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Nurse-Family Partnership® (NFP) International

Guidance: Use of mastery scales in NFP I June 2021

Introduction

Bandura's Self-Efficacy Theory (1997), part of Social Cognitive Theory, is one of the three guiding theories of the NFP program. Bandura characterizes self-efficacy as an individual's belief in their ability (*efficacy beliefs*) to accomplish certain tasks that will lead to a desired outcome (*outcome expectations*). Self-efficacy beliefs are built up from an accumulation of past experiences. Bandura identifies these as key to an individual's motivation and personal achievement; "What people think, believe and feel affects how they behave" (1986, p25).

Mastery is an indicator and assessment of the client's generalized self-efficacy and low levels of mastery have been linked to poor mental and general health. Conversely, a high level of sense of mastery is associated with positive mental health, acting as a mediator between stress factors and various health outcomes.

NFP nurses use the mastery scale as part of their ongoing client assessments, with low mastery scores indicating those with limited confidence in their ability to make changes in their lives. Understanding each individual client enables nurses to adjust their approaches to match their specific needs. Analysis of the mastery scale across the NFP population can also provide important insights into the client group being recruited and provides opportunities to identify changes in mastery in the NFP population over time that are predictive of other improvements in maternal and child health.

Mastery in NFP research

Within the three US randomized trials, different ways of measuring self-efficacy were utilized, with the Pearlin and Schooler scale (1978) being used in the Memphis and Denver trials. In all three trials, those families found to be benefitting most from the program were those where the mother was experiencing low mastery at recruitment (intake). Amongst mothers with low mastery at intake, improved outcomes, compared to the control group, were found across many maternal and child outcomes, including maternal mental health, caregiving, child functioning, maltreatment, and injury. The longer-term follow-up studies have shown that this effect is more pronounced over time. Further details of this can be found by viewing the video of Dr Olds' presentation at: https://nfpinternational.ucdenver.edu/data-resources

In Memphis, 46% of clients were found to be experiencing low mastery at intake, and in the Denver trial 32% of clients were shown to have low mastery at intake. Because the program impact is greater

for these women and their children, it is an important indicator that the program is being targeted appropriately.

Using the mastery scale in program replication

Mastery is assessed/measured within the program using the Pearlin and Schooler 7-item mastery scale, which is embedded within the client intake and client intake update data forms. As such, the nurse makes this assessment at intake (within the first 4 visits) and at 6, 12 and 24 months.

The scoring of the scale is described in Box 1 below. It is anticipated that nurses will use the scale to identify clients with low mastery and assess changes in client's sense of mastery over time. In addition, scores for clients can be aggregated and reported to provide a picture of changes in mastery within the whole client population.

Scoring of the **mean mastery scale value** should be undertaken as follows:

- The first five statements (I have little control over the things that happen to me, here is really no way I can solve some of the problems I have, There is little I can do to change many of the important things in my life, I often feel helpless in dealing with the problems of life, Sometimes I feel that I'm being pushed around in life) are coded as follows:
  - Strongly agree = 1; agree = 2, disagree =3, strongly disagree = 4
- The final two items ('What happens to me in the future mainly depends on me' and 'I can do just about anything I really set my mind to') are coded in reverse ;
  - Strongly agree=4; agree=3; disagree=2; strongly disagree=1
- Scores of the 7 items are then summed, with a possible total score from 7 to 28 points.
- To account for any missing scores/items answered, the total score should be divided by the number of questions completed (i.e., if seven items are completed, the total should be divided by 7, if 6 are completed, the total is divided by 6 etc.).
- A higher score indicates increased mastery.
- **A score of below 3 is considered low mastery.**

Box 1

Use of the mastery scale in clinical practice

As it is tied to one of the three foundational theories of the program, mastery is an important concept for nurses to understand and make use of in their clinical practice. Nurses will need to pay special attention to those clients assessed as having low mastery at intake and help those with especially low scores to build their capacity to manage challenges in their lives and work towards their goals. Low

mastery is, unsurprisingly, strongly correlated with poor mental health and clients' mastery scores are an important piece of information that nurses can use to guide their work with them.

The five client-centred principles of the program guide the nurse and support them to work with the client on building her self-efficacy;

1. The client is the expert in her own life

   As experts in their own lives, clients know best which answers to their challenges are possible for them. Their sense of self-efficacy is enhanced when they are acknowledged as experts and follow their own plans for change.

2. Focus on strengths

   Taking a strengths-based approach supports clients to see potential in themselves, encouraging them to take steps into change and experience success, which in turn will enhance their self-efficacy. This approach is supported by the program guideline materials and also by use of Motivational Interviewing (MI), which uses a person-centred approach to enhance personal motivation to change.

3. Follow the client's heart's desire

   Working with the client's 'heart's desire' and personal goals is based on the understanding that people act on what is important to them, a key concept of social cognitive theory. The client's intrinsic motivation to change is drawn on to enable them to take small steps and experience success, so building their self-efficacy.

4. Clients identify solutions that work for them

   The client's view of the importance of a change in their life and their belief in their ability to make a change are both essential to understand and should guide the nurse's work. Where clients do not believe a change is important, nurses may wish to offer additional information with the aim of altering that view, but clients' assessments of what is important to them remain central.

5. Only a small change is necessary

   When small, achievable steps to change are planned, and celebrated when accomplished, clients feel a sense of success and gradually build their belief in their ability to make change. Supporting clients to make small achievable steps towards what is important to them will help them develop confidence in their ability to accomplish their goals and make it more likely that they will persevere and develop a growing sense of confidence in managing other challenges in their lives.

The mastery scale can be clinically challenging for nurses to use with clients, especially those with low levels of education or with cultural or religious beliefs that do not align with the concept. However, nurses are able to explain the questions where clients are struggling to understand what is being asked and the scale has been successfully used with many different groups, both across the USA and in other countries. The clients' responses to the scale provide nurses with an opportunity to further explore clients' answers and gain additional insight into their underlying view of themselves and their situations.

In order to make good clinical use of the mastery scale, nurses need to understand the concept and be able to use the scores to inform their assessment of client needs. Individual answers to each item will provide nurses with insights into the client's views of themselves and their abilities. The summed total, divided to create a mean score, will provide additional insight and nurses will want to pay particular attention to women with mean mastery scores below 3, as these women will need support to develop their capacity to change. Reviewing the scale with clients at regular time points during the program supports nurses with their ongoing assessments of client progress, as well as providing an opportunity for the client to re-evaluate and explore their feelings of self-efficacy with the nurse.

Analysing, presenting, and interpreting the data

As low mastery scores are indicative of high levels of need and potential for increased gain from the program, reports for NFP teams, sites, regions and at a national level should indicate numbers and % of clients with score of less than 3 at the points data are collected in the program.

It is especially important to analyse the data at intake to understand the characteristics of the client population in your context. Countries should consider the % of clients with low mastery being recruited to the program, as this identifies a segment of the population that is likely to benefit from the program. If the % of clients with low mastery at enrolment is low (compared to that of the trials, see above) or declining over time, it may be that attention needs to be paid to recruitment criteria or recruitment processes that are impeding recruitment of those families most likely to benefit.

It is helpful to review mastery at the various progression points of the program, as it is expected that the nurses' work with clients will positively impact on their sense of self efficacy. Care should be taken when undertaking the analysis that issues such as client attrition rates are taken into account. For example, if those with low mastery are leaving the program, then those measured at later points may have had higher baseline mastery and not have been helped by the program.

If countries find that the Pearlin and Schooler scale is not appropriate for their client group and context, and another more appropriate validated scale exists, it may be appropriate for them to replace it with another validated scale that measures this construct. The principles of this guidance regarding the use of a mastery scale should be translated into use of the replacement scale.

References

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