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Article

Using a person-generated mental health outcome measure in large clinical trials in Kenya and Pakistan: Self-perceived problem responses in diverse communities

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Abstract

Health care should be informed by the physical, socioeconomic, mental, and emotional well-being of the person, and account for social circumstances and culture. Patient-generated outcome measures can contribute positively to mental health research in culturally diverse populations. In this study, we analysed qualitative responses to the Psychological Outcome Profiles (PSYCHLOPS) Questionnaire—a patient-generated outcome measure based on open-ended questions, and compared the qualitative responses gathered to conventional, nomothetic measures used alongside the PSYCHLOPS in two studies. Data were collected as part of outcome research on a psychological intervention in Pakistan ($N = 346$) and Kenya ($N = 521$). Two researchers coded the qualitative responses to the PSYCHLOPS and identified overarching themes. We compared the overarching themes identified to the items in the conventional, nomothetic outcome measures to investigate conceptual equivalence. Using the PSYCHLOPS, the most frequently reported problems in Kenya were financial constraints, poor health, and unemployment. In Pakistan, the most frequent problems were poor health and emotional problems. Most of the person-generated problem concepts were covered also in nomothetic measures that were part of the same study. However, there was no item equivalence in the nomothetic measures for the most frequent PSYCHLOPS problem cited in both countries. Response bias and measurement bias may not be excluded. More research on the use of PSYCHLOPS alongside conventional outcome measures is needed to further explore the extent to which it may bring added value. Use of a PSYCHLOPS semistructured interview schedule and efforts to minimise response biases should be considered.

Introduction

According to the World Health Organization's (WHO) global strategy on people-centred and integrated health services (WHO, 2015), person-centred care should focus on the health needs, preferences, and expectations of people, rather than being disease-focused. In particular, this WHO strategy suggests that care should be centred on the physical, socioeconomic, mental, and emotional well-being of the beneficiary, and should account for people's social circumstances and culture. Consideration of culture and individual experience is at the core of person-centred medicine (Mezzich, Botbol, & Salloum, 2016). In line with the person-centred approach are "emic" or idiographic approaches to measurement that favour individuals' perspectives, uniqueness, and the contextualisation of observed phenomena (Alegria et al., 2004; Berry, 1969). However, outcome studies in mental health tend to use "etic" or nomothetic outcome measures, which favour objectivity and comparability across settings and populations.

Person-centred approaches to measurement may be particularly important in international or cross-cultural mental health research, where the debate on measurement validity across cultures is still ongoing (Betancourt et al., 2009; Kirmayer & Pedersen, 2014). Mental health care and research in many countries are largely dominated by models, methods, and measures that are generalised and etic and that tend to have been developed in high-income countries. The extent to which these models and methods have been adapted for use in diverse settings and cultures varies, but engaging with people's experience by using person-centred measures could ensure that local values, perspectives, priorities, and expectations are not overlooked (Kirmayer, Mezzich, & van Staden, 2016; Kirmayer & Pedersen, 2014), and could potentially form the basis of measured change.

Patient-generated outcome measures (PGOMs) are idiographic and defined as measures where the items are determined by the help-seeker (Ashworth et al., 2004). PGOMs are therefore person-centred and emic by definition. PGOMs are designed to capture the individual's personal illness experience and to account for this experience, while testing the efficacy or effectiveness of treatments and interventions. Researchers in the field of person-centred care and outcome assessment are calling for a mixture of nomothetic (general) and idiographic (e.g., PGOMs) measures to be used as standard practice in mental health research (Green, 2016; Pesola et al., 2015; Rose, Evans, Sweeney, & Wykes, 2011; Sales & Alves, 2012). This hybrid approach acknowledges the weaknesses and strengths of both approaches, and could potentially contribute to strengthen mental health research conducted across and within cultures and settings. PGOMs may contribute to the integration of emic and etic approaches in mental health research. Hence, it is important to investigate the acceptability, feasibility, and added value of using PGOMs in diverse settings.

One example of a PGOM is the Psychological Outcome Profiles Questionnaire (PSYCHLOPS). It was originally developed as both a therapeutic tool and as an outcome measure to assess the effectiveness of psychological interventions delivered in primary care settings in the United Kingdom (UK). The tool can also be used as a gateway to therapeutic discussion, for baseline assessment, and for monitoring progress (Ashworth et al., 2004). The PSYCHLOPS is truly emic in that it has a qualitative component, whereby it asks respondents about their problems or functioning limitations. Each qualitative question is followed by a quantitative, Likert scale question to rate the impact and duration of the problems or limitations elicited.

Three previous studies, all from the UK, have explored the qualitative results of the PSYCHLOPS questionnaire (Ashworth et al., 2007; Lawton et al., 2014; Robinson, Ashworth, Shepherd, & Evans, 2007). Coding of responses differed across these studies. Robinson et al. (2007) coded the qualitative responses into seven main themes (interpersonal, state of mind, somatic, past events, competence/performance, self-evaluation, and material issues), and two to four subthemes (17 in total). The same seven high-level problem themes were used in a subsequent publication, though were further defined into 61 subthemes for both the problem

and the functioning domains of the PSYCHLOPS (Ashworth et al., 2007). Lawton et al. (2014) coded three problem and functioning themes (physical, psychological, and social), further stratified into nine subthemes (e.g., social work, social money). Evidence from one of these studies (Ashworth et al., 2007) suggests that the PSYCHLOPS reported problems may be more comprehensive than those captured using a quantitative, fully structured nomothetic instrument. When the authors compared the PSYCHLOPS reported problems to the content of the Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM; Evans et al., 2000), they found that several person-generated problems did not feature in the nomothetic questionnaire (Ashworth et al., 2007).

WHO obtained permission to incorporate the PSYCHLOPS into the manual of one of their scalable psychological interventions, Problem Management Plus (PM +; Dawson et al., 2015; WHO, 2016). PSYCHLOPS' focus on the person's problems means that the questionnaire lends itself to the problem-solving elements of the intervention, is simple to use, and aids therapeutic dialogue. Moreover, the emphasis on the individual's perspective was intended to capture concerns of greatest personal significance, which are deemed particularly important in people affected by adversity, rather than relying solely on an external frame of reference to interpret psychological distress and recovery. PSYCHLOPS was used as an outcome measure in two large randomised controlled trials (RCTs) designed to test the effectiveness of PM + in reducing symptoms of common mental disorders in Pakistan and Kenya.

In this article, we analyse qualitative responses to the PSYCHLOPS questions and compare these responses to the conventional, nomothetic measures used alongside the PSYCHLOPS in the two research trials.

Methods

Setting

Data were collected as part of two RCTs conducted in Pakistan and Kenya, which have been previously described (Bryant et al., 2017; Rahman, Hamdani, et al., 2016; Sijbrandij et al., 2016; Sijbrandij et al., 2015). Briefly, the RCTs tested the individual version of PM +, a brief (five-session) individual psychological intervention that was delivered by closely supervised nonspecialists (Dawson et al., 2015; WHO, 2016). PM + was developed because it is potentially scalable in resource-pressured health systems and because its components are evidence-based, using a multicomponent approach with elements of problem-solving combined with behavioural techniques. PM + is transdiagnostic in that it addresses symptoms of diverse mental health problems (e.g., depression, anxiety) as opposed to symptoms of single diagnoses, and it was designed specifically for people living in communities affected by adversity and/or for resource-pressured health systems. Between 2014 and 2016, PM + was tested among adults with psychological distress in peri-urban Peshawar, Pakistan, and in suburban Nairobi, Kenya. Both trials indicated

PM + to be effective at reducing symptoms of psychological distress, including depression and anxiety symptoms, and at improving one's degree of functioning (Bryant et al., 2017; Rahman, Hamdani, et al., 2016).

The PSYCHLOPS measure

PSYCHLOPS consists of three domains and four questions: problem domain (two questions), function domain (one question), and well-being domain (one question). It is designed to be administered before, during, and after an intervention. The versions for the different time points differ slightly. In the preintervention version, participants are first asked to think of their problems, to choose two problems that trouble them most, and to indicate on a 6-point Likert scale (0 = *not at all affected*, 5 = *severely affected*) how much the problem has affected them in the last week. This is followed by a question on functioning that is thereafter also rated on a Likert scale. In the during- and postintervention PSYCHLOPS versions, people are asked to think of the same problems that were previously mentioned in the preintervention version and to indicate again how much they have affected them in the last week. There are other questions in the PSYCHLOPS that do not contribute to the scoring, such as questions on temporality of problems in the preintervention version, a question on a new problem and its magnitude in the during- and postintervention versions, and a comparison of how the person feels since starting the intervention in the postintervention version. PSYCHLOPS has been validated in primary care populations in the UK, Iceland and Poland (Ashworth, Evans & Clement, 2008; Ashworth et al. 2005; Czachowski, Seed, Schofield, & Ashworth, 2011; Héðinsson, Kristjánsdóttir, Ólason, & Sigurðsson, 2013), but never outside of Europe.

Adaptation of the PSYCHLOPS

In both sites, the PSYCHLOPS questionnaire was used as an interview measure, not as a self-report measure as it was designed, allowing for inclusion of illiterate respondents. For maximum brevity, two items that do not contribute to scoring were removed from the preintervention version of PSYCHLOPS. These were Item 1c ("How long ago were you first concerned about this problem?") and Item 2c ("How long ago were you first concerned about this problem?"). Also, in Pakistan only, Questions 5a and 5b concerning other important problems since therapy began, were removed from the during-intervention version, and Questions 5 and 6 regarding other problems since therapy began and the way patients felt compared to when they started therapy, were removed from the postintervention version of the PSYCHLOPS. While these questions were kept in the Kenya study, they had a very low response rate, and were not included in analyses of this current study. None of the removed items mentioned above contributed to the PSYCHLOPS overall score. See supplemental material for the modified preintervention PSYCHLOPS used in Pakistan.

The questionnaire was translated into Swahili (by a language specialist) and Urdu (by a member of the team), and was reviewed by bilingual mental health

experts (Pakistan) or community health volunteers (Kenya). The process in both sites included blind back-translation to ensure integrity of the translation. The teams found that the simplicity of the PSYCHLOPS and its nondiagnostic, non-stigmatising language lent itself to ease of translation. There was just one slight language revision to the Urdu version only: "[How have you] felt in yourself [this last week?]" was translated as "*aapna kaisaameh sooskia*," which is a simpler formulation, meaning "How did you feel this week?" After feedback during the pilot, this was considered a more culturally appropriate and everyday way of asking about one's feelings and sense of well-being. All measures and intervention materials were also tested in pilot trials (Dawson et al., 2016; Rahman, Riaz, et al., 2016).

Procedure: Data collection

The details of the data collection procedure used in Pakistan and Kenya are provided elsewhere (Bryant et al., 2017; Rahman, Hamdani, et al., 2016; Sijbrandij et al., 2016; Sijbrandij et al., 2015). In summary, in Kenya, female adult participants were recruited by systematic random sampling (every 10th home in a given catchment area) and, upon receiving informed consent, a maximum of one woman per household was screened for inclusion in the trial by an independent assessor. In Pakistan, male and female primary care clinic attendees were informed about the study, and those who provided informed consent were screened for trial inclusion by a trained research assistant. Subsequent assessments were completed by an independent assessment team.

In both sites, the PSYCHLOPS was included as a secondary outcome measure at pre-, post-, and 3 months follow-up in both PM + treatment and control conditions. It was also used at the beginning of each of the five PM + sessions to aid elicitation of the problem(s) that were perceived to be causing concern or troubles, and was used in Kenya as an inlet to clinical supervision, as the PSYCHLOPS is part of the PM + protocol (WHO, 2016).

Participant screening, interventions, and assessments took place in participants' homes in Kenya between April 2015 and January 2016, and in the primary health clinics (PHCs) in Pakistan between November 2014 and January 2016. Participants who scored a minimum of 3 on the 12-item General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988) and 17 on the WHO Disability Assessment Scale (WHODAS; Ustun, Kostanjesek, Chatterji, Rehm, & World Health Organization, 2010), in both Kenya and Pakistan, were invited to the trial. In both sites, participants were excluded if they were under 18 years old, screened as being at imminent risk of suicide, or judged by the trained assessors as having severe mental disorder or cognitive impairment (e.g., psychotic disorders, substance use disorder).

Depending on the phase of the research (e.g., pre- and postassessment or during the intervention), the PSYCHLOPS questions were asked by trained assessors or the PM + provider. The interviewer then documented responses in the assessment pack, having been instructed to cite the problems as per the participants' response.

In the during- and postintervention versions of the PSYCHLOPS, Questions 1–3 ask the participant to reflect on the qualitative answers cited in the preintervention version. The PM + providers in Pakistan did not ask these open-ended questions a second time, whereas in Kenya they did re-ask the questions.

Data entry was carried out in Pakistan by a bilingual member of the research team who translated exactly what was recorded in the assessment pack directly into Stata Version 11.2. Another bilingual team member then checked the translations. In Kenya, Swahili was translated into English verbally by a bilingual team member and entered into SPSS by the English-speaking data-entry person. It was not checked again. In both study sites, quantitative data were double-checked to ascertain accuracy of data entry.

Data coding

Categorisations for PSYCHLOPS have been used previously in three studies from the UK (Ashworth et al., 2007; Lawton et al., 2014; Robinson et al., 2007), but due to the geographical and cultural diversity of the populations under study, researchers used a data-driven approach. Two researchers (MHS and EvtH) independently coded the responses given to the qualitative items of PSYCHLOPS to identify themes in a two-step process. Firstly, they each coded the responses and compared their sets of themes. They removed duplicate themes, condensed similar themes, and obtained the final list of themes and their respective codes through discussion. Using this final list of agreed themes and codes, the researchers recoded the data for each country separately. To retain the granularity of responses, two levels of coding were assigned. For example, "financial constraints" would receive a numeric code and, if a participant was specific about the financial problem (e.g., "Can't pay school fees"), the problem was coded as a numeric plus a letter code (e.g., 3c).

A problem or limitation would receive its own code provided that its frequency was more than 10 mentions across the sample or, for the Kenya sample, if a problem was seldom cited but related to gender-based violence (GBV; because this was a focus of the Kenyan study). In both cohorts, in the event of participants citing a further problem, or an answer not including a verb in response to the functioning limitation Question Q3a, "Choose one thing that is hard to do because of your problem (or problems)," the "Did not cite an activity" code category was assigned. The "Other" code would be used in instances where the meaning of the response was not clear or when an existing code was not suitable.

In cases where more than one problem was cited, coders had originally planned to code only the first response, in line with established PSYCHLOPS coding techniques (Ashworth et al., 2007; Lawton et al., 2014; Robinson et al., 2007). However, in Pakistan, multiple problems were very often cited. In order to be able to consider the problems deemed most important to respondents in Pakistan, coders retained the first three problems in response to Question 1a: "Choose the problem that troubles you most." Conversely, in Kenya, multiple

responses to questions were less frequent, so only one problem was coded by the researchers for each question.

Data analysis

We described the sociodemographic characteristics of the two samples. Given that each data string was short (approximately two to 30 words), we used Microsoft Excel to manage the coding process. Coding discrepancies were resolved by discussion between MHS and EvtH. We conducted intercoder reliability checks and calculated the percentage of agreement in coding. We compared the themes to the items in the nomothetic outcome measures to investigate conceptual equivalence between PSYCHLOPS and other nomothetic measures. The nomothetic measures used across the two studies were the WHO Disability Assessment Scale (WHODAS; Ustun et al., 2010); the General Health Questionnaire-12 (GHQ-12; Goldberg & Williams, 1988); the nine-item version of the Patient Health Questionnaire (PHQ-9; Kroenke, Spitzer, & Williams, 2001); the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013); the Hospital Anxiety and Depression Scale (HADS; Mumford, Tareen, Bajwa, Bhatti, & Karim, 1991); the Life Events Checklist (Gray, Litz, Hsu, & Lombardo, 2004); the Pakistan Life Events Checklist (LEC-P; Gray et al., 2004; Husain et al., 2011); and the WHO-Violence Against Women (WHOVAW; García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005).

Results

Characteristics of participants

Across the two study sites, a total of 867 participants completed the preintervention PSYCHLOPS questionnaire (521 from Kenya and 346 from Pakistan). Table 1 shows the sociodemographic characteristics of the two populations. As Table 1 shows, the Kenyan population was, on average, 3 years older, considerably more educated than the Pakistani population, was less functionally impaired, and scored lower for mental health problems than the Pakistani population, as measured by the WHODAS and the GHQ. Much more of the Kenyan population was employed or self-employed compared to the population in Pakistan, who were more commonly homemakers. Divorce or separation was rare in Pakistan.

The following section will present the results for the two PSYCHLOPS questions on problems (primary problem and another problem) for Kenya and Pakistan, followed by the functioning question results.

Qualitative results from PSYCHLOPS: Problem domain

Table 2 provides the frequencies of high-level codes assigned to the first response given in both Pakistan and Kenya to Questions 1a (primary problem) and 2a

Table I. Demographic characteristics of the two populations.

Variable	Kenya		Pakistan	
Total number of participants (*N*)	521		346	
Mean age, years	36		33	
Age range, years	18–89		18–65	
Mean pre-PM + WHODAS score	27.6		34.4	
Mean pre-PM + GHQ-12 raw score	18.9		25.5	
	Frequency	%	Frequency	%
Gender				
Female (%)	521	100	273	78.9
Education				
Uneducated	35	6.7	203	58.7
Completed primary school (8 years)*	288	55.3	68	19.7
Marital status				
Married/cohabiting	288	55.3	221	63.9
Divorced/separated	104	20.0	7	2.2
Never married	76	14.6	101	29.2
Widowed	49	9.4	17	4.9
Employment status				
Unemployed	47	9.0	18	5.5
Retired	3	0.6	3	0.9
Homemaker	200	38.4	231	66.8
Paid employment	131	25.1	41	11.8
Self-employed	124	23.8	26	7.5
Other	12	2.3	26	7.5

Note. PM+ = Problem Management Plus; WHODAS = World Health Organization Disability Assessment Scale; GHQ = General Health Questionnaire.
*The education data on past primary school became noncomparable due to the manner in which the question was posed to participants at the two study sites.

(other problem). Most high-level codes were present in the two countries, such as poor health, financial problems, and emotional problems, but with different frequencies.

Kenya. Table 2 shows that in Kenya, the most frequent primary problem mentioned was financial problems (40.8%) followed by poor health (25.4%) and unemployment (12.1%). The most frequent responses for the other problem question were financial problems (29.6%) and poor health (29.1%). All other categories of problems for the second problem question were significantly and similarly less frequent ($< 9.4\%$). In the supplemental material can be found the main eight coded

Table 2. Frequency of first responses to PSYCHLOPS primary problem question (1a) and other problem question (2a).

Frequent problem code	Primary problem % N				Other problem percentage % N			
	Kenya N=521		Pakistan N=346		Kenya N=346		Pakistan N=345	
Unemployment	12.1	63	Not coded		6.7	25	Not coded	
Poor health	25.4	132	66.8	231	29.1	108	13	45
Financial problems	40.8	212	1.7	6	29.6	110	9	31
Psychological/emotional	4.8	25	25.1	87	8.4	31	37	128
Interpersonal problems	7.7	40	1.7	6	8.9	33	19.4	67
Other person's health problems	2.5	13	Not coded		4.3	16	Not coded	
Other	6.7	35	4.6	16	9.4	35	20.5	71
No second problem cited	Not coded		Not coded		3.5	13	1	3

problems with their frequencies for both the primary problem and the other problem questions.

Further breakdown of the coding into the constituent subcodes shows that, of those whose primary problem was financial ($n=212$), 75% cited a general lack of money, almost 10% cited a lack of school fees, almost 10% an inability to pay for basic needs (food and rent), with the final 5% citing they had not been able to develop their business (See Table 4). The rates of these types of financial problems were 49%, 15%, 28%, and 7%, respectively (of a total of 110 women), when considering responses to Question 2a on another problem.

Among those whose primary problem was health, 36% entered a general term for illness or poor health, 38% cited a single health problem (e.g., headache), and 16% cited more than one health problem. Ulcers and reproductive health problems were commonly cited, therefore warranting their own codes, with 5% of all health complaints being ulcers and 5% being reproductive health problems.

In Kenya, though 14–30% of responses showed different codes pre- to post PM +, the overarching themes remained—financial-, health-, and unemployment-related concerns. A large proportion of the changes over time were not in the problem itself, but in the formulation of the problem, leading to a different code being assigned. For example, for Participant OW32304209, her main problem was "Educating her children," and in the postassessment, it was formulated as "Lack of school fees." Also, "Providing for the family" changed to "Unable to get money for food" (Participant KG21707027), or in the case of the functioning response, "Cannot work properly" changed to "House chores" (Participant MG21607038).

Table 3. Examples of synopses of the responses to PSYCHLOPS questions on problem domains from both countries as they were entered onto the data collection sheets.

Kenya example responses	Pakistan example responses
Question 1a: Choose the problem that troubles you most.	
Desires to start a mitumba business but lacks the financial capital	Stomach problem, poverty. Husband is unemployed and kids' problems
Lack of peace in the house due to her husband	Poverty. My son is ill and there is a problem in his treatment so we are worried
Getting food for the orphans she has	Dizziness, gets angry, beats my children, gets worry
Money to start a business, buying a plot, and for educating her children	Severe headache, feels sad
Unemployment hence no money	Headache bothers me a lot. Stomach problem
Stressed over the disobedient son. Stress	Headache, I feel burdened and angry
She is diabetic, screams at night, insomnia	Headache, feel burdened, spells of unconsciousness
Financial constraints	Headache, dizziness, feeling sick to the stomach/nausea
Living situation is dire	I feel burdened, sleep issues, I feel sad, feel like staying alone these days
Body pains	Headache. I feel burdened. Sleep issues. Fear and suffocation
Question 2a: Choose another problem that troubles you.	
Isolated by the family	I get bothered due to family problems. I don't feel interest in any work
Lack of proper housing	Loss of interest in activities and laziness
Taking care of all responsibilities	I feel angry and fearful
Ulcers	Fear, get angry, weak memory
Paying school fees for her children	Don't have good relations with husband. I feel angry
Money for rent and buying food	Short temper, diet/nutrition problem
Sickling child. The last born kid has diarrhoea	Body-aches. I feel sad, headache, sleep disturbances
Difficult in providing for her mother back at home	I feel like crying. Home issues. Lack of self-confidence. Want to study engineering. I don't have good relations with siblings
Money for upkeep, she gets paid late	I feel sad. Thinks about my future. I am worried for my children. Fights with husband
Less revenue from the business	Disappointment. I feel sad

Table 4. Breakdown of the main two problems in Kenya where more specific information was available.

Of the financial problems in Kenya (*n* = 212)	%	Of the health problems in Kenya (*n* = 132)	%
General lack of money	75	Nonspecific poor health	36
Lack of school fees	10	A single health problem	38
Inability to pay for basic needs	10	Multiple health problems	16
Unable to develop business	5	Ulcers and reproductive health problems	10

Table 5. Breakdown of the problems cited within the first three responses to the question 1a in Pakistan.

Of the emotional problems in Pakistan (cited 421 times)	%	Of the health problems in Pakistan (cited 407 times)	%
Sad/disappointed	27	Headache	56
Angry/irritated	27	Sleep problems	16
Worried	18	Other aches and pains	15
Fearful	6	Nonspecific health problems, stomach problems, fainting and dizziness, memory loss, suffocation/breathing difficulties	13

Examples of responses for the problem domain questions can be found in Table 3. Also, participants often cited a problem as their primary problem in the pre-PM + assessment (Q1a), but as their "other problem" in the post-PM + assessment (Q2a). This resulted in a change to the code assigned, but the overarching problems for that participant remained the same.

Pakistan. In Pakistan, the interviewers wrote down several problems in response to the problem domain questions. For example, Participant 41 was cited to have said "Headache, worry, body ache, problems at home" and Participant 124 responded "Headache, gets angry, sleep disturbance. I am worried due to poverty and house rent." It is for this reason that coders coded frequencies of primary problem responses considering both the first response and the first three responses to the question.

Figure 1 shows the frequencies of preintervention problem codes mentioned in Pakistan when only looking at (a) the first problem mentioned, and when looking at (b) the first three problems mentioned in response to the primary problem

Table 6. Examples of responses to PSYCHLOPS questions on the functioning domain from both countries.

Kenya	Pakistan
Question 3: Choose one thing that is hard to do because of your problem (or problems).	
Lacks interest to look after her husband	Paying attention to kids
Can't pay fees	Sometimes problems in doing housework
Can't draw water	Worrying thoughts occur. Feels burdened. Can't do home chores and offer prayer
Buying drugs and food	Have difficulty in home tasks/chores
Can't work well. Home chores	Can't do anything. Everything seems difficulty to do
Talking to her husband and upbringing of her children	Problems with work
Unable to do business	Don't socialize
She can't be employed because the husband forbids her to leave the house, she had got a job in Dubai	Worried because of my employment. Because of this I can't do any work
Providing for the family	Home tasks/chores
Unable to take care of self and of the house	Can't talk to anyone. I feel suffocation
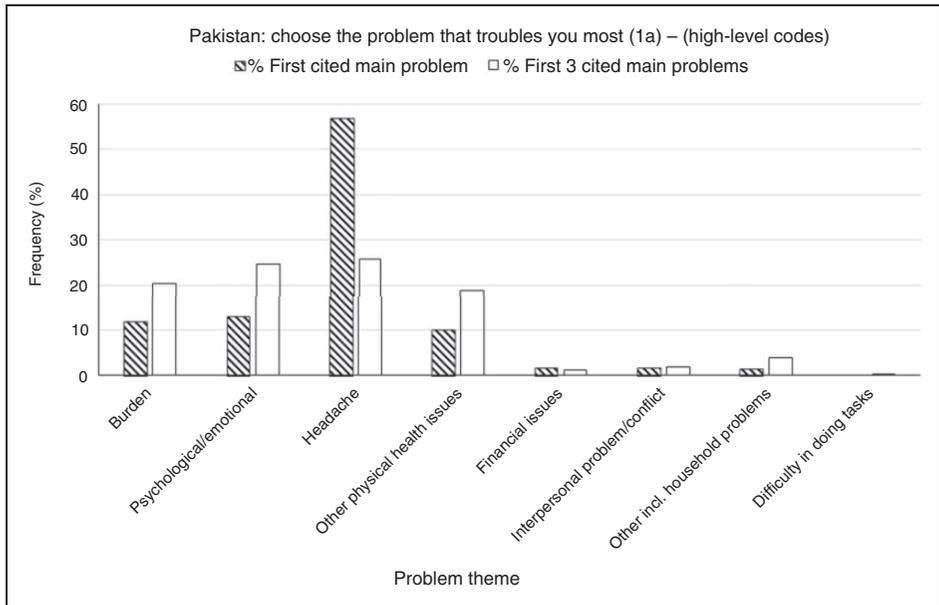
Figure 1. Frequencies of preintervention problem codes mentioned in Pakistan.

question. Though burden could be considered a psychological or emotional problem, and headache a physical health problem, due to their high frequency, we have distinguished them from their parent categories of health and psychological/emotional problems.

In Pakistan, the study population, recruited from primary health clinics, generally complained more of problems related to physical and emotional symptoms. When looking at only the first primary problem response, the most frequent problem was headache, which was reported by 57% of participants. Psychological or emotional problems followed, with 12.8% of the participants mentioning these as their first response to this question. "Burden" was the first cited main problem for 11.8% of the participants.

When looking at the first three problems mentioned in response to the question "Choose the problem that troubles you most," headache (26%) was reported on a par with emotional problems (26%), burden (20%), and other physical health issues (20%).

Further analysis of the psychological/emotional problems cited in the first three responses to the Question 1a found that, among those whose problems were emotional, 27% said they were sad or disappointed, 27% were angry or irritated, and 18% were worried. The remainder were anxious, fearful, disinterested, or mentioned general emotional issues. Of the physical health problems reported in the first three responses to the Question 1a, headaches made up 56%, other aches and pains made up 15%, and sleep problems accounted for 16% of health problems specified. The rest were cited as nonspecific, fainting and dizziness, or stomach problems.

Though very infrequent (between 1% and 2% of participants each), other problems mentioned in Pakistan included memory problems, suffocation or breathing difficulties, thinking or thinking too much and "heavy heart."

Responses to Question 2a (other problem) are shown in the supplemental material.

Qualitative results from PSYCHLOPS: Functioning domain

In Kenya, most women, in response to Question 3a, "Choose one thing that is hard to do because of your problem (or problems)" (referring to problems cited in the previous questions), found it hard to work, run their business, or engage with their educational activities (24%). Almost 16% found it hard to do their chores, 12.5% to pay for things, and 9.6% found it hard to provide for their family (see supplemental material for a visual representation).

Supplemental material includes responses to "What was the hardest thing to do because of your problem over the last week?" in Pakistan. Most reported caring for their family (48.6%) as the hardest thing to do because of their problem. This was followed by working or studying (19.7%) and stating that they cannot do anything (12%). In both study sites, many participants cited a further problem in response to this functioning question (34 participants, or 6.5% in Kenya; 22 participants, or 10.6% in Pakistan).

Only in Kenya did the enumerators report qualitative responses pre- and post-intervention. In the Kenya postassessment, between 14% and 36% of the qualitative responses to the primary and other problem questions changed pre- to post-PM+. The postintervention problem codes did not deviate from the overall trend; that is, frequent disclosures of illness, lack of money, and unemployment.

The interrater agreement level for assigned codes for the three qualitative questions was 96%, 94%, and 96% for the Kenya data, and an average of 91.4% for the Pakistan data (considering coding the first three primary problem codes, the first other problem code, and the functioning code). Although this is strong interrater agreement, the slightly higher differences for assigned codes from the Pakistan study were likely due to the greater complexity and multiple problems and/or causes for problems given in the same response.

Comparison to nomothetic outcome measures

Upon comparison of the items in the other questionnaires used to the coded problem themes in the PSYCHLOPS data, most concepts were covered; however, not all of them were. In Kenya, the nomothetic outcome measures used were the WHODAS (Ustun et al., 2010), the GHQ-12 (Goldberg & Williams, 1988), the WHOVAW (García-Moreno et al., 2005), the LEC-P (Gray et al., 2004), and the PCL-5 (Weathers et al., 2013). Across the conventional measures used in Kenya, there were no items about financial hardship, which was the most frequent problem response in that setting.

The nomothetic outcome measures used in the Pakistan study were the WHODAS (Ustun et al., 2010), the GHQ-12 (Goldberg & Williams, 1988), the PHQ-9 (Kroenke et al., 2001); the PCL-5 (Weathers et al., 2013), the HADS (Mumford et al., 1991), and the LEC-P (Gray et al., 2004; Husain et al., 2011). Though physical health problems are briefly covered in the context of functioning in the WHODAS, there was no item specifically on headache in the Pakistan interview schedule, the most frequent problem response in Pakistan.

The WHODAS has items similar to many of the responses gathered for the PYSCHLOPS functioning question (things the participant finds hard to do) in both Kenya and Pakistan: not being able to carry out household responsibilities and usual responsibilities or work.

Discussion

This study was based on the largest dataset of PSYCHLOPS data ever analysed. Our results show that poor health is perceived as an important issue in both Kenya and in Pakistan. In Kenya, the top three problems cited as a main problem were: lack of money (40.8%, mainly in a general sense, but school fees and basic needs were problematic for many), poor health (25%, mainly with no specific condition mentioned), and unemployment (12%). In Pakistan, the top two main problems were poor health (66.8%, the vast majority being headaches, but also aches and

pains, and sleep problems) and emotional issues (25.1%, with almost half cited as "burden," but also frequent were anger and sadness/disappointment). Other problems in Pakistan accounted for less than 2% of responses each. The functional limitations that participants reported were similar across the two sites, with chores, work, and providing or caring for family being commonly reported as hard to do. Additionally, in Kenya, there were many instances of participants finding it hard to pay for things they needed (12.5%).

Additional feedback from the study team in Kenya found PSYCHLOPS to be an important clinical supervision tool during the PM + facilitator supervision sessions.

Interpretation of results

When considering these results, we acknowledge many social and environmental factors, as well as research design factors and cultural factors that differed between the two sites. One obvious difference is that in Kenya, the sample was comprised of females only, whereas in Pakistan both males and females were recruited (four females for every one male). Also, the sampling method used for recruitment differed across the sites, with the Pakistani study recruiting help-seekers at health centres, and the Kenyan study recruiting in the general community. Poor health was commonly reported in Kenya (almost 30%) but more so in Pakistan (57% headaches and around 10% other health problems). The recruitment strategy could be a reason for more complaints of medical and emotional problems in Pakistan.

In both study sites participants faced remarkable adversity, including high unemployment rates, high levels of poverty, loss, and low educational attainment. Nevertheless, relatively few people in Pakistan and Kenya reported ideas of mental illness, loss, or trauma as one of their main problems. Thus, several social and environmental circumstances, and some features of the study design, were different between the two sites.

Kenya. In suburban Nairobi, there is a stark lack of attainment of basic needs. One of the study partners, World Vision Kenya (WVK), had been present in the South Dagoretti district for 25 years, supporting children's health, education, food security, and nutrition. In the study areas in Kenya, process evaluation interviews (van't Hof et al., 2018) showed there were expectations among participants that WVK helps families to pay for school fees and buy food. When assessors introduced themselves as working for WVK, such expectations of support from the organisation could have biased the formulation of participants' self-reported problems (despite the informed consent procedure).

Additionally, approximately three quarters of the study population screened for symptoms of common mental disorders disclosed instances of gender-based violence since the age of 15 at preassessment (Bryant et al., 2017), yet only six women reported violence as their main or other problem on the PSYCHLOPS. These women's descriptions of their problems did not seem to change thematically after an evidence-based problem management intervention either. Knowledge of

the Kenya context suggests the response bias towards financial problems in this population could be sociocultural, where people living in such poverty are more inclined to prioritise and emphasise their basic needs as the primary cause of their problems, and perceive or express other problems such as emotional needs, mental health concerns, or interpersonal violence to be of low importance by comparison. There is also high stigma within the study community around mental health problems, so social desirability and stigma concerns, confidentiality worries, or indeed low mental health literacy levels among the community may also have contributed to bias.

Prior to implementing the study, the Kenya team undertook a 2-day preliminary ethnographic assessment of mental health concerns in the Nairobi urban context, and whether people perceived mental health concerns as a priority. Findings echoed the PSYCHLOPS results, in that human distress was more likely to be seen as an indicator of the need to address practical life problems (e.g., financial constraints) than as a symptom of an emotional or mental disorder requiring treatment. However, when asked how people could recognise individuals experiencing distress, mental, or emotional problems, they mentioned too much alcohol intake, failing to work, or to provide and care for their families. They also commented on signs of low mood, such as social withdrawal, perhaps because of the lack of local language equivalent for words such as depression or anxiety. In addition, there is significant stigma associated with mental illness, and strong beliefs exist in local communities such as mental illness being related to bewitchment, with a need for treatment by traditional healers. Many people from these communities present with physical complaints such as fatigue, headache, or chest pain, rather than with psychological complaints. As such, it seems that, while women in Kenya readily identify individuals in distress, their vernacular around distress tends to be linked to their capacity to meet basic needs and attend to normal daily tasks, rather than to emotional distress.

Pakistan. It is now generally accepted that somatic presentations of psychological distress occur all over the world (Al Busaidi, 2010; Kirmayer, Robbins, & Paris, 1994), and in the primary care setting in Pakistan, studies have shown that the most common presentation of help-seekers with anxiety and depression is with multiple somatic symptoms (Minhas & Nizami, 2006; Mumford, Nazir, Jilani, & Baig, 1996; Mumford, Saeed, Ahmad, Latif, & Mubbashar, 1997). Idioms such as "this is really giving me a headache" are common in many languages to imply that something is causing stress, and common primary headaches have been linked to psychosocial factors (Lebedeva, Kobzeva, Gilev, Kislyak, & Olesen, 2016). Fifty-seven percent of participants in the Pakistan site, who all demonstrated caseness for common mental disorder and functional impairment, reported their main problem as headaches. In addition to aforementioned adversities in the Peshawar community, the respondents were faced with high levels of security threats due to ongoing conflict in the form of the Taliban insurgency. This may have contributed to high levels of psychological distress, which were perhaps manifested in the tendency to

experience and express psychological distress in the form of a culturally acceptable (and understandable) somatic symptom.

One explanation offered by the Pakistani team members regarding the expression of distress and communicating problems mainly in somatic terms was the social desirability of expressing distress in terms acceptable to health workers. There is practically no provision for the treatment of psychological distress, especially in primary care, so service users may emphasise a somatic symptom to get the desired attention from the health care providers, meaning that psychological symptoms could remain in the background. Additionally, one fifth of the sample in Pakistan were male. It is an accepted phenomenon that men are less proactive in seeking mental health care than women (Lynch, Long, & Moorhead, 2018), which may also explain that this sample extensively reported somatic symptoms.

Comparison to other PSYCHLOPS studies and to nomothetic instruments

In comparison to two studies of qualitative analysis of PSYCHLOPS responses from the UK (Ashworth et al., 2007; Robinson et al., 2007), both similarities and differences are apparent. In the UK, researchers used main categories, each with subcategorisations, similar to the coding strategy in this study (albeit organised differently). Many problem categories were similar to those found in Pakistan and Kenya, namely "interpersonal" (including relationships, social interactions, and other's health); "state of mind" (including diagnostic labels and unhappiness); "somatic" (health concerns and sleep problems); "sompetence/performance" (including employment); and "material issues" (including finances and accommodation). However, primary care and cardiac service users in the UK were also coded as reporting problems with sex, psychiatric diagnostic labels, and past events like loss or trauma (Lawton et al., 2014; Robinson et al., 2007).

In Kenya, few women reported sexuality-related concerns as one of their main problems in response to the PSYCHLOPS. In Pakistan, no one reported this as a problem. Self-evaluation, like self-liking or self-esteem, was also seldom reported as a main problem in Kenya and Pakistan. This could perhaps owe to a less sexually conservative culture in the UK and to comparatively lower levels of mental health stigma than in Kenya and Pakistan. Finally, from the description of the PSYCHLOPS categories devised in the UK studies (Ashworth et al., 2007; Lawton et al., 2014; Robinson et al., 2007), it seems the people in Pakistan have labelled a wider range of problematic emotions than those under study in the UK (where coded categories were diagnostic labels or unhappiness). It seems the self-reflective or introspective categories used in response to PSYCHLOPS in the UK were more clinical and less lay formulations of emotional distress (including psychological mechanisms such as self-esteem). This could reflect comparatively higher mental health literacy levels or service contact among primary care users in the UK, who may have more exposure to and therefore be more familiar with such

vocabulary (the crossover of lay and professional narratives is referred to as ''proto-professionalism'' in one of the UK studies; Robinson et al., 2007).

When we compared the findings from the PSYCHLOPS to the concepts covered by the nomothetic measures used in the studies, we observed that those nomothetic measures did not capture the most frequent person-generated problem in both countries. Though physical health problems are briefly covered in the context of functioning in the WHODAS, none of the nomothetic measures used in Pakistan had an item specifically on headache, the most frequent problem response in Pakistan. None of the Kenya nomothetic scales used had any items about financial hardship, the most frequent problem response in Kenya.

The WHODAS items were in line with many of the responses gathered for the PSYCHLOPS item on functions the participants found hard to do, in both Kenya and Pakistan: not being able to carry out household responsibilities and usual responsibilities or work. This supports the content validity of the WHODAS in these two contexts, which is expected, given that the WHODAS was developed for international use.

Limitations of the study

As discussed above, social or environmental biasing may have introduced some level of information bias, particularly in the Pakistan site. Some participants reported to the PM + facilitator that they had not told the assessor who carried out the preintervention assessment their actual main problem, citing instead another problem they felt more comfortable to discuss.

It seems that in some cases the participants may have misunderstood the questions in the PSYCHLOPS, providing multiple responses for a single item, or citing a further problem in response to the question about activities that are hard to do. This suggests that using the PSYCHLOPS in an interview could benefit from further guidance to assessors, such as a semistructured interview protocol, in order to ensure that participants understand the questions.

The final, English qualitative data used for analysis may be less rich than the original participant responses. In both study sites, participants gave detailed accounts of their life problems and the causes and feelings associated with these. The assessor wrote a synopsis of the response and then this synopsis was translated into English. We considered the first listed problem as the main problem response. Although this potential misinterpretation of the original meaning through summary, translation, and coding may have introduced some degree of measurement error, bias seems unlikely because the process is not prone to a systematic or differential misclassification of the reported problems into the overarching themes.

Some of the responses were vague and potentially not mutually exclusive (e.g., Q3a response codes about things that are hard to do included ''daily tasks,'' ''chores,'' ''work,'' and ''providing for the family''; we coded these responses separately into four distinct themes although some degree of overlap between them may exist).

Implications of the results

Because the conventional nomothetic outcome measures used in the studies did not tap into all participant-identified problems, the use of PSYCHLOPS in conjunction with nomothetic mental health measures can potentially improve outcome studies of mental health interventions.

The possible social desirability effects are a major limitation of this study. Nonetheless, in formative work (pretrial) and as part of local adaptation of programmes or interventions, important local problems should be identified with the aim to add or tailor specific elements of support to mental health interventions to help alleviate these problems (e.g., employment coaching or livelihood support; Nakimuli-Mpungu, Wamala, Okello, Alderman, Odokonyero, Musisi, ... Mills, 2014; Nakimuli-Mpungu, Wamala, Okello, Alderman, Odokonyero, Musisi, & Mojtabai, 2014).

Discussion among the study teams has highlighted a benefit of using PSYCHLOPS, in that it provides a more contextualised outcome measure. However, it may or may not be more sensitive to change than nomothetic measures. The PSYCHLOPS provided a very useful tool to initiate the discussion on psychosocial aspects of health problems. The team noted that the PSYCHLOPS was a useful tool for bringing up the items of greatest personal significance for recipients of health care provision, rather than items that may be important to health care providers. This may have helped to ensure that psychological distress was recognised as important and warrants attention from the health system. Further, the Kenya team expressed the view that the PSYCHLOPS was useful as a training and supervision tool for helpers, ensuring they remained focused and explored the person's issues as they related to self-identified problems.

It is important to consider the use of PSYCHLOPS with some interview guidance to ensure that questions are being answered with one response only, and that in during- and postintervention PSYCHLOPS responses, the participant reflects on preintervention responses in the intended way.

Conclusion

We have gained insight into operational considerations for using the PSYHCLOPS and into important perceived problems in two diverse communities in middle-income countries. The PSYCHLOPS has demonstrated that PGOMs can capture concepts that differ from those captured in nomothetic mental health outcome measures. The PSYCHLOPS seemed to have brought added value to two large RCTs on psychological interventions for common mental disorders. However, the use of PSYCHLOPS in these diverse settings has highlighted the need for some specific guidance on how to use it as an interview measure. Users should consider the implications of response biases when using PSYCHLOPS, as they should when applying conventional measures.

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Declaration of Conflicting Interests

Ethical approval

The project was approved locally by the Institutional Review and Ethics Board of the Postgraduate Medical Institute, Lady Reading Hospital, Peshawar, Pakistan; the Great Lakes University of Kisumu, Kenya; and by the World Health Organization Ethics Review Committee (ERC; proposal file numbers RPC656 and RPC627). Ethics protocols were submitted to the WHO ERC and the local ERC in parallel, first for the pilot studies, and were then amended to cover the full RCT study. The permission to translate, adapt, and use PSYCHLOPS was formally obtained from the developers of the instrument before the study was conducted.

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Informed consent

Informed consent was obtained from all individual participants included in the study.

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