Scientific Editing Evidence Example*
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Sample_1: **Edited** Primary Investigator Content

Fractional calculus is incorporated into artificial neural networks benefiting long-term memory and nonlocality creating a competitive advantage for some scholars. N. Özdemir et al., proposed a new type of activation function for a complex valued neural network (CVNN) [18] by incorporating a special Möbius transformation, i.e. a linear fractional transformation, expressed as a reflection resulting in increased number of fixed points when employed to a specific complex value in a Hopfield neural network (CVHNN). The transformation found the fixed points are asymptotically stable states of a CVHNN indicated by enlarged information capacity. M.A.Z. Raja et al., proposed both stochastic [19] and evolutionary techniques [20] for the solution of nonlinear Riccati differential equations of fractional order. This stochastic technique employs feed forward artificial neural networks for accurate mathematical modeling learning weights made with a heuristic computational algorithm based on swarm intelligence. The evolutionary technique uses a genetic algorithm tool for a competent global search method hybridized with an active-set algorithm for efficient local search. Both techniques are proposed as solutions for fractional order systems represented by a Bagley-Torvik equation. The author's solution for fractional differential equations propose use of particle swarm optimization [23], stochastic computational intelligence[24], and heuristic computational intelligence [25]. Advantages of this approach, unlike integer order calculation methods, center on making fractional differential equations available as continuous inputs and generalizing a first order HNN to fractional one with a fractional calculus implementation.

Sample 1: **Raw** Primary Investigator Content

Fractional calculus has been incorporated into artificial neural networks benefiting long-term memory and nonlocality creating a competitive advantage for some scholars. N. Özdemir et al., proposed a new type of activation function for a complex valued neural network (CVNN) [18] by incorporating a special Möbius transformation, i.e. a linear fractional transformation, expressed as a reflection resulting in increasing the number of fixed points when employed to a specific complex value in a Hopfield neural network (CVHNN) and found the fixed points are all asymptotically stable states of the CVHNN indicating enlarged information capacity. M.A.Z. Raja et al., proposed both stochastic [19] and evolutionary techniques [20] for the solution of nonlinear Riccati differential equations of fractional order. The stochastic technique employs feed forward artificial neural networks for accurate mathematical modeling learning weights made with a heuristic computational algorithm based on swarm intelligence. The evolutionary technique uses a genetic algorithm tool for the competent global search method hybridized with an active-set algorithm for efficient local search. Both techniques are proposed as solutions for fractional order systems represented by a Bagley-Torvik equation. The authors also propose use of particle swarm optimization [23], stochastic computational intelligence[24], and heuristic computational intelligence [25] approaches as solutions of fractional differential equations. These solution advantages, unlike other integer order calculation techniques, center on making fractional differential equations available as a domain of continuous inputs. Therefore, it is natural to think about how to generalize a first order HNN to fractional one by implementing fractional calculus.

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Sample_2: **Edited** PI Content

Regarding convergent and discriminate validity results, we first used exploratory factor analyses with several biaxial items deleted finding questionnaire factors consistent with theory construction. Second, correlations between factor scores and the total score indicated six factors constructing well-being were independent and heterogeneous but the remaining factors correlated with well-being. Third, confirmatory factor analyses indicated a good model fit supporting questionnaire validity. Forth, convergent validity indicated the total score of RMIWB-CC was positively correlated to SWLS and FS median coefficient scores but positively correlated to RSES with small coefficients. Busseri and Sadava demonstrated individuals with higher well-being tend to be more satisfied with their life [10] and our questionnaire's results concurred with high RMIWB-CC associated with high life satisfaction scores. As a result, we are satisfied with the questionnaire.

Sample 2: **Raw** Primary Investigator Content

Regarding convergent and discriminate validity results, we first used exploratory factor analyses indicating questionnaire factors were consistent with theory construction with only several biaxial items deleted. Second, correlations between factor scores and the total score indicated, on one hand, six factors constructing well-being were independent and heterogeneous while on the other hand were also closely correlated with well-being. Third, confirmatory factor analyses indicated good model fit suggesting construct validity with the developed questionnaire. Forth, convergent validity indicated the total score of RMIWB-CC was positively correlated to the SWLS and FS median coefficient scores. However, the total score of RMIWB-CC was positively correlated to the score of RSES with small coefficients. Our results indicate higher RMIWB-CC scores are associated with higher life satisfaction which is consistent with Busseri and Sadava [10] who demonstrated individuals with higher well-being also tend to be more satisfied with their life. As a result, we are satisfied the questionnaire.