

Research Methods in Health Promotion
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Lecture 31: Different study tools and their application in health promotion research

Hello and welcome back in this pursuit of research methods in health promotion. In this week we will be discussing regarding the different aspects of the study tools, their applications, how do we validate them, whether they are reliable or not all these aspects. In this particular lecture our discussion is focused on the different study tools that will be utilizing for our health promotion research. Now the concepts that we will be covering and simply the study tools for the health promotion research will be giving a brief classification although that is not an exhaustive list, but it will help you understand how the study there are different study tools for our health promotion research. Then the different the different classifications will be like this, the health promotion research assessment or evaluation tools and the intervention materials, because a health promotion research focusing on intervention it has typically these three phases like first you assess in the baseline then you intervene and then again you reassess. So, for these assessments the tool that we use is called the assessment or evaluation tools and the materials that we use or the tools that we use for actually implementing the intervention is called the intervention materials.

So, study tools in health promotion research as we have been discussing typically the health promotion tools can be divided in these two parts, tools for assessment or evaluation of certain behavior or certain health related issues and the proper health promotion intervention tools that means, how we are actually implementing the intervention. See for the observational health promotion studies this part will not be there this health promotion intervention tool will not be there in, but the tools for assessment and evaluation will be the only tool that will be used for the observational study. So, what are these tools for assessment or evaluation? The questionnaires or schedule now a questionnaire and a schedule what is the difference? Questionnaires and schedule the basic difference is based on how the responses are recorded whether the participants are themselves recording the response or like in a schedule where the where the data collector is asking the question and the participant is responding and the data collector is again noting down the response. Checklist may be there typically this is called an observation checklist where you are typically checking the boxes, interviewer guide or you know certain group discussion guides these are all different tools for assessment and evaluation in the baseline and also after the intervention after the actual execution of the intervention.

Now under tools for health promotion intervention see simply we can have the print materials or nowadays the digital and online materials they are very much common. So, that is also another thing that we usually can use. So, the next topic of discussion is detailing on the quantitative measurement tools. The see here I mean in the previous slide if you have noticed these are the tools for quantitative measures and these are the tools for qualitative assessment. So, for quantitative measurement the questionnaire or and the schedule it contains certain

questions with options usually this is a scenario that is called a forced choice because see in a like at scale if this is your item this is the question you have the question and you have say three options this is called a forced choice type of question why because the participant has to respond based on the options provided.

That means, it is kind of like whenever you are given an option that choose the best possible option among the given situation given options for example, here also similar thing say these are marked 1, 2, 3. Now the participant has to pick whether there is whether the response falls into this box is equated with 1 or 2 or 3 like this. So, this is called a forced choice you are forcing the participant to respond to any of the given options only the participant cannot say something of his own and you cannot record that right. Now, these questions are typically called an item when we are when we will in the next lectures we will discuss regarding the validation and reliability aspects of the questionnaires we will show you how the concept of item is very much important and how each of these questionnaires are very much essential for developing a good assessment tool. There may be different segments in a questionnaire for example, I mean if we have this is a consider this as a questionnaire we may have one portion for socio demography then we may have one portion for a scale.

So, there may be different segments in that questionnaire and it can also incorporate certain scales or indexes. So, that makes a questionnaire longer and also more complex. So, these are the different types of study tools you can come up with still if it is a homogeneous thing that means, it is consistent with your study objective and the whole of the questionnaire it addresses the research question in your study that will be considered as a single questionnaire and for your study. Remember that the questionnaire I mean each of these questions these items and the items in synchrony or the questionnaire as a whole they must be tested for reliability and validity based on this structure that means, question 1, question 2, question 3 or it should be question 3 first then question 2 then question 1 like this these are the structural issues that these study tools that we use in health promotion should be addressed because we are here eliciting the behavioral contexts or the different concepts perhaps the different theories. So, the way you put forward your question that can also change the response from the participants we discussed these kinds of issues or the response related biases when we discuss the design aspects in prior previous weeks.

So, that is why the reliability and validity based on the structure is very essential. Also what you should do is prepare the questionnaire I mean and also mention the scoring or the analysis techniques and when I will show you an example of a questionnaire I will show you how the analysis of the scoring of the items is mentioned in the questionnaire. Why this is needed? Because this is your study tool and you should already know before implementing it how to read that tool. That means, after implementing the study tool it is better not to change all the scoring and analytical criteria that is a very common mistake that usually we perform we usually implement the study tool without even thinking of how do we analyze or what are the scores or these kind of issues that should be there. So, that is not the proper way to approach

health promotion research you should be very clear on how to score these items in this questionnaire and that should be mentioned in your study tool.

So, the structure of your questionnaire or schedule should consist if it is of a multiple groups or multiple segments then each of the segments will consist of different items. The questionnaire or schedule as a whole may be will structured and containing closed ended questions. In some instances there may be certain open ended questions, but that can ultimately be structured into I mean formed into a single nearest response. So, here are different scenarios we will not be discussing those different scenarios, but we shall understand that this is the basic structure. And the most important thing is in your questionnaire or schedule you should mention the scoring or the analytical technique that will be used for this particular question ok.

Next part is the checklist. So, checklist again is for the observation by the data collector it usually contains again the predefined items. Here also you have put for certain questions which we call the items you devise this questionnaire you identify the question from prior research or through your qualitative survey perhaps. In the checklist also you have predefined items usually how do we form a checklist or why do you utilize a checklist we utilize a checklist to evaluate an event or an activity or even practice of a good behavior or a bad behavior for that matter. Checklists are typically utilized when we are evaluating any health promotion program ok, but for our understanding purposes let us focus the concept of checklist with the typical health promotion intervention only.

What happens here is you divide the activities for example, performing a behavior you divide the performance of a behavior say into 1, 2 and 3 these different steps. Now, step 2 will come after 1 and step 3 will come after 2 say like this. What the data collector will do? Data collector will have this checklist where you have mentioned what is 1, what is 2 and what is 3 and maybe you have given a box where the data collector can tick or mention if he or she is able to find that the particular individuals are performing those behaviors. That means, a checklist should better be performed based on the key aspects of performance of a behavior. For example, say if you are I mean consider simply the preparation of ORS, if a participant is not using the clean water that is a drawback.

So, that should be that is a key aspect of the behavior of say preparing the ORS that is the practice. So, that key aspect should be there in your checklist. Again whether the whether the beneficiaries understand that how much ORS should be poured into 1 liter of water. See if you can if you find out that a particular mother is pouring 2 packets of ORS in 1 liter of water then again that is not the appropriate practice. So, that check box should again be left empty by the data collector.

This is how checklist helps us to identify how what aspects of a particular behavior of a particular program or of a particular intervention is actually being practiced by the individuals. So, again similar to the questionnaire and the schedule you should mention how you are going to score the checklist. Some items may have weightage of 2, some may have weightage of 1 like this, but that you have to mention a priori. This is typically an example of a questionnaire if you can read on the bottom for interpretation of total please refer to the accompanying scoring cards. So, what they did this is PHQ 9, what they did they provided a scoring card where they have detailed the scoring criteria like what is the meaning of this total.

Now see here you will identify all the elements that we discussed for a questionnaire. These are your items see you have 9 items. This is one segment this is the starting segment where you provide the ID maybe name maybe general like this and the date of assessment these are the PHQ 9 questions and these are the choices available against each of the items. So, the beneficiaries who are taking this questionnaire will respond in terms of either 0, 1, 2 or 3 whichever fits. If for example, consider this first question little interest or pleasure in doing things say the beneficiary is finding that no this is not the scenario not at all then the beneficiary will say 0.

Next question maybe again 0, next maybe 1 like this. What will happen is if this is 0 then you do not have to add up anything if this is if the beneficiary has put circle to 2 ones say in this beneficiary circle 1 and again for this 1 then you add columns and mention here 2. Say here the beneficiary has not circled anything so that means, it will be 0 that means, no score for under these aspects and again in this say there is this score is 3 so that means, the total now becomes 5 right. This is how the questionnaire should be structured and remember one thing whenever the data collector is actually implementing the questionnaire for collection of data of your study these aspects should also be completed in the field only ok. This is typically the example of a questionnaire or you can utilize it as schedule depending on how you are going to collect the data.

Now next we come to the qualitative assessment tools. What can be the qualitative assessment tools? We mentioned about the IDI guides the in depth interview guides and the focus group discussion guides. This is typical example of an in depth interview or focus group discussion guide depends on how you are conducting the qualitative process. Typically these guides consist of the first part rapport builder where the introduction of the interviewer that is who is going to interview you simply say like this I am you state your name where are you from why then why you are doing this interview you introduce the topic and why this is important. Typically these questions they are open ended you do not provide with forced choices and you do not lead the participants in answering something you just want to explore the information or you just want to hear from the participants whenever you are performing any qualitative assessment.

So, that is the essence of these guides and see that is why you do not mention questionnaire or schedule like these terms for qualitative studies. Typically the study tools in qualitative research they are called the guides for in depth interview or focus group discussions and nowadays even we can formulate the in depth interview protocols of FGD protocols like this the whole process forms a protocol ok. Then you have the probes after the questions you probe on certain aspects to elicit more information on those. Consider this example this is just a sample question just I randomly taken from the Google search. Consider this first question what is are your experiences of accessing using or providing contraceptives at your facility level.

See if this interview is being conducted suppose with a public health nurse. Now you can this is a simple question the public health nurse may start answering something and just simply know my experience it is very good, but that is not sufficient you want to explore more you want to understand good in what sense in what way good. So, if there are any other problems or if there are any other dimensions that are related to this simple explanation of good for that you have your probe you keep on probing like current and ever use levels and reasons accounting for days, the user satisfaction, the different aspects that relate to the experiences. That means, the probe that you use in your guide should directly relate to the key I mean keyword of the question here the keyword is the experiences. So, you can understand how these probes are related to exploring or eliciting more and more information about the experiences.

So, this is how typical FGD or IDI guide is formed. Next we come to the intervention tools first let us discuss about the print materials perhaps these are the most common intervention materials that we come across. Common print materials of pamphlets, usual flyers, posters these are there I mean the handouts everything these are called the print materials because they are printed and often you can distribute them by hand or you can just simply put it up on a wall. So, that people can see like this and typically the printed materials they provide key to key messages see the key communication messages for your health promotion intervention in such a way that the that the beneficiaries they get engaged and they start understanding the change behavior or what change you want them to make. So, again this is related to the discussion of what is an appropriate message and what are the components of an appropriate message and typically the appropriateness or you know the the validity of the intervention tool will be discussed in next week when we discuss the different aspects of intervention designing, message designing, delivery of the messages and how do we pretest.

So, pretest is another way how we just simply test the intervention tools. So, till this point what we have understood is for the assessment tools like questionnaire schedules and everything what we do we perform the reliability and validity assessment often with the help of statistical techniques, but for interventions we perform pretesting to understand whether the intervention tool is appropriate or not. We were able we were about to discuss regarding the online and digital materials that we use for our own health promotion intervention. Now these are more and more in use nowadays because people are having more access to the internet and

they are more internet savvy nowadays and also the generations are I mean newer generations are coming up who are mostly dependent on the internet rather than on the print media. For example, a newspaper may also be a very important print media, but nowadays what we see people usually read the e-newspapers not the printed newspapers.

So, that is why the online or digital materials for intervention are of very much importance to us. Usually the different materials include e-flyers simply the flyers that is designed in the web form and is distributed through the different social medias can be flashcards. See the flashcards can be a part of the you know the print media the print materials also you can have certain digital flashcards. Flash messages that means, you get certain pop up messages that certain important information is put forward in front of you. The e-banners certain websites they utilize their banners and they showcase certain important messages.

So, the different digital materials can be there. Now what about the posters where do we use the posters and why really do we use the posters? See if you go through this is an example of a posters we have put forward the similar example in our basic scores as well. Now what do you get from this poster? This poster it engages you it gives you certain information typically relating to the family planning practices right. So, I mean whenever we are utilizing a poster that means, we are printing a poster there are certain considerations. First one is where do we paste the poster where do we put the poster? Basically you should post the poster somewhere where your beneficiaries or your target population will come and visit them.

Next will be the considerations on what should be included in the poster. Now the content of the message designing part will be discussed later on, but the content of the poster it should be very much interesting and engaging it has a picture of a couple then the different methods and also a message. So, it helps people understand what exactly is being conveyed and what change you want them to perform ok. So, that is why posters are very much important and very much you know effective as well because people can understand people can relate and people can take up the behavior. But since you are pasting the posters in certain public areas people will come across the posters again and again.

So, therefore, you should be very much cautious on the duration of the poster. It is ideal if you can change the posters a couple of weeks later on I mean a different poster focusing on a same aspect maybe a helpful addendum to your research intervention perhaps. Flip charts typically these are the flip charts where you typically flip the information sheets and you showcase the participants on the information that you have provided. So, usually the flip charts they contain a number of posters not the larger ones, but the smaller ones how why we are calling this posters because it has the similar structure of it has pictures clear messages and calls to an action like this. And the blank sheets in flip charts see these are these are not blank sheets these the messages are there, but in a flip chart also you can utilize blank sheets how to record the ideas that come out of the group meetings or the discussions.

So, it is better in a flip chart if you have a couple of blank sheets. So, that you can record the ideas that you have gathered from the meeting where you show the flip chart. The pamphlets brochures, leaflets, flares these are typically printed on thin paper materials or a bifold or a trifold paper material I mean of thick consistency. So, the basic idea behind these pamphlets brochures and leaflets and flares is to distribute the concept or to distribute the idea or to spread the idea by hand. A very common example at least it used to be during our days when the newspapers used to come to every home almost.

We used to get leaflets every now and then every alternate day that provide the certain information. So, the use of these leaflets these pamphlets brochures are like you can provide them with the to the participants very easily and the participants by just taking that material in their own hand can look it look into it and can react with. So, pamphlets brochures leaflets the typical flyers they are again another technique to engage the participant into your intervention in bringing about the desired behavior change. Even in many of our projects we also utilize these typical you know pamphlets and leaflets to induce the behavior change. And even at this juncture where the digital interventions at gradually taking over the typical print or physical interventions still at this point the leaflets the pamphlets they are they are providing good results to us.

So, that is what we were discussing the purpose of these they they utilize to promote a healthy behavior or a service and inform the reader. So, information is again the key like for posters the change behavior that we want them to perform that that key line is the main essence in leaflets and brochures like that you get a detailing area this is suppose the key message you have a picture over here and here you just simply detail what you want them to do and how you want them to do it. So, this is the information that is required and this is what you are providing them extra. So, that they can understand why the change behavior that you are proposing is actually needed right. And for these simple materials usually what you have you have a logo for example, if you if the WHO has proposed the leaflet or a brochure is is distributing it then WHO will have a logo over here or somewhere else.

Typically the lower corners are the areas where they put their logo in the pamphlets leaflets and in these flyers. This is an example of say you can consider this as a as a brochure a tri fold one this is again you can this can be a pamphlet I mean sorry this can be a leaflet or even this can be a flyer. So, what are the key components or the key elements? It should command attention with the cover compelling text that means, the participant should be engaged and compelled to react to the material set the tone with color. So, this means how do we design the content of it I mean if you are providing certain information you have to for example, if you are providing a very important information you provide emphasis with a darker tone maybe. Write font and write size which one to highlight which font should be larger that should be decided before you actually device the intervention and that should goes hand in hand with the content of your brochure or pamphlet.

Use the white space strategically that means, say in these areas you have white spaces over here white spaces over here, but see if these white spaces were not present then the problem would have been it would have appeared too much clumsy and the beneficiaries might just simply not become interested in reading all those things that is again important consideration. It should highlight the information with boxes see you do not have typical boxes over here, but if you consider this part this is again a box although this is a picture it informs the important issue that using latrines it focuses on use of latrines like this. Then it should have appropriate folds that means, the folds like here the folds are like this if the fold was over here then the problem would have been it would not be very much you know easy to read it would appear too much you know clumsy beneficiaries may be confused as to whether this part belongs to is related to this one or this one ok. So, the folding is again appropriately important and they should be lively and they should look lovely with the photographs you have seen the photographs in the previous slide as well. These are the flannel graph this is again another important physical intervention technique where over the flannel cloth you can put certain cutouts certain pictures the flannel cloth actually provides you a good contrast and the different handmade pictures or these cutouts they provide provide important messages to the people.

The interesting part with flannel graph is you can just ask the beneficiaries to prepare this kind of thing. So, that not only engages the participants, but also it ensures community participation this is another technique where you ensure community participation as part of your intervention. Flashcards that we were discussing like the these are the examples the different cards with certain information you put forward in front of you like this and in front of your chest and then the participants can see it then you remove that card then the next card that is just beneath that one will be focused and the participant can see like this the idea is again similar to I mean having a flip chart. After each and every flashcard the participant is able to understand the context of your intervention and what should be done and what are the different problems or how the problems can be addressed like this ok. So, the flashcards these are the examples of different flashcards see the pictures and the messages are there you can just simply put forward the messages first and then you can state the meaning of the messages that will stimulate the participants in comprehending comprehending the situation.

Now, the flashcards in a similar way are also utilized in the waveform as well how they are utilized in the waveform if you are observing something. So, if you are willing to intervene through certain digital techniques you can devise certain flashcards which appear on the screen of the beneficiary and gradually in a similar way what you have observed in the flashcard over here. Say first you can put in this picture and after this picture say after 10 or 5 or 10 seconds you can show this message and it appears like a flashcard and the participant will be able to understand what is shown and what you want them to perform. So, this can also be utilized for the websites. Now, coming to the the digital materials that we can use in our health promotion intervention as our intervention tool.

Commonest are the e flyers and the flash messages the e flyers are somewhat similar to the posters e flyers again are this is consider this as an e flyer here you have a very attractive

picture this picture is obviously, related to the intervention that you want to implement and is in line with the objective of your study you have your key message. Here you can just write something or you can add some more pictures some more secondary pictures or some pictures of items or calls to an action for example, if you consider if you just let us go back to this to this slide. See this can be formed as an e flyer you can have the message you can just have the picture this helps participants to relate and then you can have different small diagrams or pictures photographs in fact, with small messages. So, and the thing is you can just simply distribute this one digitally right. So, that is e flyers and what are flash messages? Now flash messages means suppose this is your computer screen ok this is your computer screen you have different items over here and you have opened a web browser your message will just simply flash up over here from any end or in which way you have designed in the middle of the website or in the middle of of the portal that you are utilizing what is the utility of having this flash message because of the nature of the flash that it suddenly appears in front of your eyes you you tend to observe what is actually written over there you suddenly get engaged in in that material.

The drawback of flash messages is you cannot put too many information or too much even two or three calls to an action in a single flash message. Ideally in a single flash message you should provide a single change objective because for flash messages it should appear first and the participant should then and there observe it and it should fade away. If the flash messages remain and the participants are getting annoyed then the participants ultimately may not be taking up the intervention that you are promoting. So, these are the different considerations whenever you are opting for the digital intervention of your health promotion research, but still these e flyers these flash messages even the digital flash cards these are now coming up in a big way because people are more dependent on computers and internet and the different health promotion websites or websites that promote prevention of diseases they often utilize different health promoting messages in their websites. So, in a similar way whenever you are going to implement your own intervention for the purpose of your research you can devise such a website or a portal where the beneficiaries can log into and get certain information and in between you can showcase certain key information in in in way of flash messages or flash cards and also you can just share through social media the e flyers.

Now what is problem what is the main problem with these with these internet or digital materials? See, if you are deciding to have two groups say this is the intervention group and say this is the control group. If you are utilizing the print materials then there is least chance of diffusion of this material or in that context contamination of the intervention between the two groups if you are utilizing the physical material if they are sufficiently distant then the chances are very less. But see when you are utilizing these digital materials what happens is they they are spread through the social media and you do not have any control on who who can observe them or who can read them and who cannot right. If you have to have a control over your intervention then typically you have to design your portal typically you have to target your audience and you have to induce your audience into viewing that website or something like that. Again this issue of control of who can view and who cannot it is a big question whenever we are implementing this digital material.

So, but with digital materials the contamination rate can be very high that is again a limitation that we may need to implement or may need to mention whenever we will ultimately write a manuscript. So, we discussed regarding the different aspects of the different intervention materials and the different assessment materials in in a in short we discussed the different you know health promotion research tools. We know that the tools may be the questionnaires like you know the checklists, the schedules like this these are used for the assessment, the measuring the problem statement or measuring certain behaviors these are the tools. Then for intervention what you can do is you can utilize either the physical intervention, the print materials or the digital intervention or you know the virtual interventions that you can use. So, we discussed the different aspects of these interventions also we discussed that the posters are you know whenever you are implementing the intervention through posters you have to have two or three different types of posters in hand because you you have to keep on changing the posters after certain duration.

So, that people do not I mean get bored with the same and same posters in in the area ok. So, these are the considerations and we also discussed that while choosing our intervention strategy I mean the different pros and cons of the techniques are important and one such important consideration is the issue of contamination whenever we are trying to utilize the digital intervention for as a strategy of our health promotion research. So, it is not really about only the e flyers or the the the flashcards digital flashcards only it is not really only about the study tools it is also about the method how you are implementing your intervention that is influencing the issue of contamination among the different study groups. So, these are your resources these mostly focus on the health communication part and the health communication is very much essential if you are going to design your health promotion and in the next lectures we will gradually move on to the discussion of how do we validate and how do we understand reliability of these assessment tools and as we have already mentioned that the use of these intervention materials the design of messages and whether they are appropriate or not these will be discussed later on in the next week. Thank you.