasons for attendance and non attendance, and characteristics of other women's groups

operating in the community) and 2) references to how the programme could be continued in the future (management, method, nature and frequency of contribution, price setting, reasons for contributing, any confusion). Thematic content analysis was used to categorise the recurrent themes and highlight the key elements of what was said. Themes are supported by selected quotes in italics, with supplemented comments, to aid coherence of fragments, in brackets.

Results

We begin by presenting the perceptions about the programme, including baseline knowledge levels, and benefits and problems mentioned. Next we discuss findings from the second set of discussions regarding the design of the contingent valuation scenario.

Perceptions about Women's Groups

Contrary to those living near to the meeting place, few women not attending meetings living further away knew anything about the meetings. However, they did value the monitoring and evaluation system of local woman making monthly visits to evaluate pregnancy status. This was beyond the scope of what we were valuing¹ and so efforts were made to clarify the 'boundaries' of the intervention, to ensure a consistent understanding of the service to be valued by all stakeholder groups. The first group of husbands did not know about the women's group, whereas those in the second did. Consequently, visual cues in the form of photographs of group meetings, were introduced to both women living far away and husbands to facilitate understanding.

When asked, *'How do you feel about the programme?'* a variety of themes emerged. The most predominant were:

- Knowledge generated;
- Learning about health during pregnancy;
- Subject matter (health);
- The ability to apply knowledge and reap the benefits;
- To share knowledge with others;

¹ We were not considering the costs of the monitoring activities so we did not want to include the benefits.

- Increased confidence (mentioned solely by husbands) and;
- NGO presence in the community.

The main problems raised were:

- Distance (for those living further from the meeting place);
- Time shortage (especially for those in small families)
- Age or contraceptive status (with older women and those with children/contraception finding it less relevant) and;
- Mismanagement of the emergency fund.

These themes were used to pre-code two questions in the final questionnaire to find out: 1) what the respondent liked most about the conduct of the women's groups in the community and; 2) why women not attending meetings were not or had stopped coming.

The issue of 'group overload' was also mentioned by some, as up to 6 other groups operated in some areas, some offering financial incentives that were not available in these women's groups. Given that the extent of participation in other groups, will impact on how these women's groups were perceived and valued, a question was introduced to find out how many and which other groups they attended.

Contribution Scenario

Women were already aware the programme was possibly coming to an end, so asking them if they wanted the programme to continue was an appropriate start to the discussion of how and in what way women would be willing to contribute to support the programme's continuation. When asked: '*If you feel that only you are not able to run the meeting and you need the facilitator (to help) (and) if we (ask) you to pay salary for (the facilitator), will you be ready to do that?*' Respondents rejected the scenario of paying the salary for the facilitator because it was felt to be beyond their means: '*No, we can't. Rs. 5 per month (would not be) enough. We can't take that responsibility*'.

However, each of the groups independently proposed the same alternative scenario which was more acceptable to them: contributing towards a volunteer woman from the community to facilitate the meetings, or to get training. This is summarized in the following in a quote by a group member: *'If that is for training a woman (then) we will give(...) if she will teach us what she has learnt'*.

Husbands also suggested the same scenario: *'If any one from (the implementing NGO) (i.e. facilitator) is not coming then they need to select one woman from the group (to run the meetings) and collect money from all members and pay her'*.

Women not attending the meetings, also indicated that this practice was common place in the community, with other NGOs handing programmes over for community control and management: *'Yes we can continue without the support of (the implementing NGO). Other organizations are also saying so. A person from the village who knows the things can run the meeting.'*

The scenario introduced as a result of this process involved two stages. Firstly, respondents were asked if they thought the women's group meetings should continue without the financial support of the implementing NGO. The purpose was to assess the extent of commitment to the groups. Secondly, the following scenario was introduced: *'One way the meetings could continue without the current level of support from (the implementing NGO), is for people from the village to contribute towards the costs of someone running the meeting, like the facilitator does now, or to train a woman from your village to run meetings'*.

The use of a willingness-to-accept scenario was explored with one group. The notion of being compensated (WTA) was rejected and the contribution scenario of WTP was preferred as illustrated in the dialogue below.

(Researcher) You were saying that the programme is valuable, women are learning different things from the group and if there is no programme they will lose those things, so, in return if (the implementing NGO) wants to compensate you by giving money or grains, what do you feel about it?

(Husband) I feel sad because if we take those things after some time we will finish all things. People they will not think about running the programme. They will take the money and spend it.

(Researcher) But they will compensate everyone who has been coming to the meeting. Then women do not need to come to the meeting but (instead) they will get some compensation.

(Husband) No, I do not like this. I do not think it is good. It will make a difference having meetings and not. So, I like that there should be the group and the meetings.

(Researcher) That means you want the programme to continue and for that you are ready to contribute?

(Husband) If it is running it will be good for women and family too. If there is no one to support may be hire a person to run the meeting and pay her according with everyone's consent.

Given the preference for contribution (WTP) instead of compensation (WTA), the following elicitation method was used in the final questionnaire: *'Would you be ready to contribute (...) so that the meetings can continue for women?'*

Payment Method and Frequency

Most households were involved in the cultivation of various grains, namely corn and millet, and it was thought that this could be more manageable than money, when the cash economy is not so widely developed. However, generally, group participants felt comfortable contributing money. Crops and other 'in kind' contributions were not supported due to the difficulty of measuring contributions of rice or corn or other grains and the need to cash in these items, as shown in the two quotes below.

'It will be difficult for us to collect food grains and it will be difficult to sell when it is necessary. So we feel that if we can collect money it will be easier for us'. (Women's group member)

'Yes, money is the best. It will be difficult to manage grains, collect it, place at home and take it to the market and sell it.. ..In the village they won't allow to take grains on specific days (superstition) so it will be difficult to collect grains.' (Husband of women's group member)

In the lower income community, women suggested that allowance should be made for poorer community members and that: *'People who can afford money will give money and people who can't will give grains'*. So, it was decided in the final survey to keep the nature of contribution open to suit women's circumstances and preferences, and the question was phrased as follows: *'Would you be ready to contribute some money every month to such a fund so that the meetings can continue for women? If you contribute grains they will be converted to money afterwards.'*

For those not attending the meetings and living further away, it proved difficult to ask them to contribute to something they knew nothing about. Therefore they were given the additional option of giving up time to attend or indirectly support the meetings. The following question was added to the questionnaire: *'Would you attend the MIRA meetings if they were nearer to your home?'* If the answer was affirmative they were asked the maximum time they would be prepared to travel (walking) from their home to go to the meetings.

With each group the field researcher discussed the frequency of contribution (monthly, six monthly, yearly, or one off) and there was wide variation in the responses given. For this reason, we decided to keep the option open and give respondents the chance to contribute as often as they wanted. In order to standardize the WTP values, the contribution period was set at three years to match the duration of the action research

cycle of the women's groups. The following question was added to the final questionnaire:

The contribution would allow the programme to run for a period of 3 years. How often would you prefer to contribute?

- a. *Once every month*
- b. *Once every 3 months*
- c. *Twice a year*
- d. *Once a year*
- e. *Once for the whole 3 years*

Confusion about purpose of contribution

The final scenario presented, was that of '*contributing money or grains to a fund which would be used to support the facilitator or train a woman from the village to run meetings*'. For some this was a source of confusion with respondents thinking the money would add to their existing (emergency loan) fund and could be used in the case of health problems as illustrated in the following dialogue between two non-attending women and the field researcher.

Woman 1: What is that fund, is it different from the fund that they are collecting now?

Woman 2: Rs. 5 which they are collecting now is for (the) fund from which they can borrow when they need (to) but the fund which (we) are talking (about) now is for supporting the group and we can not borrow from it.

Researcher: Yes, that's true. The new fund will be for the group to conduct the meeting not to borrow from it.

Woman 2: Then I will give Rs 10 half yearly. I thought that was the same (emergency loan fund) fund so I was saying that I will contribute Rs 10 per month.

One way of avoiding misunderstanding, was by checking the reasons for making a contribution. In this case, it became apparent that a husband of a woman's group member also thought the money being contributed was for the emergency loan fund.

Researcher: Now, you are able to contribute half yearly. Then how do you think that money will be used?

Husband: If anyone has problems, children get sick they can borrow the money. They should not use it for household expenses.

Researcher: I am talking about (an) additional fund. That is different from the (emergency loan) fund. (T)his money you are contributing is to run the group and meetings.

The following qualifications were added to the CV scenario used in the final questionnaire: *'You could not use this money, it would be used to support the meetings.'* After giving their valuation, respondents were also asked: *'Why are you prepared to give this amount to support the group?'* to ensure there was no confusion in the purpose of the contribution.

Survey Administration

Having established a contribution scenario, respondents in each of the groups began discussing how much they could give and negotiating between themselves their 'maximum' willingness-to-pay. This indicated that the open-ended question format would not be problematic, and so this was used as the starting point for a bidding process. However, during the group discussion everyone tended to agree to the same amount. Therefore in order to obtain an individual rather than a group valuation, it was decided that interviews should also be conducted with individuals to bid them up or down from the initial group valuation to obtain their maximum. The administration of the final survey first involved a group discussion to introduce the scenario, encourage questions and clarify any uncertainty or confusion in their purpose. Subsequently each group participant was interviewed individually on the following day. Individuals were asked this open-ended question in the final survey: *'How much is the maximum you could you*

give?’ The following note was added for the field researchers, to guide the bidding process:

If money is preferred and they are willing-to-pay more than 10 Rs, ask: could you pay 5 Rs more? Continue until reach maximum

If money is preferred and they are willing-to-pay less than 10 Rs, ask: could you pay 1 Rs more? Continue until reach maximum

If grains are preferred ask: Could you give half mana² more? Continue until reach maximum

Discussion

This paper was motivated by the fact that very little is reported about the design of CV surveys, and particularly the nature and findings of qualitative research methods used. Whilst there are studies illustrating the use of qualitative methods this is usually to validate surveys ex-post, rather than to inform the design of the survey ex-ante. This is surprising given the increasing attention to assessment of validity, or the extent to which the constructed scenario measures what it is intended to measure⁸ and, to a lesser extent, reliability³⁶ in CV studies. Construct validity (the degree of association of willingness-to-pay values with variables such as socio-economic status), criterion or convergent validity (comparing hypothetical and actual willingness-to-pay through actual or simulated markets^{37 38} and reliability are all assessed during or after the survey has been administered. Much has been written on the results and benefits of alternative methods of such validity and reliability tests.

Content validity, or the extent to which the contingent valuation scenario reflects the good to be valued and elicits appropriate responses, has been given some attention³⁹. Yet the role of qualitative research prior to survey administration has not been emphasized. Qualitative research should therefore be encouraged as the first step in a CV study and associated methods and results used need to be more frequently reported and scrutinized.

² Frequently used to measure grains, and is similar in size to a small cup.

In our case, the conduct of group discussions was essential to the design of the CV survey, in terms of the chosen vocabulary, deciding the extent and method of information provision (communicating attributes), as well as setting the boundaries around the service to be valued, choosing the elicitation method, and frequency of payment, identifying areas of potential confusion and misunderstanding, as well as deciding on the method of survey administration. It also served to familiarize field workers with the concept of willingness-to-pay and convince them of its purpose.

Without this phase of research, some respondents may have overestimated their valuation (by including the monitoring and evaluation benefits or thinking they were contributing to the emergency loan fund); and more respondents would have protested (rejecting the original scenario or contributing to the salary of the facilitator), invalidating the results. The contribution scenario was bound to be realistic and credible as it was spontaneously suggested by community members themselves, rather than imposed by the researchers. By giving women the option of different modes of payment, more respondents with lower income and living further away, were able to value the programme, limiting the number of zero responses. Group discussions justified and informed the choice of appropriate payment modes.

Researchers are often reluctant to use WTA as empirical studies have found it to exceed WTP⁴⁰, and WTP to maintain current level of service provision⁴¹ is preferred. We also found support for the use of willingness-to-pay rather than willingness-to-accept a loss, despite the situation where individuals already have property rights over the good/service in question.

Our work suffered from limitations. The selection of women's groups for group discussions was guided by security restrictions in Nepal at the time of data collection, and the groups chosen may not be wholly representative of the whole population (111 groups in total). This could have implications for the nature of benefits and problems identified during the first set of discussions, although these were fairly consistent across the two groups we selected. We also presented the range of responses rather than quantifying

frequencies, as the latter may have given a distorted impression due to the small sample size. Regarding the scenario design, we did not feel that holding additional discussions with more groups would have added significantly to our findings. Information was gathered from communities of differing wealth status which was important for the final choice of payment method. Whilst content analysis has come under criticism for allowing the researcher to impose a pre-held ‘conceptual grid’ on the data, which guides the interpretation and results⁴², our objective was to inform the survey design, which we felt justified a more deductive approach.

Scope for Further Work

This paper discusses the importance of including qualitative methods in published results of future contingent valuation surveys, and the need for the development of standard methodologies. This could feed into the ‘best practice’ benchmark for CV studies in the health sector, as advocated for by Smith⁷.

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References

1. Ministry of Health (Nepal) NE, & ORC Macro, *Nepal Demographic & Health Survey 2001*. 2002, Calverton, Maryland, USA: Family Health Division, Ministry of Health; New ERA; and ORC Macro.
2. Whittington D, Kerry Smith V, Okorafor A, Okore A, Long Liu J, McPhail A. Giving respondents time to think in contingent valuation studies: a developing country application. *Journal of environmental economics and management* 1992;**22**:205-225.
3. Onwujekwe O, Shu E, Chima R, Onyido A, Okonkwo P. Willingness to pay for the retreatment of mosquito nets with insecticide in four communities of south-eastern Nigeria. *Trop Med Int Health* 2000;**5**:370-6.
4. Bhatia M, Fox-Rushby J. Willingness to pay for treated mosquito nets in Surat, India: the design and descriptive analysis of a household survey. *Health Policy Plan* 2002;**17**:402-411.
5. Whittington D. Administering Contingent Valuation Questions in Developing Countries. *World Development* 1998;**26**:21-30.
6. Johannesson M. The contingent valuation controversy in environmental economics and its relevance to health services research. *J Health Serv Res Policy* 1996;**1**:116-7.
7. Smith RD. Construction of the contingent valuation market in health care: a critical assessment. *Health Econ* 2003;**12**:609-28.
8. Klose T. The contingent valuation method in health care. *Health Policy* 1999;**47**:97-123.
9. Mooney G, Lange M. Ante-natal screening: what constitutes 'benefit'? *Social Science & Medicine* 1993;**37**:873-8.
10. Donaldson C, Shackley P. Does "process utility" exist? A case study of willingness to pay for laparoscopic cholecystectomy. *Soc Sci Med* 1997;**44**:699-707.

11. Ryan M. Using willingness to pay to assess the benefits of assisted reproductive techniques. *Health Econ* 1996;**5**:543-58.
12. Kahneman D, Comments, in *Valuing Environmental goods: An assessment of the contingent valuation method*, R.D.B. Cummings, D.S. & WD Schulze, Editor. 1986, Rowman & Allen: Totowa, NJ.
13. Neumann PJ ,Johannesson M. The willingness to pay for in vitro fertilization: a pilot study using contingent valuation. *Med Care* 1994;**32**:686-99.
14. Svedsater H. Economic Valuation of the Environment: How Citizens Make Sense of Contingent Valuation Questions. *Land Economics* 2003;**79**:122-135.
15. Protiere CD, C. Luchini, S. Moatti, JP. Shackley, P. The impact of information on non-health attributes on willingness to pay for multiple health care programmes. *Soc Sci Med* 2004;**58**:1257-69.
16. Tversky AK, D. The framing of decisions and the psychology of choice. *Science* 1981;**211**:453-8.
17. Berwick DM ,Weinstein MC. What do patients value? Willingness to pay for ultrasound in normal pregnancy. *Med Care* 1985;**23**:881-93.
18. Manandhar DSO, D. Shrestha, B.P. Mesko, N. Morrison, J. Tumbahangphe, K.M. Tamang, S. Thapa, S. Shrestha, D. Thapa, B. Shrestha, J.R. Wade, A. Borghi, J. Standing, H. Manandhar, M. Costello, A.M. and MIRA. The effect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster randomized controlled trial. *The Lancet*:**364**:970-9.
19. Gibb S, Donaldson C ,Henshaw R. Assessing strength of preference for abortion method using 'willingness to pay': a useful research technique for measuring values. *J Adv Nurs* 1998;**27**:30-6.
20. Bala MV, Wood LL, Zarkin GA, Norton EC, Gafni A ,O'Brien B. Valuing outcomes in health care: a comparison of willingness to pay and quality-adjusted life-years. *J Clin Epidemiol* 1998;**51**:667-76.
21. O'Conor RM, Johannesson, M. Hass, S.L. Kobelt-Nguyenn, G. Urge incontinence. Quality of life and patient's valuation of symptom reduction. *Pharmacoeconomics* 1998;**14**:531-9.
22. Zarkin GAC, S.C. Bala, M.A. Estimating the willingness to pay for drug abuse treatment: a pilot study. *Journal of Substance Abuse Treatment* 2000;**18**:149-59.
23. Donaldson C, Hundley V ,Mapp T. Willingness to pay: a method for measuring preferences for maternity care? *Birth* 1998;**25**:32-9.
24. Schkade DAP, J.W. How people respond to contingent valuation questions: a verbal protocol analysis of willingness-to-pay for an environmental regulation. *Journal of Environmental Economics and Management* 1994;**26**:88-109.
25. Chilton SM ,Hutchinson WG. A Qualitative Examination of How Respondents in a Contingent Valuation Study Rationalise Their WTP Responses to an Increase in the Quantity of the Environmental Good. *Journal of Economic Psychology*. February 2003;**24**:65-75.
26. Ryan MR, C. and Entwistle V. *Listening to respondents: think aloud study of Discrete Choice Experiment responses*. in *4th World Congress of the International Health Economics Association*. 2003. San Francisco.

27. Kenny PH, J. Viney, R. & Haas, M. Do participants understand a stated preference health survey? A qualitative approach to assessing validity. *International Journal of Technology Assessment in Health Care* 2003;**19**:664-81.
28. Willis GB, Royston, P. & Bercini, D. The use of verbal report methods in the development and testing of survey questionnaires. *Applied Cognitive Psychology* 1991;**5**:251-67.
29. McClelland G, Schulz, J. Lazo, D. Waldman, J.K. Doyle, S. Elliot, R, & Irwin, J. Measuring non-use values: a contingent valuation study of groundwater cleanup. 1992, Centre for Economic Analysis, University of Colorado: Boulder.
30. Jones Lee MWL, G. Towards a Willingness-to-Pay Based Value of Underground Safety. *Journal of transport economics and policy* 1994;**28**:83-98.
31. Knodel J, The Design and Analysis of Focus Group Studies: A Practical Approach, in *Successful Focus Groups: Advancing the State of the Art*, D.L. Morgan, Editor. 1993, Sage: Newbury Park, CA.
32. Taylor SJ ,Armour CL. Measurement of consumer preference for treatments used to induce labour: a willingness-to-pay approach. *Health Expect* 2000;**3**:203-216.
33. Painter KM ,et al. Using Contingent Valuation to Measure User and Nonuser Benefits: An Application to Public Transit. *Review of Agricultural Economics. Fall Winter* 2002;**24**:394-409.
34. Swallow BM ,Woudyalew M. Evaluating willingness to contribute to a local public good: application of contingent valuation to tsetse control in Ethiopia. *Ecological economics* 1994;**11**:153-61.
35. Shyamsundar P ,Kramer RA. Tropical forest protection: an empirical analysis of the costs borne by local people. *Journal of environmental economics and management* 1996;**31**:129-44.
36. Dong HK, B. Cairns, J. Sauerborn, R. A comparison of the reliability of the take-it-or-leave-it and the bidding game approaches to estimate willingness-to-pay in a rural population in West Africa. *Soc Sci Med* 2002.
37. Onwujekwe O. Criterion and content validity of a novel structured haggling contingent valuation question format versus the bidding game and binary with follow-up format. *Soc Sci Med* 2004;**58**:525-37.
38. Clarke PM. Testing the convergent validity of the contingent valuation and travel cost methods in valuing the benefits of health care. *Health Econ* 2002;**11**:117-27.
39. Shackley PD, C. Should we use willingness-to-pay to elicit community preferences for health care? New evidence from using a 'marginal' approach. *Journal of Health Economics* 2002;**799**:1-21.
40. Bateman I, Carson RT, Day B, Hanemann WM, Hanley ND, Hett T, Jones Lee MW, Loomes G, Mourato S, Ozdemiroglu E, Pearce DP, Sugden R ,Swanson J, *Economic valuation with Stated Preference Techniques. A Manual*, ed. D.o. Transport. 2002, Cheltenham, UK; Northampton, MA, USA: Edward Elgar.
41. Mitchell RCC, R.T., *Using Surveys to Value Public Goods: The Contingent Valuation Method*. 1993, Washington, D.C.: Resources for the Future.
42. Atkinson P. The ethnography of a medical setting: reading, writing and rhetoric. *Qualitative Health Research* 1992;**2**:451-74.

APPENDIX – Scenario

For 3 years, (this NGO) has been supporting facilitators to attend mothers group. (This) financial support may soon reduce or stop and at that time you will need to decide whether to continue running or stop the meetings in the future. In your opinion, do you think it is better if these meetings continue?

- a. Continue
- b. Stop - Why? – go to next section.

One way the meetings could continue without the current level of support from (this NGO), is for people from the village to contribute money or grains that would be used to create a fund to pay someone to run the meeting, like the facilitator does now, or to train a woman from your village to run meetings. Would you be ready to contribute either money or grains contribute so that the meetings can continue for women? If you contribute grains they will be converted to money afterwards. The amount you say depends on your income and your feelings about the programme. The amount can be big or small or nothing at all. As we explained before, you could not use this fund, it would be used to support the meetings.

- a. Yes
- b. No – why not? Go to end of the section

Would it be easier for you to give money or grains?

- a. Money
- b. Grains

The contribution would allow the programme to run for a period of 3 years. How often would you prefer to contribute?

- f. Once every month
- g. Once every 3 months
- h. Twice a year
- i. Once a year
- j. Once for the whole 3 years

How much is the maximum you could you give?

_____Rs _____mana

If money

If more than 10 Rs, ask: could you pay 5 Rs more? Yes/No

If less than 10 Rs, ask: could you pay 1 Rs more, until reach maximum. Yes/No

If grains

Could you give half mana more?

- a. Yes
- b. No

Continue until reach maximum