Abstract. The odd writhe is a numerical invariant of a virtual knot which is defined by L. Kauffman. Y. Im, K. Lee and Y. Lee and A. Henrich introduced a polynomial invariant of a virtual knot, called the index polynomial. S. Satoh and K. Taniguchi introduced a series of numerical invariants of a virtual knot, called $n$-writhes, which induce the odd writhe and are related with the index polynomial. In this talk, we discuss a generalization of them to a twisted knot by use of weighted index diagrams.