

# PARE NEWS

A Quarterly Publication of Pakistan Association for Research in Education



January 2020

Volume 10, No, 1

## Seminars, Conferences and Events

### World Academy of Art and Science

“The World between Yesterday and Tomorrow - Podgorica“

June 11-13, 2020  
Podgorica

For More Information:

<http://worldacademy.org/conference-page/international-conference-world-between-yesterday-and-tomorrow>

### European Education Research Association

“Emerging Researchers' Conference 2020”

August 24 - 25 2020

University of Glasgow, Glasgow G12 8QQ

For More Information:

<https://eera-ecer.de/ecer-2020-glasgow/>

### World Education Research in education

“Focal Meeting 2020”

July 01-03, 2020  
Santiago de Compostela, Spain

For More Information:

<https://wera-compostela.com/>

### European Education Research Association

“European Conference on Educational Research”

August 25 - 28 2020

University of Glasgow, Glasgow G12 8QQ

For More Information:

<https://eera-ecer.de/ecer-2020-glasgow/>

### America Educational Research Association

“2020 AERA Annual Meeting”

APRIL 17-21, 2020  
Moscone Center, San Francisco

For More Information:

<https://www.aera20.net/>

### British Educational Research Association

“What does 'Artificial Intelligence' mean for educational research?”

February 06, 2020

Marylebone Campus, University of Westminster, London, NW1 5LS

For More information:

<https://www.bera.ac.uk/event/great-expectations>

# LESSONS FROM IMPLEMENTATION OF EDUCATIONAL REFORMS IN PAKISTAN

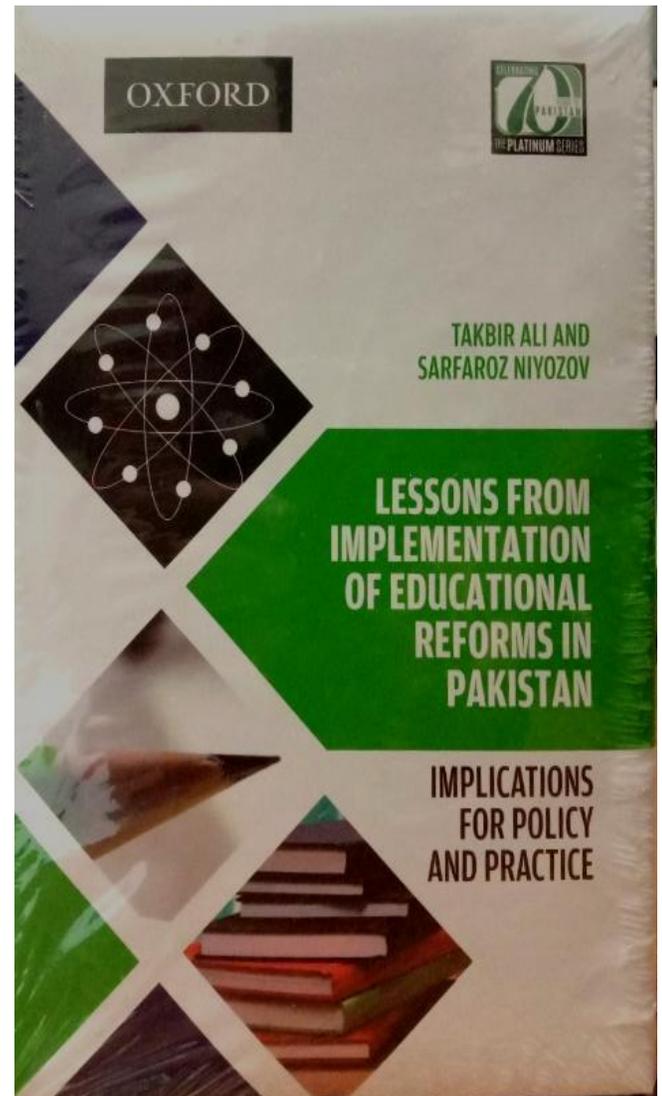
## IMPLICATIONS FOR POLICY AND PRACTICE

A resourceful insight for stakeholders and reformers on the future of education in Pakistan, *Lessons from Implementation of Educational Reforms in Pakistan: Implications for Policy and Practice* offers challenging research-grounded accounts from a selection of distinct research studies, carried out by AKU-IED faculty. These studies originated from two major multi-year international and donor-funded education improvement projects in Pakistan—the Strengthening Teacher Education in Pakistan (STEP), and the Educational Development and Improvement Programme (EDIP).

Providing a blend of qualitative and quantitative accounts of practices, attitudes, and challenges of integrating local and international experiences and ideas around educational reform and professional development at micro-levels, and these projects' promising implications at macro-levels, the book provides a distinct understanding of the processes of educational reforms in Pakistan. It delves into issues involved in understanding the nexus of theory and practice in the context of large-scale education reforms. While providing a conceptual base for reflections, it raises such critical questions on how local and global successful practices and experiences can be merged into new quality and sustainable projects and frameworks for educational change in Pakistan and other developing countries.

### Author Description

**Takbir Ali** is Assistant Professor and Head Outreach at the Aga Khan University-Institute for Educational Development (AKU-IED), Karachi, Pakistan. He obtained his PhD from the University of Toronto, Ontario Institute for Studies in Education. Takbir has extensive work experience in designing and executing developmental projects in Pakistan's education sector. He coordinated the Strengthening Teacher Education in Pakistan (STEP) project (2008–2016) of AKU-IED. He has



Research interest in teachers' change experiences, teacher development, curriculum implementation, school improvement, and teaching and learning science in schools.

**Sarfaroze Niyozov** is the Director of the Institute for Educational Development of the Aga Khan University (AKU-IED), Karachi. Niyozov holds a BA in Arabic from Tajik State University, MEd from the Aga Khan University, and PhD from University of Toronto. He has been an active member of professional associations such as the Central Eurasian Studies and Comparative International Education Societies. His research and teaching experiences include comparative international education, Islamic education, teacher development, and borrowing and lending of reform policies and practices in developing countries.

### Role of vitamin E supplementation in improving blood hemoglobin levels in apparently healthy mildly anemic Pakistani adults and the probable mechanism of this action of vitamin E

By  
Jilani, Tanveer

**Background:** Prevalence of mild anemia is high in apparently healthy populations in the developing countries of South Asia. A few human studies have shown that use of antioxidant vitamins such as vitamin E could correct anemia. However, the exact molecular mechanism(s) of this correction is still unclear. One of the possible mechanisms of action of vitamin E in enhancing blood hemoglobin levels in humans could be through inhibition of apoptosis of erythroid stem cells. A few studies have shown that the inhibition of proapoptotic proteins by various intra- and extracellular factors may cause increased survival of human erythroid progenitor cells (EPCs). Some of the animal studies have also suggested the possible role of vitamin E in the prevention and/ or correction of defective erythropoiesis. Moreover, it has also been reported that vitamin E decreases the experimentally-induced apoptosis in bone marrow hematopoietic stem cells in animals. The objectives of this study were to find out the effect of vitamin E supplementation on blood hemoglobin levels in apparently healthy but mildly anemic Pakistani adults and to investigate whether any positive effect of vitamin E on hemoglobin levels in apparently healthy humans could be due to inhibition of apoptosis of EPCs.

**Methods:** To study the effect of vitamin E on hemoglobin levels, a single blinded and placebo-controlled trial was carried out on 124 apparently healthy mildly anemic adult human subjects

Recruited from the General Practitioners' Clinics and Also included personnel from the Aga Khan University, Karachi. All the subjects were recruited with informed consent. The study subjects were randomly assigned to the Intervention group (n=82) and the Control group (n=42). In the Intervention group, each subject was given vitamin E (400 mg) every day for three consecutive months, while Control group subjects received a placebo. Eighty six subjects completed the trial. Fasting venous blood was collected at baseline and after three months of supplementation. Blood hemoglobin levels and serum/plasma concentrations of vitamin E, erythropoietin, total antioxidant status (TAS), vitamin B12, folate, ferritin, serum Transferrin Receptor (sTfR), glucose, and creatinine and lipid profile were determined, compared between Intervention and Control groups and analyzed using repeated measures ANOVA and multiple linear regression. To find out the probable mechanism of action of vitamin E on blood hemoglobin levels, CD34+ derived EPCs were isolated from human peripheral blood mononuclear cells (PBMCs) of apparently healthy Pakistani adult volunteers by density gradient centrifugation followed by magnetic activated cell sorting (MACS) using CD34+ selection kit. Purity of the isolated EPCs was assessed through immune fluorescence microscopy using Fluorescein-5-isothiocyanate (FITC)-conjugated monoclonal antibodies against various EPCs surface antigens. The purity of CD34+ derived EPCs was found to be 95-98%. CD34+ derived EPCs were then cultured for 7-14 days in the recommended medium supplemented with erythroid expansion supplement. To study the effect of vitamin E on apoptosis of erythroid stem cells, EPCs were treated in vitro with various concentrations of Tumor necrosis factor (TNF)- $\alpha$  to induce apoptosis. The concentration of TNF- $\alpha$  inducing maximum apoptosis was then selected to study any protective effect of vitamin E. EPCs were then incubated at various concentrations of vitamin E (zero, 10, 50 and 100  $\mu$ g/ml) or erythropoietin (zero, 10, 50 and 100 IU/ml) followed by addition of 100 ng/ml concentration of TNF- $\alpha$  which produced the maximum apoptosis under the

experimental conditions. The percentage of apoptosis of the treated EPCs was measured through flow cytometry by using annexin V and propodeum iodide (PI) staining. Two-way ANOVA with replacement was used to find out the mean difference between the effects of increasing concentrations of drug (vitamin E or erythropoietin) treatment and the interaction of these drugs on TNF- $\alpha$ -induced apoptosis of EPCs. Results: In the study population, there was a significant increase in post-supplemental concentrations of both vitamin E and hemoglobin (p value= 0.045 and p value= 0.049, respectively) when compared with their baseline concentrations. However, when the mean post-supplemental levels of both vitamin E and hemoglobin levels were compared, significant increase in vitamin E (p value= 0.01) and hemoglobin (p value <0.001) levels were observed in the intervention group (vitamin E supplemented) as compared to the control (placebo) group. The adjusted regression coefficients (B) and standard error [SEW] of the significant determinants of post-supplemental hemoglobin levels were serum concentration of vitamin E (0.983 [0.095]), baseline hemoglobin levels (0.768[0.077]), sTfR (-0.06[0.02]) and gender (male or female, -0.656[0.224]). Regarding the second objective of the study pertaining to the possible underlying mechanism of the action of vitamin E on apoptosis of CD34 $\pm$ -derived EPCs, the mean percentages of early and late apoptotic CD34 $\pm$ -derived EPCs after treatment with TNF- $\alpha$  (100 ng/ml) alone were 58.7 $\pm$  4.87% and 8.9 $\pm$  3.43%, respectively. Vitamin E and erythropoietin in highest used concentrations (100  $\mu$ g/ml and 100 IU/ml, respectively) decreased the percent cell early apoptosis of treated EPCs to 25.2 $\pm$  4.70% and 5.3 $\pm$  1.81%, respectively. However, there was a significant difference in the mean percentage of TNF- $\alpha$ -induced apoptotic CD34 $\pm$ -derived EPCs in early and late apoptosis by vitamin E treatment (p value= 0.008) which was higher in early as compared to late apoptosis. There was a significant difference in the mean percentage of TNF- $\alpha$ -induced apoptotic CD34 $\pm$ -derived EPCs by vitamin E treatment (p value < 0.001) when analyzed for a statistical interactive effect on early and late apoptotic phases and vitamin E concentration. Conclusion: The study showed a positive role of vitamin E supplementation in improving blood hemoglobin levels in apparently healthy mildly anemic Pakistani adults. The study

also showed that one of the possible mechanisms of action of vitamin E appears to be through inhibition of apoptosis of the CD34 $\pm$ -derived EPCs.

## Feasibility of offering a positive learning environment through positive disciplining module for public school teachers: a cluster randomized trial in Hyderabad, Pakistan

By  
Mughal, Farida Bibi

Background: In Pakistan, a key public health concern is corporal punishment in schools. Globally, for reducing corporal punishment, teachers training modules are reported as being effective in the schools. In Pakistan, such social health concerns are prevalent and there is a scarcity of literature on the usefulness of teacher education interventions to decrease corporal punishment. Objectives: The primary aim of this study was to assess the feasibility of Positive Learning Environment through Positive Disciplining (PLEPD) module for public school teachers. The secondary aim of this study was to assess the effectiveness of the PLEPD module in improving the self-efficacy score and the knowledge and attitude towards corporal punishment, and in reducing depression among public school teachers. Methods: This research study was conducted on 60 public school teachers in Hyderabad, Pakistan, and a Cluster Randomized Trail (CRT) was used to categorize two settings each in the control group and intervention group. In the control group 29 teachers and in the intervention group 31 teachers participated in the study. All the teachers were provided the routine training and, additionally, the educational program, of four hours per day, was offered as an intervention, for four days, a total of 16 hours to the intervention group. The scores (General Self Efficacy (GSE), Beck Depression Inventory-11 (BDI-II), and knowledge and attitude) of teachers were assessed before, immediately after, and at three months' interval

after the intervention i.e., pretest, post-test I, and post-test II respectively. Results: The results of the study showed the high participation 96.8% rate, and the successful completion of the module by the participants which confirms the feasibility of the PLEPD vi module. Furthermore, it was found that the intervention was useful in improving the median scores of teachers' self-efficacy, and knowledge and attitude towards corporal punishment. However, there was no significant difference found in the depression among the teachers after the intervention. In the mean scores for GSE, BDI-II, and knowledge and attitude, an insignificant difference ( $p = >0.05$ ) was found within each group and between the control and intervention group. Conclusion: The findings of the study recommend that the module on positive disciplining for teachers needs to be provided on a continuous basis to reduce corporal punishment and to improve student-teacher relationship. The present study identified the need for further studies to be conducted in other public schools, in order to evaluate the impact of PLEPD module in different settings.

### Writing the winning thesis or dissertation: a step-by-step guide

By  
Joyner, Randy L

The classic step-by-step guide to thesis and dissertation success, fully updated for 2018. From selecting your topic to defending your finished work, a master's thesis or doctoral dissertation is a major undertaking. Since 1998, this book has been the go-to resource for scholars seeking guidance and best practices at every phase of the process. This revised and updated fourth edition is the most comprehensive guide yet to researching, writing, and publishing a successful thesis or dissertation. It includes: Insights on leveraging new technologies to maximize your efficiency. Current case studies demonstrating the book's teachings in action. Tested principles of effective planning, an engaging writing style, defense preparation, and more. Written in an easy, digestible style perfect for a thesis or dissertation-writer's busy schedule, this

latest edition of a contemporary classic belongs on every advanced degree candidate's shelf

### Assessing the effectiveness of the maternal, newborn and child health program's place-based continuum of care for maternal and neonatal services from the community to the district level in district Thatto Sindh, Pakistan

By  
Shaikh, Hazoora

Background: The maternal mortality ratio (MMR) in Pakistan stands at 178 deaths per 100,000 live births (Pakistan Maternal mortality ratio, 1960-2017). (1) Early estimates suggest that Pakistan is failing to achieve the necessary growth required to meet the SDG target of less than 70/100,000 by 2030. (3). In addition, child mortality continues to be a national concern. Pakistan has the world's highest newborn mortality rate, with one in every 22 babies born dying within a month (4). The Pakistan Demographic Health Survey 2017-2018 showed that the antenatal coverage for at least one visit was 86%, while the antenatal care coverage for 4 visits was only 51% (5). The World Health Organization's (WHO) Continuum of Care framework emphasizes how poor communication and weak referral links between communities and facilities contribute to poor MNCH outcomes. This study aims to assess the implementation of the program and find out whether the proposed policies and actions taken are effective in achieving impact. Moreover, the study also aims to identify strengths and gaps of the program, and suggests ways in which the program can be further improved to positively impact the health of women and children in the district of Thatto. Methodology: A mixed method approach was adopted for the study to increase the scope of the study. Quantitative data was obtained using checklists from all facilities, and qualitative data was obtained by conducting in-depth interviews, focus group discussions. The

sampled facilities included 3 CMW workstations, 5 BHUs, 1 RHC, 1 THQ, and DHQ. Results: The results show that there are major gaps in the implementation of the policy for continuum of care. Major gaps were identified at the communication and referral linkages at all levels from LHWs to CMWs. At the BHU level, there were no referral review meetings in spite of written protocols. On monitoring, there was no strict protocol to give feedback or referral instructions to care providers. CMWs were not supported with adequate supplies and compensation. There was no communication between stakeholders of different levels of facilities such as MERF, PPM. And MNCH especially on quality and continuity of care. Conclusion: The study results on triangulation analysis showing that the resources available are not properly distributed. The main back bone of community care providers is not well supported. There appears an immense need of strategy to strengthen deployment and sustain the trained CMWs by regular job-assurance salaries. There is a need to implement existing referral and communication policy at all levels uniformly with the collaboration of organizations such as PPHI, MERF, and MNCH with the support of Sindh Government. Policy makers and implementers should also develop a monitoring and supervision joint cell with a representative at district level and involvement of all stakeholders to monitor the implications of referral and communication linkages at all levels.

## Call for Contribution

Newsletter is designed to share latest educational research news, member's achievements and information. The newsletter calls for submission Under these categories. We also welcome your suggestions to improve this publication.

PARE next newsletter will be the April 2020 issue. Please send your contribution by 15th March, 2020 The length of submission should not exceed 100 words.

Please submit items to PARE Secretariat by email at [pare.secretariat@aku.edu](mailto:pare.secretariat@aku.edu) [pare@pare.org.pk](mailto:pare@pare.org.pk)