Development and Validation of a Brief Screener for Current Gambling Problems Among Brazilian Lottery Players

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INTRODUCTION

- In Brazil, lotteries and horse race betting are the only forms of legalized gambling.

- Lotteries are the most popular form and are run by the Federal Bank of Brazil (*Caixa Econômica Federal* – CAIXA).

- Despite partial prohibition, 2.3% of Brazilians have experienced significant problems with their gambling.

- Considering the rates of gambling disorder in Brazil, the development of a validated version of a brief screening tool that can identify people currently experiencing gambling problems should be examined.

- The NODS-CLiP is a well known, 3-item tool designed to identify lifetime, but not current disordered gambling.

- However, identifying people experiencing current problem gambling may have more utility.

OBJECTIVE

- Replicate the methods used to create the original NODS-CLiP (Toce-Gerstein et al. 2009) in order to create a brief screening tool that can identify current disordered gambling behaviour in a sample of Brazilian Lottery players.

METHODS

- Visitors of CAIXA lottery shops who were at least 18 years old and normally bet on lotteries were recruited and stratified based on populations from all regions of Brazil (N = 5,407).

- Participants completed a Brazilian adaptation of the full, 17-item NODS to assess past-year gambling symptoms, which were mapped to the nine symptoms of gambling disorder as defined by the DSM-5.

- All possible combinations of two, three, and four items from the NODS assessing past-year symptoms were tested for screening current disordered gambling (i.e., within the past year).

- All possible combinations were then tested against the past-year version of the original NODS-CLiP, first with regard to their highest sensitivity, then their highest specificity, and finally with Youden's Index.
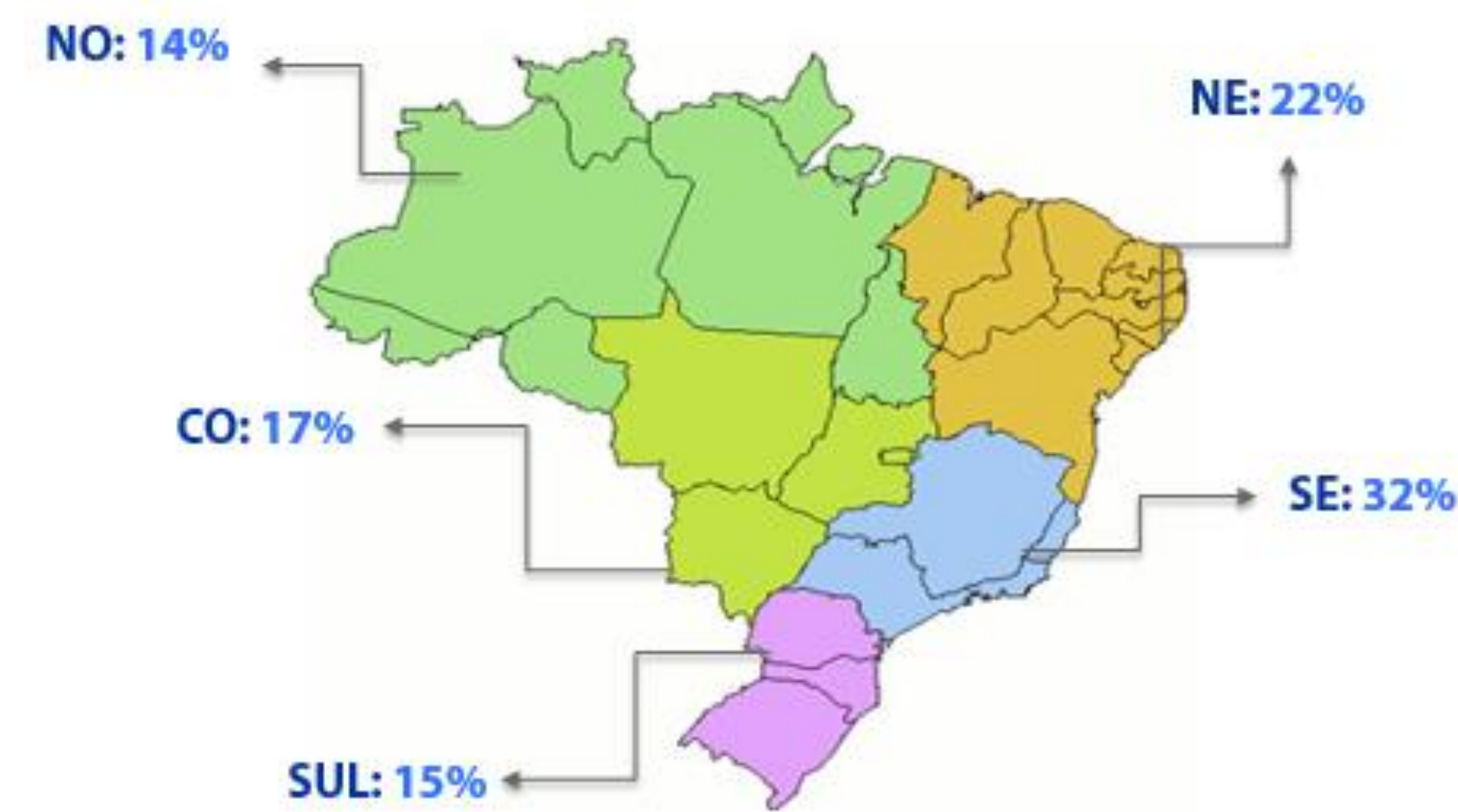

Figure 1: Brazilian sampling regions.
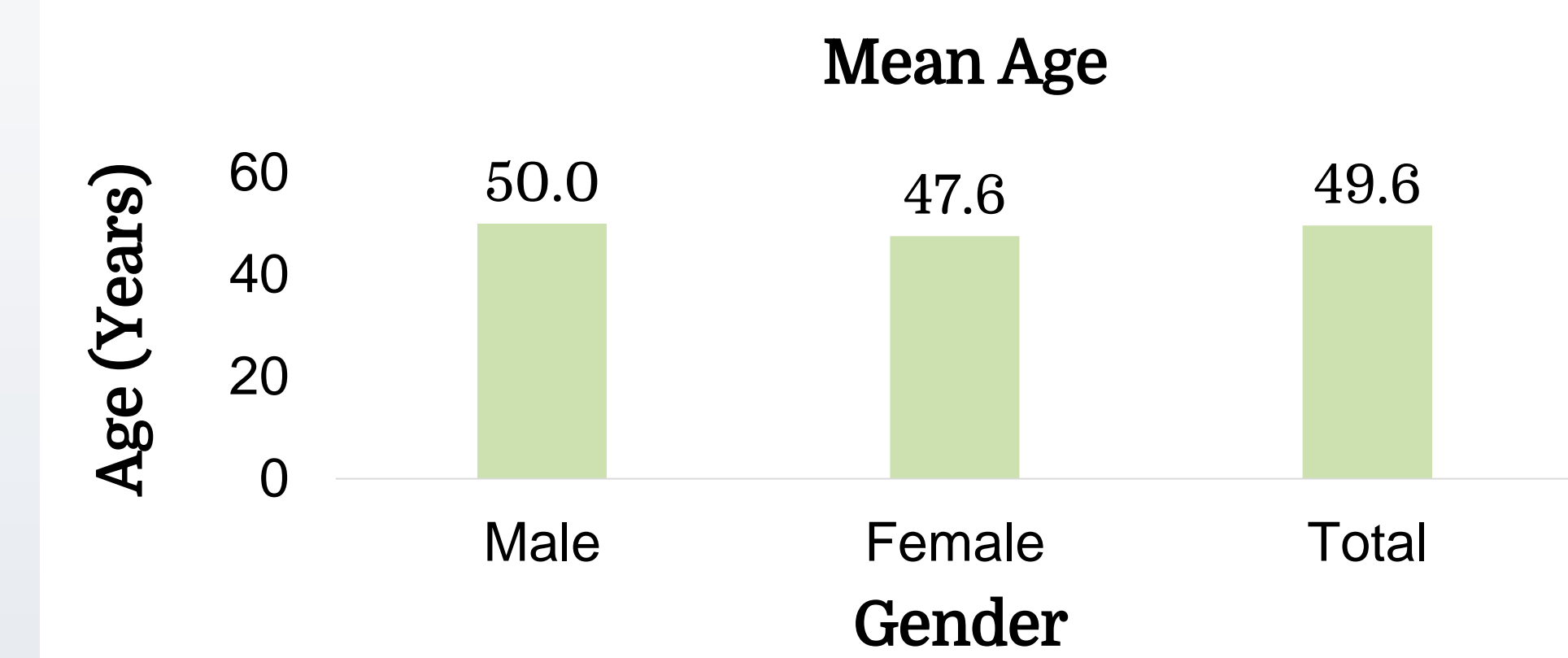NE = northeast; NO= north; CO = central west; SUL = south; SE = southeast.
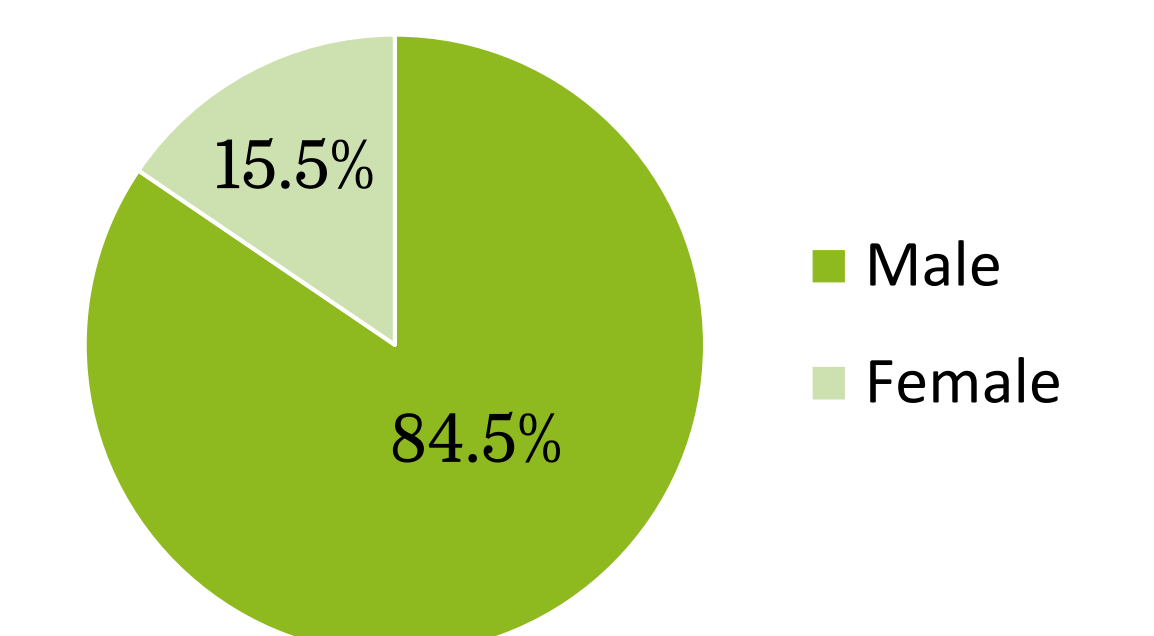

Figure 2: A CAIXA lottery shop.

Figure 3: The *Lotofácil*. The "Easy Lotto" is one of many lotteries sold in Brazil.
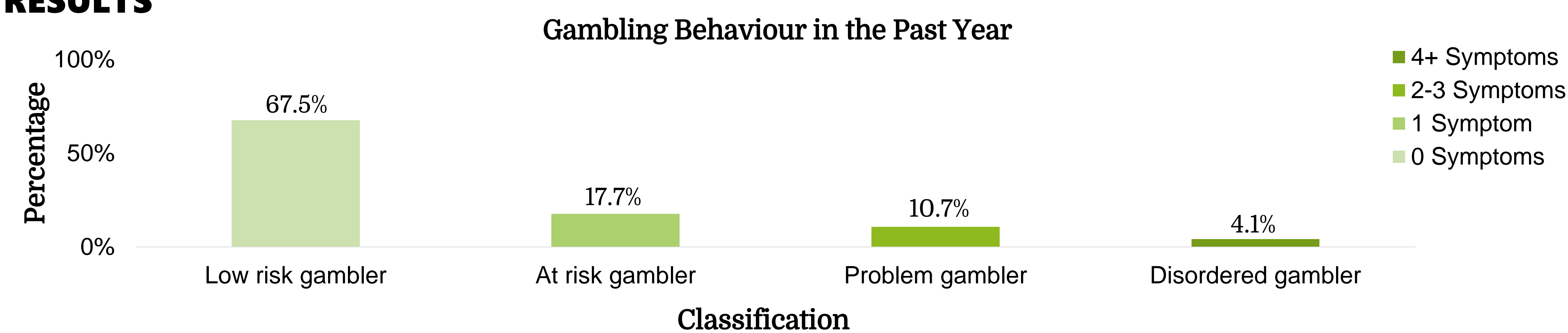
RESULTS

Figure 4: Percentage of participants in each gambling behaviour classification based on answers to the full, 17-item NODS mapped onto DSM-5 symptoms of gambling disorder.
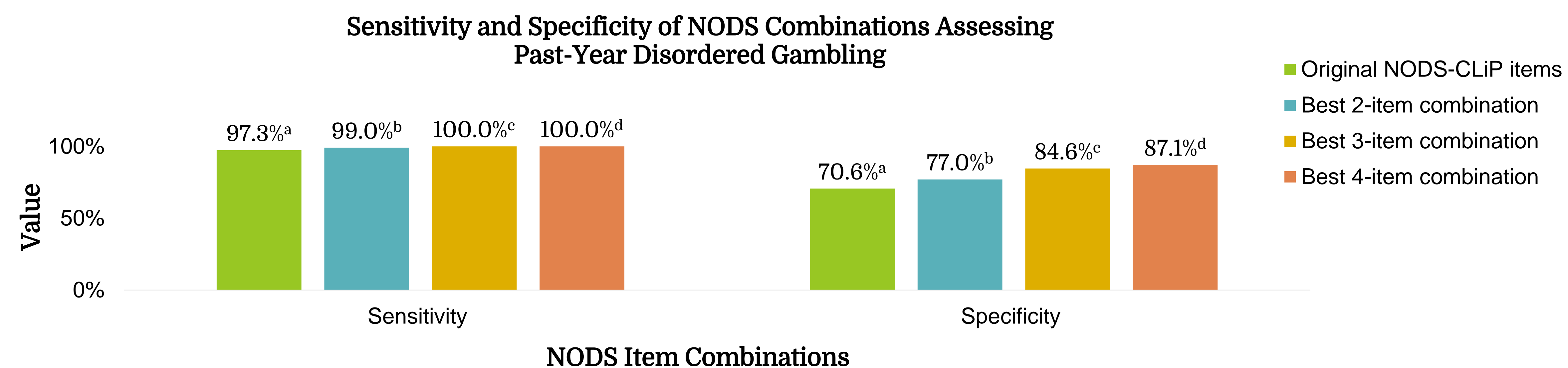

Figure 5: Comparison of sensitivity and specificity values between the original NODS-CLiP items and the best 2, 3, and 4-item combinations. [a]Loss of control, lying about gambling behaviours, and preoccupation with gambling. [b]Loss of control and chasing losses. [c]Feelings of withdrawal, escape from problems, and chasing losses. [d]Loss of control, feelings of withdrawal, escape from problems, and chasing losses.
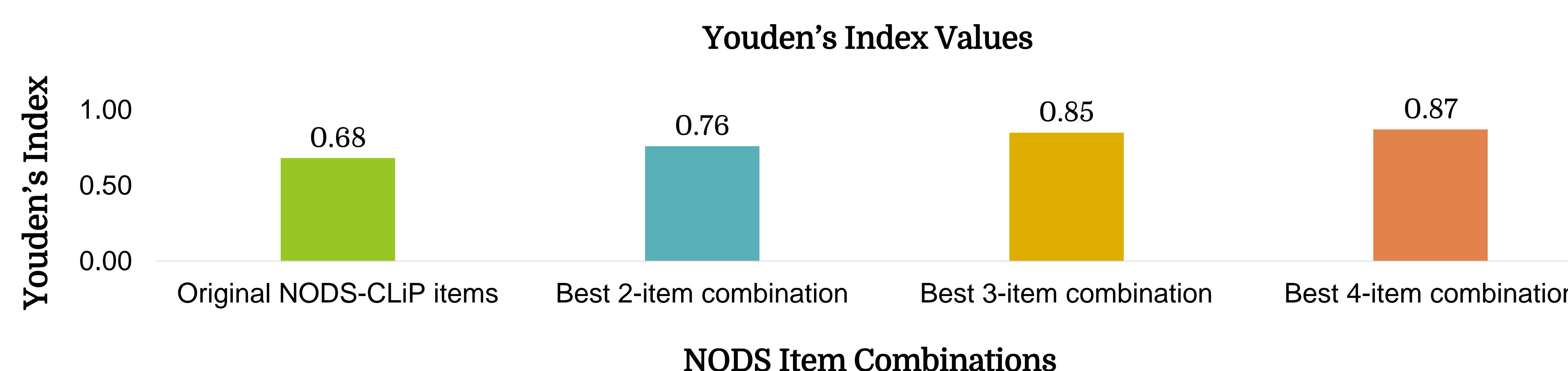

Figure 6: Comparison of Youden's Index values used to test the performance of the best 2, 3, and 4-item combinations against the original NODS-CLiP items. Youden's Index: J = sensitivity + specificity – 1.

PARTICIPANT DEMOGRAPHICS

CONCLUSION

- The best 2, 3, and 4-item combinations assessing past-year gambling behaviour each performed better than the original NODS-CLiP items for identifying current disordered gambling.

- The best 2, 3, and 4-item combinations each assessed chasing losses. Additionally, loss of control, feelings of withdrawal, and escape from problems were each assessed in two of the three combinations.

- The results of this study could aid in the development of more targeted and efficient screening tools for more specific populations and types of gamblers.