KMC and postpartum disorders in mothers after preterm delivery: which relationship?

Gilles NDJOMO[(1)(3)] ; Érero NJIENGWÉ[(1)]; Béatrice MOUDZE[(2)]; Odette GUIFO[(2)]; Sylvie BLAIRY [(3)].

(1) Laboratory of Behavioral Sciences and Applied Psychology (LAPSA), Douala University, Cameroon.
(2) Cameroon Kangaroo Foundation (FKC), Douala, Cameroon.
(3) Psychology and Neuroscience of Cognition Research Unit (PsyNCog), Liege University, Belgium

INTRODUCTION

The Kangaroo Mother Care (KMC) is a structured package of maternal care, which aims the health and proper development of the preterm baby. It has three components *(Chan et al., 2016)*. KMC is associated with a reduction in postpartum psychopathological symptoms in the mother *(Badr & Zauszniewsk, 2017)*. Postpartum depression may impair or even inhibit maternal care of the baby *(Lovejoy, M.C., et al. 2000)*. No data are available on the effects of postpartum psychological difficulties on adoption and subsequent KMC practice.

The aims were to investigate:

- the relationship between psychopathological symptoms assessed immediately after preterm delivery and subsequent KMC practice.
- the relationship between KMC practice and the evolution of postpartum psychopathological symptoms at 40 weeks.

HYPOTHESIS

H1: Postpartum symptoms assessed in pre-test after delivery predict the quality of KMC practice.

H2: KMC practices predict the evolution of psychopathological symptoms at post-test at 40 weeks.

METHODS

Participants: 96 mothers who gave birth between 29 and 36 weeks in 2 hospitals in the city of Douala, Cameroon..

Assessment of psychopathological symptoms

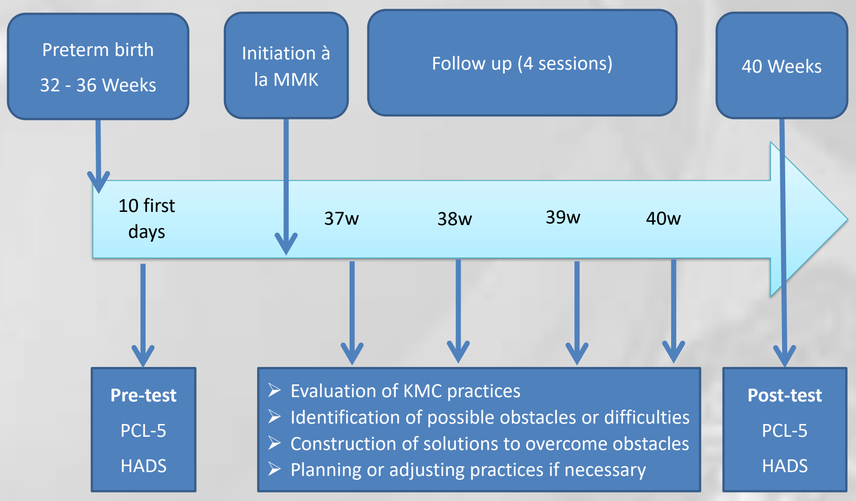
- Trauma : PCL-5 *(Ashbaugh et al., 2016)*
- Anxiety : HADS-A *(Bocéréan & Dupret, 2014)*
- Depression : HADS-D *(Bocéréan & Dupret, 2014)*

Assessment of KMC practices

- Mother's adherence to feeding schedule (Schedule)
- Getting the baby to take the recommended amounts of milk (Quantity)
- Skin-to-skin practice (SSC)

Statistical methods

- Multiple linear regressions
- T-student test



RESULTS & DISCUSSION

H1

Table 1: Regressions to explain KMC practices by symptoms in Pre-test

	R	R^2	F	df1	df2	p
Schedule	0.368	0.135	4.798	3	92	0.004
Quantity	0.332	0.110	3.795	3	92	0.013
SSC	0.159	0.025	0.791	3	92	0.502

Table 2: Significant predictors of feeding schedule compliance

Predictors	Estimate	SE	t	p
Intercept	4.493	0.153	29.384	< .001
PCL-5 (Pre)	0.005	0.005	0.975	0.332
HADS-A (Pre)	0.009	0.019	0.455	0.650
HADS-D (Pre)	-0.061	0.016	-3.703	< .001

Table 3: Significant predictors of milk quantity compliance

Predictors	Estimate	SE	t	p
Intercept	4.628	0.166	27.903	< .001
PCL-5 (Pre)	0.008	0.005	1.424	0.158
HADS-A (Pre)	-0.027	0.021	-1.280	0.204
HADS-D (Pre)	-0.045	0.018	-2.517	0.014

Symptoms reported on the pre-test appeared to predict **13.5%** compliance with the baby's **feeding schedule** and **11%** compliance with the baby's recommended **quantities of milk**. Depressive symptoms appear to predict a decrease of both compliance with feeding schedules and recommended quantities of milk.

H2

Table 4: Test of symptom score means Pre and Post test

	Pre-test	Post-test	T-student	df	p
PCL-5	22.792	20.875	1.395	95.0	0.166
HADS-A	8.302	8.354	0.138	95.0	0.891
HADS-D	7.260	6.823	1.120	95.0	0.266

No significant difference between Pre and Post test scores of symptoms at 40 weeks

Table 5: Regressions to explain the evolution of symptoms by KMC practices

	R	R^2	F	df1	df2	p
PCL-5 (Post-Pre)	0.143	0.021	0.643	3	92	0.590
HADS-A (Post-Pre)	0.391	0.153	5.523	3	92	0.002
HADS-D (Post-Pre)	0.325	0.105	3.617	3	92	0.016

Table 6: Significant predictors of the evolution of anxiety symptoms

Predictors	Estimate	SE	t	p
Intercept	-2.202	2.811	-0.783	0.435
Schedule	-2.953	0.888	-3.327	0.001
Quantity	3.118	0.824	3.783	< .001
SSC	0.450	0.326	1.379	0.171

Table 7: Significant predictors of the evolution of depression symptoms

Predictors	Estimate	SE	t	p
Intercept	-9.731	2.985	-3.260	0.002
Schedule	0.348	0.943	0.369	0.713
Quantity	1.506	0.875	1.720	0.089
SSC	0.426	0.347	1.230	0.222

KMC practices appear to predict 15.3% of the evolution (increase, decrease or maintenance) of anxious symptoms and about 11% of the evolution of depressive symptoms at 40 Weeks. Maternal compliance with schedules appears to predict a decrease of anxiety, while the compliance of milk quantities appears to predict increase of anxiety. The contrast of these results with data from the previous literature *(Badr & Zauszniewsk, 2017)* could perhaps be explained by the way breastfeeding is practiced in KMC program in Cameroon which can be perceived as very tedious by mothers.

Contact : gc.ndjomo@doct.uliege.be