The increasing number of road race finishers over the past 25 years suggests an upsurge in the popularity of distance running (Running USA, 2016). However, after a peak in 2013, the number of running event finishers fell in 2014 and again in 2015 (Running USA, 2016). A declining number of finishers poses threats, such as a decrease in revenues for organizers, to the distance running industry and could indicate a lower level of running involvement and event satisfaction. Thus, this study compares demographic and psychographic data among half and full marathon runners over a five-year period in order to understand constraints and motives facing distance runners. In turn, this affords insight into the recent decline in finishers, providing valuable information for running event managers and the broader running industry.

Literature Review
Previous research highlights the importance of understanding motives and constraints towards participation in leisure and sport activities (Iwasaki & Havitz, 2004). Individual sport participation is negatively influenced by perceived constraints (Crawford & Godbey, 1987) and positively influenced by motives (Shepherd, 1985). Within distance running events, motives and constraints vary between participants (Ogles & Masters, 2000). Thus, this study will consider demographic and psychographic variables linked to distance running constraints and motives.

Gender can be a constraint to participation in leisure activities (Stebbins, 1992). Examples of gender constraints include: women are often the primary household caregivers which restricts their leisure time (Maume, 2008; Shaw, 1994), women’s training is often constrained due to safety concerns (Goodsell & Harris, 2011), and a lack of interpersonal support for women to pursue time consuming leisure activities (Henderson & Allen, 1991). Gender constraints are often related to family dynamics and social expectations; thus having children or being married is a constraint for women. There are also age differences with respect to motives and constraints. For example, Generation Y runners are primarily motivated by goal achievement and most commonly cite injury as a constraint, while older runners emphasize health and social motives and cite age-related injuries and work commitments as constraints (Rice, 2015).

High levels of activity involvement can motivate individuals to overcome constraints such as role conflict (Rice, 2015). Examples of involvement affecting participant behaviour include: highly involved runners travel to races involving overnight stay more often than less involved runners (McGehee, et al., 2003) and involvement can increase commitment to service offerings (Casper, et al., 2007). Finally, event satisfaction helps determine if a runner will return to a race (Caro & García, 2007); being unsatisfied with an event could constrain future participation and contribute to the recent decline in event finishers.

Method
A large distance running event was used as a case study to examine trends among demographics, involvement, and event satisfaction over a five-year period from 2011 to 2015. This time period was chosen to provide an equal number of years before and after the peak in 2013. Each year, a post-event online survey was distributed to participants in the road race yielding annual number of responses between 2,697 and 3,855. The surveys measured the demographic variables gender, marital status, children, and age as well as the psychographic variables involvement (Beaton et al., 2011), and event satisfaction (Funk et al., 2011). Constructs for involvement and event satisfaction were measured using a 7-point slider scale.
Results revealed that for each of the five years, there was a greater proportion of females participating in the half than the full marathon (all years: p<.001; 2011: F(1,3848)=88.633; 2012: F(1,3470)=57.346; 2013: F(1,2207)=21.367; 2014: F(1,2713)=73.829; 2015: F(1,2705)=84.522). No significant differences were observed among the other three demographic characteristics between the distances. In the half marathon, there were significant (χ²=9.741, p=.045) fluctuations in gender proportions between each of the five years, but the fluctuations did not amount to a general trend. Additionally, over the five-year period, an increasing proportion of half marathon runners have children (χ²=13.274, p=.010; F(1,10803)=11.864, p=.001). Finally, there were no significant changes in full marathon runners’ demographics over the time period.

The two psychographic variables were analyzed between distances for each year and across years for each distance. Full marathon runners were significantly (p<.001) more involved than half marathoners in 2011 (χ²=129.889), 2012 (χ²=113.324), and 2015 (χ²=243.843). For both half and full marathon runners, levels of involvement decreased over the five-years (full: F(4,4045)=21.584; half: F(4,11714)=57.712; p<.001). There were no significant differences in event satisfaction between half and full marathoners across the years. Overall, event satisfaction was an inverted trend of the number of event finishers; event satisfaction decreased from 2011 to 2014 and increased from 2014 to 2015 (full: F(4,3964)=13.769; half: F(4,11464)=23.163; p<.001).

Discussion and Implication

Comparing results between both distances and years produced an evaluation of constraints and motives in distance runners. Results confirm previous literature that there is a significant difference in gender proportions between the half and full marathon. Though previous research identifies constraints that women face for distance running, findings suggest that women are able to overcome these constraints for the half, but still face barriers for the full marathon (Wegner et al., 2015). Future qualitative research could study female marathon runners to gain insight as to how some female runners are able to negotiate constraints.

The increasing trend of half marathon runners with children contradicts research stating children are a constraint (Nomaguchi & Bianchi, 2004). A potential explanation for this contradictory finding is that parents are encouraged to live healthy lifestyles as they learn their vital role as healthy lifestyle models for their children (Golan & Crow, 2005). Future research could consider family structure as a motivator for runners instead of a constraint.

By using a multi-stage sample, this work was able to highlight a major disadvantage of cross-sectional studies. For example, in 2013 and 2014, involvement is statistically the same for half and full marathon runners. However, 2011, 2012, and 2015, data produces the opposite conclusion. Future research using longitudinal studies or a combination of numerous cross-sectional studies is encouraged to augment the strength of conclusions.

The decline in running involvement for both distances suggests runners are becoming less involved with the activity and could be indicative of a running recession. This poses a threat to the running industry as less involved runners are less likely to participate (McGehee et al., 2003), purchase related products (Casper et al., 2007) and become committed to the activity (Funk et al., 2012). Additionally, a running recession would lead to a smaller market, drastically decreasing profits for running event organizers and related businesses. Therefore, race organizers and running stakeholders should focus on developing strategies to increase involvement, such as promoting and supporting running as a year round activity.

Overall, event satisfaction follows an inverse trend to the number of running event finishers; as the number of event finishers increases, event satisfaction decreases and vice versa. This could be explained by runners becoming numb to the racing experience and thus it would be advantageous for event organizers to restructure events each year to introduce novel features. For example, to attract and retain runners, race organizers could design course experiences that are fun, physically challenging, and include social features for both the runners and their spectators.