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## EUROPEAN COLLEGE OF SPORT SCIENCE

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# B. Paper Submission

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Abstract-ID: 896

Title: A successful first season implementation of VAR in Football: The Norwegian

story

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Institution: University of Agder

Department: Department of Sport Science and Physical Education

Country: Norway

General Field: [SH] Psychology, Social Sciences & Humanities

Format(\*): Oral

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### INTRODUCTION

Since its inclusion in the laws of the game handbook by the International Football Association Board before the 2018-2019 season, it has been found that the Video Assistant Referee (VAR) system has improved the accuracy of referees decisions from 92.1% to 98.3% (1). Despite its effectiveness, VAR continues to spark significant debate, including concerns over match flow and delays (2). Prior to the 2023 season, the Norwegian Premier League (NPL) adopted VAR for the first time. This study aims to explore and detail the NPL's inaugural season utilizing VAR.

### **METHODS**

This study investigates the number of situations checked by VAR and associated time use. According to the laws of the game, VAR may only intervene in four specific situations: goals, penalties, direct red cards, and cases of mistaken identity. A total of 240 matches from the 2023 NPL season were included. Data utilized for analysis is provided by official reports from the Norwegian Football Federation (NFF) and gives an overview of all situations investigated by VAR. Time delay was noted from when the referee halted play for VAR checks.

### **RESULTS**

A total of 1662 incidents were reviewed by VAR, covering 748 goals, 694 yellow cards, 60 direct or potential red cards, and 160 penalty situations. Out of these, 1304 were quickly resolved (no delay of match play), while 358 required further investigation. VAR upheld the initial decision in 303 cases but altered the decision in 55 instances. Of these, 25 were factual checks (e.g., ball in/out, offsides), with an average match delay of 48 sec. The remaining 30 necessitated on-field reviews by the match official, with match delay averaging 2 min and 2 sec. Notably, 9 of 303 decisions upheld by VAR were later identified as incorrect by NFF, missing critical calls with 2 red cards, 2 goals, and 5 penalties. Maximum time to complete VAR checks was 6 min and 10 sec.

#### CONCLUSION

The introduction of VAR in the NPL led to 55 overturned decisions, marking, to the best of the authors knowledge, the lowest known VAR intervention rate across European leagues with 1 intervention every 4.36 matches. Despite this, certain oversight incidents (such as kick to the head) and single cases of prolonged delays have drawn criticism towards VAR, also from Norwegian fans. Such incidents and other learning effects prompted adjustments to the VAR protocol throughout the season, improving the effectiveness of VAR. Our findings indicate that VAR improved the correctness of match officials' decisions by lowering the number of mistakes from 3.9 to 0.5% in the NPL during the 2023 season. However, previous findings, including 795 VAR checks in other European leagues, reported a median of 22 sec for factual checks and 62 sec for on-field reviews (1). Thus, there is room for improvement in reducing VAR-review time in the NPL.

- 1. Spitz et al., (2021), Journal of Sports Sciences.
- 2. Scanlon et al., (2022) Soccer & Society

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