Golf Putting: Shorter Putts are easier, Is this really true?

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Abstract: Simple logic would tell us that shorter putts are easier, but is this really true? This study aims to identify which distance is hardest in golf putting. The participants were 153 golfers with average handicaps (M=15.8, SD=9.45). A putting test was carried competitive out immediately prior to a golfing competition. They were asked to putt only one time from four different distances (3, 6, 12 and 24 feet). The number of strokes taken to get the ball into the hole was used as the performance measure. Based on the handicap of 18th hole courses, ten golfers (5 male; 5 female) were then volunteered to take part in the interviews right after the competition. The interview lasted approximately 20 minutes including the introduction phase. A one-way repeated measures ANOVA was used to interpret the data. The results showed, there was a significant effect for putting distance, Wilks' Lambda = .43, F (3, 150) = 74.49, p < 0.05, multivariate eta squared = .57 and the pairwise comparison revealed that the average number of putts taken from a distance of 6 feet distance was significantly greater. (M=2.35, SD=0.62) compared to the other distances. Content analysis of the interview data suggests that participant' psychological states (i.e., anxiety and self-belief) play a big role in influencing their performance. The present study concluded that the 6 feet distance considers the most difficult distance to putt compared to other distances (i.e., 3, 12, 24 feet). As cognitive, emotional, and technical aspects play the big role for making the distance difficult to putt. Future research particularly in using of psychological skills training need to be carried out using the 6-feet distance.

Keywords: Hardest distance, golf putting.

Becoming a successful golfer, requires more than a good swing (i.e., driving, pitching, short game, and putting) (Karlsen, Smith, & Nilson, 2008). Several studies found that golf putting seems to be an important discriminator of golfing ability (e.g., Ramsey, Cumming & Edwards, 2008; Beilock & Gonso, 2008; Smith & Holmes, 2004). Furthermore, Cooke, Kavussanu, McIntyre, and Ring, (2010) found that pressure influenced the performance of the golfers during the game. The data was collected based on psychological, muscular and kinematics factors while performing under pressure. For instance, it was reported that anxiety, perceived pressure, heart rate and the movement of muscle also increased and caused poor performance during the game (Cooke et al., 2010). Hung (2003), argued that putting is not an easy task to perform, and further, inconsistency could be attributable to a range of performer and environmental characteristics, e.g. the nature of the green (Clark, 2004).

With regards of those studies exploring psychological effects on golf putting performance, most investigators have selected the distance of putt arbitrarily. As Beauchhamp, Halliwell, Fournier, and Koestner (1996) used 4 and 12 feet in their cognitive-behavioral program. Psychologists like Malouff and Murphy (2006) used 12 feet to check the significance of using self-instruction in performance. Furthermore, Orliaguet and Coello (1998) used 3, 7, 10 or 13 feet to check the collaboration between timing while imagining the actual performance. Ploszay, Gentner, Skinner, and Wrisberg (2006) used 8,12,16,20, and 24 feet to evaluate the effects of a pre-shot putting on the putting performance of four NCAA division I golfers. In 2004, Smith and Holmes study's used 13 feet to investigate the effects of imagery modalities in putting performance. Finally, Wright and Erdal (2008) considered 3 feet distance as an easiest distance and 9 feet as hardest distance to putt. It is important to note that for the comparison studies - no evidence was provided to justify the hardest putting distance.

Therefore, the primary objective of this study was to identify the most difficult distance and secondly, to explore the reasons for making why the distance difficult to putt. There is a need for interested coaches or golfers to be very clear that before exploring technical issues, it is important to know which types of putts (e.g., distance) cause the most problems. The present study also explains the arguments on why some golfers show little interest in using of psychological technique while practicing the putting.

Method

Participants : Hundred fifty three golfers (48 male and 105 female) with average handicaps (M=15.8, SD=9.45) were recruited at the two different tournaments.

Procedure: For the purpose of gathering data in this study, the ethical approval letters were obtained from the internal research committee of University of Malaya Sports Centre before personally contacting the person in charge at the selected golf club. Prior to the tournament, the participants were informed regarding the purpose of the test and provided voluntarily informed consent. The participants were instructed to use their own putter and to putt only one time from four different distances at the actual putting green (e.g., Ramsey et al., 2008; Ploszay et al., 2006). They were provided with a standard golf ball for each putt. Finally, the performance of the golfers was based upon the number of how many stokes taken to get the ball into the hole.

We conducted the interviews after the tournament and the participants were selected based on their handicap on 18th hole courses. For example, a player who gets a 90 on 18th hole courses with pars of 72 will have a handicap of 18. Then, the organizer also informed regarding the score and interview sessions to the participants. Ten golfers (5 male and 5 female) were volunteered in these interviews. The interview sessions started with an informal conversation such as "hi, how was your training today" to make them feel comfortable with the researcher. The participants were informed regarding the purpose of the study. Next, the interviews were administered on one occasion and they were told to write down their contact number incase the researcher need to establishing meaning of the themes.

One simple open-ended question was used in this study – especially the statistically showed that the 6 feet distance was the hardest distance to putt. The question started with "Can you please describe a situation when you had to do a putting from the 6 feet distance and what were you thinking when you putt from this distance that you feel it will affect your performance" As suggested by the previous studies (Baumgartner, & Hensley, 2006; Thomas, Nelson, & Silverman, 2005; Seale, 1999). The participants were informed regarding the needs of the tape recording in this interview. The interviews lasted approximately 20 minutes including the introduction phase. Finally, we analyzed the contents through the content analysis in this study.

Results

A one-way repeated measures ANOVA was conducted to compare scores on the putting performance from 3, 6, 12, and 24 feet. There was a significant effect for putting distance, Wilks' Lambda = .43, F (3, 150) = 74.49, p < 0.05, multivariate eta squared = .57. The Bonferroni Post hoc tests revealed that there was a significant increase in the number of strokes taken from 3 feet to 6 feet distance (M=1.40, SD=0.42 vs. M=2.35, SD=0.62, respectively) (p <.01) (see figure 1). Furthermore, significantly fewer strokes were taken from 12 feet (M=1.84, SD=0.44) to 6 feet (P < .01). Finally, putting performance from 24 feet distance was significantly worse than performance from 12 feet (M=2.09, SD=0.47, P < .01).

Qualitative data

In using content analysis method, we separated the respondents' statements into categories and then organized the categories into themes (Bos & Tarnai, 1999). The transcripts from the interviews suggested that three general themes described to why certain distances were hardest. The general themes were: (1) Cognitive aspects, (2) Emotional aspects, (3) Technical aspects. In Figure 1 illustrated the codes, categories (i.e., lower order & higher order) and themes. The categories for Cognitive aspects included; confidence fluctuations, self – regulation. Additionally, Emotional aspect the categories included; negative thoughts, conscious control. Finally, Technical aspects the categories included focusing technically. Cognitive aspects: This theme included confidence fluctuations and self-regulation that make them to get hole putt or miss the putt. For instance, 'varying confidence' participant one described "confident in 3 feet but not in 6 feet". Additionally, 'low expectations' when one golfer described "I don't really expect the ball hole out from the long putts", "less pressure, except you're targeting from the 30 footer" and "I just want to park the close to the pin for long putting". On top of that, 'high expectations' for instance one golfer described "pressure from must make distance" and "expectation the ball hole out".

The self- regulations stated in the transcript like 'positive affirmation' one golfer described "make sure putting the ball into the hole" and 'routine' another golfer also described "focus on the routine and relax". In fact, in short distance one golfer described "relax and more firm in shorter distance". These perspectives can be explained when your mind tells you that you can't make the stroke especially from short distance (Smith & Holmes, 2004).

Emotional aspects: It is clearly showed that negative thoughts worsen the putting performance in a round of golf. These findings consistent with the previous studies, those golfers who expected to perform poorly had higher anxiety than golfers with expectations of successful performance (Bois, Sarrazin, Southon, & Boiche, 2009; Krane, Williams, & Feltz, 1992). Likewise, Chamberlain and Hale (2007) also described that increasing of somatic anxiety intensity decreased the putting performance. The present study also found negative thoughts like one golfer stated "nervous and psycho" in short distance putts and "shacking when downhill putts especially left to right". Additionally, 'frustration of missing' like one golfer described "sad and angry because keep missing the hole". The 'negative thinking' play a big role for making the distance difficult to putts for instance one golfer stated "negative thinking form 6 feet distance" and "negative thinking when the score is getting better or 65 to under". These findings have been described by Gucciardi, Longbottom, Jackson, and Dimmock (2010); "Other distracting thoughts were prominent and included negative thoughts as well as an increased focus of performance expectations".

Previous studies also stated that mood is unpredictable (Hellstrom, 2009; Hassmen, Koivula, & Hansson, 1998). In the present study, the conscious control for instance one golfer described "need to control my speed" and two golfers described "speed very hard to judge". However, in short distance, one golfer has stated "take time" it seems like the closer the hole the more time to take to putts.

Technical aspects: There is ongoing suggested regarding the factors contribute to the poor putting performance (Gucciardi et al., 2010). As Weinberg and Gould (1999) stated that somatic anxiety cause increases in muscle tension and can interfere with coordination while performing the task. The focusing technically such as one golfer expressed in his statement "shaking when downhill putts especially left to right". Another golfer also said "fine and sometime open the club faces" and two golfers also described "problem in line reading" and "confused with the line". As previous studies stated that most probably if eyes are fixated elsewhere at a position other than the ball, and head moves during the stroke these can lead to an improper stroke and miss the putt (Hung, 2003). Similar with other sports like the players made faster first fixations and fixated for significantly longer toward the goalkeeper when taking the penalty kicks in soccer (Wilson, Wood, & Vine, 2009). A failure to get a hole putt from probably because of technical changes made by the golfers. The 'grip pressure' like one golfer said "light grip" and one golfer tried to grip the putter harder when putt from a short distance like one golfer said "pressure grip not commit with putting" and one golfer also said "grip a bit pressure and tension". However, one golfer described that "shorter distance looser" in other words 'too relaxed on shorter distances'. It is clearly showed that common grip faults include too tight a pressure and softer grips have a propensity to twist easily (Farnsworth, 2009).

Discussion

It is important to emphasize that our findings are related to identify the hardest putting distance to putt and the reasons for making the certain distances hardest to perform. The present study found both male and female golfers had a problem to perform from 6 feet distance. For example one participant said "confident in 3 feet but not in 6 feet". In contrast from what we expected the longer the distance the hardest the distance to putt. Indirectly, the statement was influenced the belief and confidence that make golfer to get hole putt or miss the putt. Consistently, where some golfers not being able to have the same stroke as in practice whilst playing (Smith et al., 2003). The negative thinking however, plays a big role for making the 6 feet distance difficult to putts. For example one golfer stated during the interview "negative thinking form 6 feet distance". The present study also found that 6 foot putt has made golfer to delay their stroke like one golfer says "take time" when putting from a 6 feet distance. Hence, the interview from the present study summarized the cognitive aspects (i.e., "must make putt from short distance and just want to park the ball closer to the hole in long distance") potentially the emotional aspects (i.e., nervous and worry) influences the emotion of golfers. Hence, they tried to change the putting technique (i.e., "grip position") and they will miss the 6 foot putt.

The present study most importantly identified the perspective of the hardest distance were associated with psychological state of golfers, which will allow sport psychologist or coaches to emphasize more on distance measure and the solution to improve golf putting performance psychologically. However, any distances that difficult to putt also need to be explored in an actual field performance (actual putting green or competition). Hence, the efficacy should be investigated based on this distance. The present study ensures that researchers or psychologists to emphasize and explore the 6- feet distance rather than selected the distance of putt arbitrarily.

This study consequently opens up a number of potential research questions for instance, we noted that golf is somewhat related with your own feeling and belief while playing as supported by the previous study (Lane, & Jarrett, 2005). Additionally, self-regulation and confidence fluctuations may not consistently occur in every competition especially in golf where you play against yourself (Crews, Lutz, Nilson, & Marriott, 1999). Therefore, to enhance confidence and self-belief

in any task or skills performance, the psychological strategies need to be learned consistently as supported by the previous studies (Roberts, & Turnbull, 2010; Ramsey et al., 2008; Smith, & Holmes, 2004).

Psychological Skills Training including attentional control, goal setting, self-talk, emotional control, relaxation and imagery have been effectively used by researchers (e.g., Hardy, Roberts, Thomas, & Murphy, 2010; Beauchamp, Bray, & Albinson, 2002; Thomas, Murphy, & Hardy, 1999). Among other performance improvement strategies, imagery training has gained much popularity in sport psychology research and practice (e.g., Ramsey, Cumming, Edwards, Williams, & Brunning, 2010; Malouff, McGee, Halford, & Rooke, 2008; Munroe, Hall, & Fishburne, 2008). For example, this strategy helped in mastering specific skill and the mediation of psychological states such as arousal and anxiety (Weinberg & Gould, 2007). It warrants that future research particularly in using of psychological skills training be carried out using the 6-feet distance.

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Table 1: Summary of Pairwise Comparisons, Means, and Standard Deviations for scores on the 3 feet, 6 feet, 12 feet, and 24 feet Distance

Distance	3 feet	6 feet	12feet	24 feet	M	SD
3 feet	-	-	-	-	1.39	.516
5 feet	.961*	-	-	-	2.35	.765
12 feet	.451*	510*	-	-	1.84	.539
24 feet	.699*	261*	.248*	-	2.09	.578

Note. The comparisons for participants (n=153) are presented above and below the diagonal. Means and standard deviations for participants are presented in the vertical columns. For all distances, higher scores are indicative of more strokes taken to made putt in the hole; 3 feet, 6 Feet, 12 feet, and 24 feet.

^{*}the mean difference is significant at the .05 level

Table 1: Structure of the theme specifically to illustrate cognitive, emotional, and technical explanations for why certain putts are hardest.

Codes	Categories	Lower order	High order	General theme
Confident in 3 feet but not in 6 feet	Varying confidence	Fluctuations in	•	
I don't really expect the ball hole out from long putts.	Low expectations	confidence		
Less pressure, except you're targeting from the 30 footer	Lower expectations to hole longer putts	Low expectations		
Long distance, just want to park the ball close to the pin Near to the pin from long distance I just want to park the ball close to the pin for long	Park ball close to hole	Confidence fluctuations		Cognitive aspects
putting Park to the pin for long putts	Stressed on shorter putts (must make)			
Stress and anger when putt from 6 feet and below Pressure from must make distance	Higher expectations	1.24		
Higher expectations		5.5		
Expectation the ball hole out	Positive affirmation	High expectations		
Make sure putting the ball into the hole	Routine			
Focus on the routine and relax	Relax		Self-regulation	
If I'm relaxed then for sure will the ball in, longer distance no expectation to hole out Relax and more firm in shorter distance		Self- regulation / self talk		
Nervous and psycho Worry Anxiety	Nervous/ worried/ confused	- 0	ė.	
confused Shaking when downhill putts especially left to right	Frustration of missing			
	Prusuation of missing			
Sad and angry because keep missing the hole Angry and tense when always missed the ball	Negative thinking	Negative thoughts	Negative thoughts	Emotional aspects
Negative thinking from 6 feet distance Negative thinking of either putt or not. Negative thinking from 20 feet distance	rvegative ulliking			
Negative thinking when putt from the short distance Negative thinking from the score 55 and 65 to under	More conscious – controlling speed			
Conscious Need to control my speed		Conscious control	Conscious control	
Speed very hard to judge	Taking too much time			
Take time	line reading			
Checks the line Make sure position of the ball				
Problem in line reading Confused with the line		Focus on technical aspects		
Cannot see the same line	Technical error – club face	aspects		
Fine and sometime open the club face	Grip pressure		Focusing technically	Technical aspects
Grip pressure and not commit with putting			,	
Grip a bit pressure and tension Light grip	Too relaxed on shorter distances			
Shorter distance looser		Over confident		