

Research for Mothers' QOL

Aim

Our main objective is **to assess the effects of Pb pollution on the quality of life (QOL) of the mothers of children** in communities near the lead-zinc mine in Kabwe.

カブウェ地域の鉛鋳山近隣の居住区における児童を有する母親の健康関連QOLに与える鉛汚染の影響を検討することを目的とする。

Specific objectives

1. Measure blood Pb concentrations in children and mothers in communities around the mine in Kabwe
2. Evaluate the QOL of the mother with children in communities around the mine in Kabwe
3. Determine the effects of Pb exposure on the QOL of the mothers of the children.

Method

Sampling:

Mothers with children in communities will be selected from the database of the household survey (N=1000?) conducted by economic assessment team.

The willing participants will visit the health centers for blood sampling test and will be asked questionnaire .

対象：児童を有する母親

(経済チームの世帯調査から、子どものいる母親を抽出する)

Method:

For assessment of the QOL of the mothers, **the Short-Form 36 Questionnaire (SF-36) Health Survey version 1** will be used in this study.

Short-Form 36 (SF-36) Health Surveyを用いて健康関連QOLを調査する。

Health related QOL the Short-Form 36 Questionnaire (SF-36)

- Self-evaluation of health and well-being by 4-week recall
- It takes about 10 min.
- Score 8 scales: **PF** (physical functioning), **RP** (role limitation due to physical problem), **BP** (bodily pain), **GH** (general health perception), **VT** (vitality), **SF** (social functioning), **RE** (role limitation due to emotional problem), **MH** (mental health)
- Score 2 components summarised as **PCS** (Physical Component Summary) and **MCS** (Mental Component Summary)



HEALTH



[RAND](#) > [RAND Health](#) > [Surveys](#) > [RAND Medical Outcomes Study](#) > [36-Item Short Form Survey \(SF-36\)](#) >

36-Item Short Form Survey Instrument (SF-36)

RAND 36-Item Health Survey 1.0 Questionnaire Items

Choose one option for each questionnaire item.

1. In general, would you say your health is:

- 1 - Excellent
- 2 - Very good
- 3 - Good
- 4 - Fair
- 5 - Poor

Table 2. Mean of SF-36 scores in the mothers of children with CP and a general Iranian population (higher scores indicate a better condition).

SF-36 subscales	Mean (SD)	General population mean (SD); N = 2166 ^a	p Value
Physical functioning	55.35 (24.76)	82.9 (22.1)	.001
Role limitations due to physical problems	29.59 (34.96)	66.5 (39.1)	.004
Body pain	47.40 (22.34)	76.4 (26.2)	.001
General health perceptions	43.58 (21.95)	65.0 (20.8)	.001
Vitality	42.09 (19.88)	62.9 (17.8)	.001
Social functioning	48.61 (23.55)	74.2 (25.1)	.001
Role limitation due to emotional problems	29.24 (36.78)	61.4 (42.4)	.004
Mental health	49 (20)	65.0 (18.6)	.001
PCS	39.21 (8.40)	–	–
MCS	41.23 (9.97)	–	–

SF-36: 36-item Short Form Health Survey; PCS: physical component summary; MCS: mental component summary.

^aDerived from a study by Montazeri et al. (2005).

EXAMPLE of the findings of previous study

Data analysis

血中鉛濃度より児童の血中鉛濃度正常ならびに異常、母親の血中鉛濃度正常ならびに異常の4群に分ける。母親の身体関連QOLおよび精神関連QOLのコンポーネント・サマリースコアに対する児童の血中鉛濃度ならびに母親の血中鉛濃度の効果を二元配置分散分析にて検討する。さらに母親の血中鉛濃度の効果ならびに交互作用が認められない場合はSpearman rank correlations (ρ)を用いて児童の血中鉛濃度が母親の身体関連QOLおよび精神関連QOLのコンポーネント・サマリースコアに与える効果を検討する。なお。有意水準は5%とする。

- ① Analyze **relationships between metal concentrations and the two summary components of the QOL (PCS, MCS)** by using ANOVA (a two way factorial analysis of variance).
- ② Divide the participants into 4 groups according to Pb level of mothers' and children.
- ③ T-Test will be conducted to **compare each scale of the QOL between the mothers of the children with normal and high metal concentrations.**

T-test in 4 groups

Mother's Pb Normal	Mother's Pb High
Children Pb Normal	Children Pb Normal
Mother's Pb Normal	Mother's Pb High
Children Pb High	Children Pb High

現時点での課題

Points for consideration

- 母親と子どものサンプリングをどうするか？

経済チームが先行して行う大規模世帯調査から、こういった子どもを持つ母親を抽出したらよいか？

Sampling method is still not concrete. Which kinds of mothers and children should be selected from the database?

- 母親のQOL分析における交絡因子の検討が必要？

Confounding factors of Mothers' QOL should be considered.

子どもと母親の包含基準・除外基準の作成

We need to make inclusion and exclusion criteria of the sample, mothers and children in collaborate with other health assessment team.