

The Consistency of Pre-Service Routine as a Predictor of Serve Accuracy

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INTRODUCTION

- In self-paced tasks such as the tennis serve, basketball free throw or golf shot, elite level players often use a “pre-performance routine” to mentally and physically prepare to execute the skill. This routine is suggested to have an impact positive impact on performance.
- Pre-performance routines are defined as the behavioral responses combined with the cognitive strategies that aid in relaxation, cognitive restructuring, and decision making prior to performing a task.
- Prior research and theory have explored pre-service routines to aid in physical and mental preparation for the serve however; few studies have examined the connection between consistent pre-service routines and serve accuracy.

PURPOSE

- The purpose of this project was to observe the behaviors, sequence, and timing of the pre-service routines of professional women tennis players during tournament play to determine if serve accuracy can be predicted based on the consistency of pre-service routine. This study also looked to investigate the following hypotheses:
 - That the consistency of pre-serve routine was significantly related to first and second serve accuracy.
 - That the pre-serve routine of the first serve was significantly related to that of the second serve.



SAMPLE

- Participants for this study were 27 professional women tennis players, ages 19-34 that were ranked from 1-130 on the WTA Corel Tour with a mean of 7.6 years of pro experience



YEAR PERFORMED 1998

METHOD

- The subjects were videotaped while playing in the 1997 Hardcourt Tennis Championships. The pre-service routines were observed by investigators that coded the player’s overt behaviors and sequence as well as the time of each routine.
- After coding all routines, the behaviors and sequence which appeared most frequently were considered to be the consistent pre-service routine for that player.
- A forward multiple regression analysis was used for all, first and second serves to determine variance in accuracy attributable to changes in behavior, sequence, and absolute deviation of the routines.



RESULTS

- The results indicated that the consistency of pre-service routine behaviors, sequence and time were not significantly related to accuracy of all, first and second serves.
- Significant differences in behavior and time were observed between first and second serve pre-service routines. There was no significant difference between the sequence of the first and second serve pre-service routines.

RECOMMENDATIONS

- Although the consistency of a pre-service routine was not a significant predictor of serve accuracy, it is not suggested that the use of a pre-service routine is ineffective.
- It is possible that at the professional level, it may not be necessary for the same exact behaviors, sequence and timing for each pre-service routine and that the presence of any routine is enough to trigger the automatic process used to execute the serve accurately.
- Altering of the pre-service routine behaviors and timing can be the result of differences in strategy and psychological stressors between first and second serves.
- Accuracy of the serve may be more closely related to changes in the environment once the ball is tossed or tennis specific considerations such as the speed accuracy trade off.

REFERENCES/ RESOURCES

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