Two strategies for accurate dart throwing

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Timing of dart release or hand position may improve dart throwing accuracy, according to a study published in *PLOS ONE* on February 12, 2014 by Daiki Nasu from Osaka University, Japan and colleagues.

Two major strategies are attributed to accurate throwing: timing the object release, and the using hand positioning at release to compensate for releasing the object at variable times. To better understand these strategies, researchers investigated whether expert dart players utilize hand movement that can compensate for the variability in their release timing. The study compared the timing variability and hand movement of 8 expert players with those of 8 novices as they threw a dart 60 times, aiming at the bull's eye. The movements of the dart and index finger were captured using seven cameras and analyzed.

The results revealed two strategies in the expert group. The timing variability of some experts was similar to that of novices, but these experts had a longer window of time in which to release an accurately thrown dart. These subjects selected hand movements that could compensate for the timing variability. Other experts did not use these hand movements, but rather reduced the variability in timing of the dart's release. The authors indicate that both strategies can equally achieve consistent throwing.

More information: Nasu D, Matsuo T, Kadota K (2014) Two Types of Motor Strategy for Accurate Dart Throwing. *PLoS ONE* 9(2): e88536. DOI: 10.1371/journal.pone.0088536