On some discrete-time epidemic model with an exponent[1]

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In [1] authors considered a second order difference equation

$$x_{n+1} = (1 - x_n - x_{n-1})(1 - e^{-Ax_n}), \quad n = 0, 1, ... \tag{1}$$

as a discrete epidemic model and formulated Open Problem 6.10.14 about equation (1): investigate the boundedness character, the periodic nature, and the asymptotic behavior of the solution of (1); extend and generalize. Some generalizations and interesting results we can find in [2] and [3].
We offer a research about a difference equation

$$x_{n+1} = (1 - x_n - x_{n-1})(1 - e^{-Ax_n - Bx_{n-1}}), \quad n = 0, 1, ... \tag{2}$$

where A and B are parameters which can be interpreted as infectivity of a disease in two time moments.

[1] Kulenovic, M.R.S., Ladas, G., Dynamics of Second Order Rational Difference Equations. With Open Problems and Conjectures. *Chapman and Hall/CRC*, USA, 2002.

[2] Stević, S., On a Discrete Epidemic Model. *Discrete Dynamics in Nature and Society* 2007, Article ID 87519, 10 pages.

[3] Zhang, D.C., Shi, B., Oscillation and global asymptotic stability in a discrete epidemic model. *J. Math. Anal. Appl.* 278 (2003), 194–202.