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Pain management strategies for effective coping with Sickle Cell Disease: The perspective of patients in Ghana



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Aims: Prevalence of Sickle Cell Disease (SCD) is high in Ghana but not much is known in terms of research into non-medical strategies for managing and coping with the pain associated with SCD. This study was carried out to examine effective non-medical related strategies patients use to cope and manage their SCD condition.

Methods: SCD patients (387) at the Korle-bu Teaching Hospital (Sickle Cell Clinic), consisting of 180 males and 204 females between 18 and 65 years old years participated in the study. A cross-sectional research design was used in which participants completed 9 questionnaires on pain, non-medical coping and management strategies, anxiety, and depression.

Results: Over 90% of participants reported that pains associated with SCD were the main reason for seeking treatment in SCD crisis. In terms of non-medical related coping strategies, attending a place of worship and praying were the main coping strategies used in SCD crises, suggesting that patients' beliefs, particularly in a supernatural being, served as a mitigating factor in the process of coping with the pain associated with SCD crisis. Also, avoidance and withdrawal from people and social activities were reported to be strategies used to cope with the pain associated with SCD crisis. Results of multiple regression analysis showed that socio-demographic characteristics contributed to the variance in the pain associated with SCD.

Conclusion: This study indicates that non-medical strategies, such as religious beliefs and psychosocial actions, are important factors for patients in Ghana for their coping and management

of the pains associated with SCD. This knowledge may add to the understanding of the SCD-patients' situation.

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PEARL – Pain in early life. A new network for research and education



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Aims: To establish a network for research and education and to provide expert knowledge to parents and health care professionals about pain in early life.

Methods: In November 2014 a group of Nordic researchers and research students, committed to the field of pain in early life, gathered for an open lecture day and workshop in Örebro, Sweden. Inspired by the work of the Canadian initiative PICH – Pain In Child Health, the network formulated its vision: To be a stable and competent research and training network within the area of pain in early life. A first collaborate project was designed: “Translation, cultural adaptation and validation of the revised version of the Premature Infant Pain Profile (PIPP-R): An effort to improve pain assessment in infants in the Nordic countries”.

Results: Fourteen months later, in January 2016, the second PEARL-meeting was held, in Oslo, Norway. The lecture day provided clinically active nurses and physicians from several countries with the latest findings on how to best manage pain in neonatal settings. The network which now consist of 18 researchers from different professions and academic levels presents itself on a five-language website: www.pearl.direct. The PIPP-R project has progressed according to the plan. The PIPP-R is translated into Finnish, Icelandic, Norwegian and Swedish. The cultural adaptation and validation should be finished in fall 2016. The members work on and plan for further collaborate projects. The next two steps are to translate and distribute educational material for parents via Internet and social media, and to establish a research and masters course about pain in early life. The work has been secured

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Conclusions: PEARL fulfils the need for a collaborative network for pain in early life researchers in the Nordic countries.

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Searching for protein biomarkers in pain medicine – Mindless dredging or rational fishing?

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Aims: Biomarker research seems to be somewhat controversial in pain medicine. Because pain is a subjective experience, renowned pain researcher Eija Kalso wrote in a 2004 *Pain* editorial that biomarkers for pain is an impossibility. However, in the same editorial, she also seemed to imply that what she called “biomarkers of (neuronal) activity in the nociceptive pathway” would be possible. Recently, I proposed the neologism “noci-marker” as a better term than “pain biomarker” for denoting attempts to find objective, measurable correlates to the neurobiological processes involved in different pain conditions. The purpose of the present conceptual work is to propose criteria for sensible hypothesis-generating research in the field of “noci-marker” research.

Method: Conceptual theoretical work, with examples from the literature.

Results: Criteria for sensible biomarker research in pathological pain conditions, together with examples from the literature, will be presented for discussion, including consideration of (work in progress):

- “Mirroring” rationale – which body fluid is studied? The example of saliva vs. cerebrospinal fluid.
- Time frame rationale – when is it sensible to look for what? The example of Cystatin C.
- Statistical considerations – univariate multiple testing vs. correlation structure of a whole data set. The example of multivariate data analysis by projection using SIMCA.
- The definition of patient cohorts – clinically and phenotypically.
- Relating findings to the literature and to systems biology. The example of Pain Networks.
- Reporting issues – how should the hypothesis-generating (explorative) nature of such studies be acknowledged?

Conclusions: Although it seems ethically dangerous and philosophically dubious to talk about “pain biomarkers”, searching for biological correlates to pathological activity in the nociceptive pathways (“noci-markers”) seems justified and conceptually possible.

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Effectiveness of smart tablets as a distraction during needle insertion amongst children with port catheter: Pre-research with pre-post test design

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Aims: Children who experience pain and anxiety while undergoing interventions or treatments during hospitalization at a young age can experience negative feelings which can influence how they experience health care in the future.

The purpose of the study was to evaluate the protocol of using a tablet computer as a source of distraction from pain and fear when children undergo needle insertion in a port catheter (port-a-cath®).

Methods: The study uses a quasi-experimental pretest-post test design with a sample of 14 children, 20 months to 16 years of age, 9 boys and 5 girls. Pain and fear were first evaluated without the distraction of a tablet computer. The second time pain and fear were evaluated while a tablet computer was used for distraction. The children evaluated their pain and fear with a 10 cm Numeric Rating Scale (NRS/VAS) and six faces scales in all cases except three. In those three cases the mothers evaluated the children's pain and fear with the NRS, the Faces scale, or the Legs, Activity, Cry, Consolability scale (FLACC).

Results: The Shapiro–Wilk test showed a significant distribution ($p < 0.05$) of pain and fear but most subjects did not feel any fear before the intervention. The mean score of pain was 2.90 (sd = 3.67) and the mean score for fear was 3.67 (sd = 3.76). No significant difference was found between pain and the fear prior to the intervention ($p = 0.09$). Children who felt fear prior to the intervention ($n = 5$) experienced significantly lower pain when a tablet computer was used ($p < 0.05$). No difference was found between pain and fear by age or gender. No difference in pain was found by the type of distraction ($p = 0.20$). All subjects where highly experienced with needle insertions and some of them had developed their own approach to deal with the intervention.

Conclusions: More extensive research is needed in this area.

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Postoperative oxycodone in breast cancer surgery: What factors associate with analgesic plasma concentrations?

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Aims: Parenteral oxycodone is increasingly used worldwide to manage perioperative pain. Oxycodone doses required for adequate analgesia vary significantly between individuals. Our

