

One team member's effort can jumpstart the whole team's efforts, new analysis of soccer teams reveals

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What if you could measure effort and not just performance? What if you could determine if one person's effort in a workplace improved

everyone's effort? What if you could determine if team efforts improved individual effort? While most research uses performance as a proxy for effort, Ben-Gurion University of the Negev researchers looked at a unique dataset to measure effort—in depth data from the Israeli Professional Football Leagues.

The soccer league tracks myriad statistics regarding play and Dr. Naomi Gershoni, Prof. Danny Cohen Zada, and former master's student Itai Dayag utilized these data for the 2017/2018 season to directly measure how teammates' efforts affect each other for the first time.

Their findings were published recently in *Management Science* in an article entitled "Effort Peer Effects in Team Production: Evidence from Professional Football."

Among the aspects the league tracks are players' running distance, number of sprints and player substitutions in five-minute increments throughout every game. By measuring how each player's running distance in a specific five-minute section of the game changes when he plays with peers/teammates that typically run more/exert more effort, they were able to show that peer effort positively affects individual effort.

To crosscheck their findings, the three researchers also looked at player substitutions. They analyzed the sections before and after a substitution to see how individual fatigue affects the team. They compared the outgoing player's final five-minute section with the incoming player's first five-minute section and found a significant difference in overall team effort catalyzed by the fresh player's energy.

The researchers believe the findings could be generalized to other types of work teams such as R&D units, court litigation teams, political lobbying groups and marketing divisions because, similarly to a soccer

team, these work groups are characterized by high levels of collaborative, professional effort in a [competitive environment](#) (usually competing against rival teams). Moreover, in all these settings, performance measures are not observed very frequently (innovations, winning a [legal case](#)) and hard to measure at an individual level.

Cohen Zada, Dayag and Gershoni found that group efforts impact individual efforts and individual efforts impact group efforts.

"A potential implication of the strong peer effects that we found is that managers should determine workers' compensation not only by their direct contribution to output but also according to their effort. This may be even more efficient in environments where effort is strongly related to group performance and when individual performance is rarely observed, difficult to quantify, or when common individual [performance measures](#) are irrelevant for large parts of the team," they wrote.

"Finally, our results suggest that teammate social connections and obligations to each other may contribute to positive peer effects in effort and indicates why it can be beneficial for organizations to encourage [social interaction](#) among coworkers and to invest in activities that help forge team spirit," they added.

More information: Danny Cohen-Zada et al, Effort Peer Effects in Team Production: Evidence from Professional Football, *Management Science* (2023). [DOI: 10.1287/mnsc.2023.4811](https://doi.org/10.1287/mnsc.2023.4811)

Provided by Ben-Gurion University of the Negev

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