

## Event segmentation: A review and research agenda

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### ABSTRACT

Event academics and practitioners have long recognized the importance of segmenting event attendees. Despite a relatively long level of enquiry into event segmentation, there is little consistency in the methods, data analysis techniques and segmentation variables that are used. A review of 120 event segmentation studies incorporating an attendee-orientated approach was conducted to identify how event attendees are currently segmented. This study will serve as a reference guide to current event segmentation researchers on the segmentation approach/s and data analysis techniques utilized in previous studies. Recommendations for future research are suggested.

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### 1. Event segmentation

The management and marketing of events has been acknowledged as an area of research of extreme importance to academic researchers and event practitioners (e.g. Allen, O'Toole, Harris, & McDonnell, 2008; Getz, 2005, 2008). Owing to the social and financial benefits that events such as festivals can bring to local communities, there has been significant growth in terms of numbers and the diversity of events (Chang, 2006; Getz, 2008; Lee & Beeler, 2009). Several authors (Felsenstein & Fleischer, 2003; Formica & Uysal, 1998; Van Der Wagen & Carlos, 2005) argue that an event can increase local tourism demand, improve the identity of a local community, and can also provide a community with tourism in off-peak tourist seasons. With events being increasingly seen as tourism attractions attended by both residents and tourists (Allen et al., 2008; Formica & Uysal, 1998; Getz, 2005, 2007), it is essential for event managers to develop a profile for attendees that can guide marketing and managerial decision making (Lee, Lee, & Wicks, 2004).

Market segmentation is a management and marketing strategy (Smith, 1956) that is widely used to profile attendees (Allen et al., 2008; Bowdin, Allen, O'Toole, Harris, & McDonnell, 2006; Getz, 2007; Van Der Wagen & Carlos, 2005). Segmentation involves viewing a heterogeneous market as a number of smaller, more homogenous markets (Kotler, Bowen, & Makens, 2010). These

smaller markets can be distinguished by different consumer needs, characteristics, or behaviors (Kotler, Haider, & Rein, 1993) which allow organizers to define visitor needs and wants more precisely (Dolnicar, 2008; Getz, 2007; Kotler et al., 2010). Segmentation also enables organizers to maximise return on investment by targeting the most profitable attendees (Perdue, 1996). For segmentation to be managerially useful, each segment needs to be accessible, measurable, actionable, and substantial (Kotler et al., 2010).

A review of the marketing literature indicates there is no one correct way to segment a market (Beane & Ennis, 1987; Dolnicar, 2008; Kotler et al., 2010). It has been argued that different approaches can be used to satisfy the researchers' requirements. For example, a plethora of event academics (e.g. Allen et al., 2008; Getz, 2007; Mohr, Backman, Gahan, & Backman, 1993; Park, Reisinger, & Park, 2009; Uysal, Gahan, & Martin, 1993) have argued that attendees should be segmented based on their motivations, as this approach explains why attendees made the choice to attend an event. Alternate views exist with other researchers focussing on different characteristics such as age and income, place of origin (residence), and expenditure on the grounds they provide managers with a profile of who people are, what they do, and where they live. Each variable that can be applied by a researcher is viewed as a vital discriminator for marketing decision making (e.g. Formica & Uysal, 1998; Kim, Cheng, & O'Leary, 2007; Saayman & Saayman, 2006).

Kotler (1980) proposed four bases of segmentation (demographic, geographic, psychographic, and behavioral) in an attempt to classify consumers in different ways.<sup>2</sup> Whilst developed in the

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<sup>2</sup> For a review of these four segmentation approaches, refer to Kotler (1980).

general marketing literature, they have been applied in specialized areas of marketing such as services and destination management. For example, Tkaczynski, Rundle-Thiele, and Beaumont (2009) in an attempt to classify which segmentation bases were used in the destination segmentation literature, reviewed 139 academic papers from 2002 to 2008. The authors concluded that Kotler's (1980) four bases were frequently utilized by researchers to profile tourists. Further, this study noted that destination segmentation researchers could employ as few as one and as many as four segmentation bases to segment their tourism market.

In an attempt to provide a summary of event segmentation, the current review has been limited to the following issues:

- Which of the four segmentation bases developed by Kotler (1980) were applied by academics to profile attendees?
- What variables were utilized by researchers to classify attendees?
- What data collection method/s have been applied to collect information from attendees?
- What data analysis methods were used to segment attendees?
- Has the development of more advanced computer data analysis packages increased the size of the sample in the more recent event segmentation studies?
- Do sample sizes vary according to the data analysis technique/s employed?

## 2. Literature review

A review of 120 academic event segmentation papers was undertaken. Both tourists and/or residents of a destination were considered (Getz, 2005, 2007). To qualify, the authors of the articles had aimed to classify attendees based on at least one of the segmentation bases outlined by Kotler (1980). Consequently, studies have been included that may have used segmentation bases and/or variables without using the word *segmentation*. Data reported in the papers was entered into SPSS permitting additional analysis to be undertaken to gain further insights into event segmentation study practices. Variables entered into SPSS included year of publication, sample size and the type of analysis. Table 1 and Fig. 1 present the findings. In Table 1, papers are assembled in alphabetical order to provide clearer understanding to the reader. The event's name (e.g. 2006 Honolulu Marathon) has been provided for further clarification and reference for the reader.

Due to the way that the table and figure have been summarized, the following explanatory notes are provided. If the event's name is not provided (e.g. confidentiality reasons), this event was simply listed as *undisclosed*. In instances where column information such as the sample size or data collection method was not addressed in the article, a # was placed in the column where the missing information exists. If secondary data was utilized, a \* was placed after the sample size.

The column entitled *method* deals with the different data collection techniques. These were coded as: self-administered mail survey (A), self-administer on-site survey (this included diaries and recollection methods) (B), personal interview (e.g. in-depth/semi-structured) (C), self-administered online survey (D), interviewer-administered on-site survey (E), telephone interview (F), and observation (G).

The *data analysis* column lists 12 different techniques that have been utilized by event academics. These are coded as: descriptive statistics (I), chi-square test/s (II), *t*-test/s (III), factor analysis (IV), analysis of variance (V), cluster analysis (VI), regression (VII), correlation analysis (VIII), discriminant analysis (IX), qualitative analysis techniques (X), post-hoc analysis (XI), and other analysis

(XII). The other analysis includes techniques that have used been less than three times (e.g. multiple classification analysis, and analysis of co-variance).

In Fig. 1, the most frequently used variables have been provided. Each of these variables has been utilized at least ten times in the event segmentation literature to qualify. The variables were categorized in order of descending frequency for each of the four segmentation bases. The bases are classed as demographic (D), geographic (G), psychographic (P), and behavioral (B). If segmentation methods dealt with aspects not relating to the attendee (e.g. length the event business has been operating), the variable was not included.

## 3. Results

The majority of segmentation studies were based on events that ran in the United States of America (USA). Fifty-four articles were conducted in a variety of American states such as *Pennsylvania*, *Kentucky* and *Florida*. This was over triple the number of studies than the second most popular country, namely Australia (16 studies). Other countries that had several studies included Korea/South Korea (10 studies) and the United Kingdom (UK) (6 studies). There were two studies in which events were compared across two countries (e.g. Norway and the UK).

The visitor survey was the most popular method of data collection. Almost half of the studies (57) incorporated a self-administered on-site survey. Other popular methods included the interviewer-administered on-site survey (39 studies) and the self-administered mail survey (29 studies). Almost a quarter of the studies (28) used a combined data collection approach with the self-administered and interviewer-administered survey methods (8 studies) being the most common multiple data collection method.

The most popular segmentation approach was a combination of all four of the segmentation bases outlined by Kotler (1980). This was identified in almost half of the studies (56). Three bases (51 studies) were also frequently chosen by event academics with a combination of demographics, psychographics and behavioral (37 studies) being most popular. Two bases (10 studies) and one base (3 studies) were seldom chosen. Each of the four bases was used in at least 60% of the studies. Demographics and psychographics were most popular (111 studies), followed by behavioral (107 studies). Geographic was the smallest (71 studies) segmentation base.

Twenty-four variables had been utilized by event academics at least ten times. The most popular variables included *age* (101 studies), *gender* (85 studies), *education* and *income* (both 61 studies) (demographic), *origin (place of residence)* (71 studies) (geographic), *motivations* (49 studies), *trip purpose* (42 studies) (psychographic), *experience* (e.g. *first-time or repeat*) (47 studies), *expenditure* (41 studies), and *length of stay* (behavioral) (38 studies).

Descriptive statistics (e.g. frequencies and means) were the most frequently chosen data analysis method (111 studies). In 19 of all 120 studies, this was the only method applied. Other methods that were applied often included factor analysis (48 studies), analysis of variance (38 studies), *t*-tests (29 studies) and chi-square tests (27 studies). It was noted that using more than one form of data analysis (e.g. descriptive statistics, exploratory factor analysis, chi-square tests and analysis of variance) was the most popular choice amongst event researchers (97 studies).

Correlation analysis was used to understand whether there was a relationship between year of publication and sample size to comprehend if the increased available of data analysis packages such as SPSS had any bearing on sample size. No significant relationship was found ( $r = .04$ , Sig.  $.6 > .05$ ). Data was again analyzed to understand whether sample sizes varied according to the data

**Table 1**  
Segmentation approach used by event researchers.

Author (date)	Event name	Country	Sample size	Method	Data analysis	Demographic	Geographic	Psychographic	Behavioral
Agrusa (2000)	1998 Lafayette Mardi Gras	USA	349	A	I				✓
Agrusa, Maples, Mitterlin, and Tanner (2008)	2006 Honolulu Marathon	USA	1537	B	I, II	✓	✓	✓	✓
Agrusa, Lema, Kim, and Botto (2009)	2007 Honolulu Marathon	USA	1643	B	I, II, III	✓	✓	✓	✓
Backman, Backman, Uysal, and Sunshine (1995)	Undisclosed festival/special event/exhibition	USA	533*	C	I, II, III, XII	✓		✓	
Barbieri, Mahoney, and Palmer (2009)	4 RV and camping shows in Michigan	USA	411	D	I, IV, V, VI	✓	✓	✓	✓
Boo, Ghiselli, and Almanza (2000)	5 Food festivals in Indiana	USA	304	A, C	I, XII	✓		✓	✓
Boo and Busser (2006)	The 2nd World Festival for Island Cultures	Korea	813	B	I, III, IV, VII	✓		✓	✓
Boo, Ko, and Blazey (2007)	The 2nd World Festival for Island Cultures	Korea	356	E	I, III, V, VII, VIII	✓	✓	✓	✓
Bowen and Daniels (2005)	2004 Celebrate Fairfax! (music festival)	USA	374	B, E	I, III, IV, V, VI, IX	✓	✓	✓	✓
Burgan and Mules (2000)	Canberra Floriade Festival	Australia	1100	E	I		✓	✓	✓
Burr and Scott (2004)	3rd Annual Great Salt Lake Bird Festival	USA	414	A, B	I, IV, VII	✓		✓	✓
Chang (2006)	Rukai Cultural Festival	Taiwan	315	B	I, II, IV, V, VI, IX	✓	✓	✓	✓
Chen (2010)	Women's Basketball Sport Event	USA	33	C	I, X	✓		✓	✓
Chhabra (2004)	Grandfather Mountain Highland Games	USA	115	A	I, VII	✓	✓	✓	✓
Chhabra, Healy, and Sills (2003)	Flora Macdonald Scottish Highland Games	USA	120	B	I, V, VII	✓	✓	✓	✓
Chhabra, Sills, and Rea (2002)	Grandfather Mountain Highland Games	USA	1437	A, B	I, II, VII	✓		✓	✓
Crompton and McKay (1997)	Fiesta San Antonio	USA	1496	A	I, IV, V, XII	✓	✓	✓	
Daniels and Norman (2005)	31st Annual Colonial Cup Race	USA	222	A	I, VIII, XI	✓		✓	✓
de Guzman, Leones, Tapia, Wong, and de Castro (2006)	Undisclosed thematic annual festival	South East Asia	600	B	IV, VI			✓	
Dees, Bennett, and Tsuji (2007)	25th Anniversary of the Sunshine State Games	USA	538	B	I, IV, VII, VIII	✓		✓	
Dewar, Meyer, and Li (2001)	Harbin Ice Lantern and Snow Festival	China	368	A	I, II, IV, V	✓	✓	✓	
Dodd, Yuan, Adams, and Kolyesnikova (2006)	Grapefest Wine Festival and Vintage Indiana Wine and Food Festival	USA	843	B	I, III	✓		✓	✓
Faulkner and Raybould (1995)	1993 Australian University Games (Brisbane)	Australia	510	A, C	I, II, III	✓	✓	✓	✓
Florek, Breitbarth, and Conejo (2008)	2006 FIFA World Cup	Germany	112	A, C	I, III	✓		✓	✓
Formica and Uysal (1996)	Umbria Jazz Festival	Italy	313	B	I, II, III, IV	✓	✓	✓	✓
Formica and Uysal (1998)	Umbria Jazz Festival	Italy	278	B	I, II, IV, VI, IX	✓		✓	✓
Fox and Edwards (2009)	3 Undisclosed horticultural shows	UK	345	A	I, III	✓		✓	✓
Funk and Bruun (2007)	2005 Gold Coast Airport Marathon	Australia	239	A, D	I, IV, V	✓	✓	✓	✓
Funk, Alexandris, and Ping (2009)	2008 Beijing Olympic Games	China	282	A, C, D	I, II, IV, VII	✓	✓	✓	✓
Gabr (2003)	Dubai Shopping Festival	United Arab Emirates	203	B	I	✓	✓	✓	✓
Gillis and Ditton (1998)	2 Competitive Billfish Angling Events	Mexico	#	A	I, II, III	✓	✓	✓	✓
Gitelson, Kerstetter, and Kiernan (1995)	Ag Progress Days	USA	914	A, E	I, II	✓		✓	✓
Goderie (1994)	1992 Nijmegen Summer Festival	The Netherlands	#	B	I	✓	✓	✓	✓
Grant and Paliwoda (1998)	Alberta Arts	USA	474*	A	I	✓	✓	✓	✓
Grant and Paliwoda (2001)	Alberta Arts	USA	509*	A, B, F	I	✓	✓	✓	✓

Table 1 (continued)

Author (date)	Event name	Country	Sample size	Method	Data analysis	Demographic	Geographic	Psychographic	Behavioral
Grunwell, Ha, and Martin (2008)	Bele Chere Festival & Asheville Film Festival	USA	937	B	I, III	✓	✓	✓	✓
Hede and Jago (2005)	Mamma Mia! Theatre Event	Australia	321	C, F	X			✓	✓
Hede, Jago, and Deery (2005)	Mamma Mia! Theatre Event	Australia	354	C, F	I, II, IV, V, VI	✓		✓	✓
Houghton (2008)	Undisclosed wine festival	Australia	828	B, C	I, VI, VIII	✓		✓	✓
Hvenegaard and Manaloor (2007)	Snow Goose Festival and the Brant Wildlife Festival	Canada	1169	B	I	✓	✓	✓	✓
Irwin, Wang, and Sutton (1996)	2 National Collegiate Athletic Association sporting events (Ice Hockey and Lacrosse)	USA	1106	A, B	I	✓			✓
Kaplanidou (2007)	2004 Olympic Games	Greece	224	B	I, VII, XII	✓	✓	✓	✓
Kaplanidou and Vogt (2007)	Undisclosed amateur bicycle event	USA	839	A	I, IV	✓	✓	✓	✓
Kay (2009)	Queen Victoria Market	Australia	961	E	I, IV	✓	✓	✓	✓
Kerstetter and Mowrer (1998)	First Night®	USA	251	A, B	I, IV, V	✓		✓	✓
Kim, Scott, Thigpen, and Kim (1998)	7th Annual Hummer/Bird Celebration	USA	517	A	I, XII	✓	✓	✓	✓
Kim, Borges, and Chon (2006)	International Festival of Environmental Film and Video	Brazil	422	B	I, III, IV, V, VIII	✓	✓	✓	✓
Kim et al. (2007)	Baekje Cultural Festival	South Korea	335	B	I, II, IV, V, VI, IX	✓	✓	✓	✓
Kim and Jamal (2007)	Texas Renaissance Festival	USA	37	C, G	I, X	✓		✓	✓
Kim, Sun, Jogaratham, and Oh (2007)	Undisclosed Festival and Musical Attractions	USA/Canada	6405*	A, F	I, VI, VII	✓		✓	✓
Kim, Han, and Chon (2008)	Asan Admiral Lee Sun-Shin Festival	Korea	534	E	I, VII	✓		✓	✓
Kim, Choi, Agrusa, Wang, and Kim (2010)	Korean Traditional Drink and Rice Cake Festival	Korea	283	E	I, IV, XII	✓	✓	✓	✓
Kim, Prideaux, and Chon (2010)	Korean Traditional Drink and Rice Cake Festival	Korea	595	E	I, VII	✓	✓	✓	✓
Kim, Suh, and Eves (2010)	15th Gwangju Kimchi Festival	South Korea	335	B	I, IV	✓		✓	✓
Kozak and Kayar (2009)	East Mediterranean International Tourism and Travel Exhibition	Turkey	295	B	I, III, IV, V	✓		✓	✓
Krause (1998)	Boston, Fall River and Providence Waterfront Festivals	USA	490	E	I, II, V, XI	✓		✓	✓
Kruger, Saayman, and Saayman (2009)	Klein Karoo Arts Festival	South Africa	1840*	B, C	VII	✓	✓	✓	✓
LeBlanc (2003)	Undisclosed local festivals/special events	Canada	1101*	F	I	✓	✓	✓	✓
Lee, Toepfer, and Obenour (1995)	Southeastern Wildlife Exposition	USA	126	B	I, III	✓		✓	✓
Lee (2000)	1998 Kyongju World Cultural Expo	South Korea	758	B	I, III, IV, V	✓	✓	✓	✓
Lee and Beeler (2007)	Undisclosed community festival	USA	254	E	I, IV, V	✓		✓	✓
Lee and Beeler (2009)	19th Annual Tallahassee Winter Festival	USA	331	E	I, IV, VII	✓		✓	✓
Lee and Crompton (2003)	3 Events (Springfest, Sunfest, Winterfest of Lights)	USA	4249	C	I		✓	✓	✓
Lee and Lee (2001)	1998 Kyongju World Culture Expo	South Korea	558	B	II, IV, V, VI	✓		✓	✓
Lee et al. (2004)	2000 World Culture Expo	South Korea	726	E	I, IV, V, VI, XI	✓	✓	✓	✓
Lee, Yang, and Lo (2008)	2006 Kenting Wind Chime Festival	Taiwan	211	B	I, V, VIII	✓	✓	✓	✓
Li, Huang, and Cai (2009)	Undisclosed rural community festival	USA	280	E	I, IV, V, VI	✓		✓	✓
Li and Vogelsohn (2006)	2002 Jacksonville Riverwalk Festival	USA	130	A	I, III	✓		✓	✓
Liang, Illum, and Cole (2008)	27th Annual Fair Grove Heritage Reunion	USA	413	B	I, IV, V, VIII	✓	✓	✓	✓
Mackeller (2009a)	Elvis Revival Festival	Australia	#	G	X	✓		✓	✓
Mackeller (2009b)	Wintersun Festival	Australia	#	C, G	X	✓		✓	✓
McCarthy (2005)	50th Macau Grand Prix	China	148	E	I, III	✓	✓	✓	✓
McCleary, Weaver, and Meng (2005)	9 Dance events in 5 states	USA	120	B	I, II, III, IV, V, VI	✓		✓	✓
McHone and Rungeling (1999)	Imperial Tombs of China Exhibition	USA	930*	E	I	✓	✓	✓	✓
McHone and Rungeling (2000)	Imperial Tombs of China Exhibition	USA	930*	E	I	✓	✓	✓	✓
Mehmetoglu (2001)	Viking Festival	Norway	169	B, E	I, XII	✓	✓	✓	✓

(continued on next page)

Table 1 (continued)

Author (date)	Event name	Country	Sample size	Method	Data analysis	Demographic	Geographic	Psychographic	Behavioral
Mihalik and Ferguson (1994)	1988 South Carolina State Fair	USA	432	E	I, III, V, XI	✓		✓	
Mihalik and Ferguson (1995)	1988 South Carolina State Fair	USA	432	E	I	✓	✓	✓	✓
Mohr et al. (1993)	Freedom Weekend Aloft	USA	458	E	I, II, IV, V	✓	✓	✓	✓
Mules (1993)	Adelaide Port Dragon Boat Festival	Australia	680	A	I	✓	✓	✓	✓
Nicholson and Pearce (2000)	4 Events (The Hokitika Wildfoods Festival, Warbirds Over Wanaka, New Zealand Gold Guitar Awards, and One Fly New Zealand Festival)	New Zealand	1296	B, E	I, II	✓	✓	✓	✓
Nicholson and Pearce (2001)	4 Events (same as 2000 study)	New Zealand	1296	B, E	I, IV			✓	✓
Okayasu, Nogawa, and Morias (2009)	Tomisato Suika Running Event	Japan	216	B	I, IV	✓		✓	✓
Park, Reisinger, and Kang (2008)	South Beach Wine and Food Festival	USA	475	B	I, III, IV, V	✓	✓	✓	✓
Pennington-Gray and Holdnak (2002)	National Hot Rod Association Drag Festival	USA	507	B	I	✓		✓	✓
Prentice and Andersen (2003)	9 Festivals in Edinburgh	UK	403	E	I, VI	✓	✓	✓	✓
Preuss, Seguin, and O'Reilly (2007)	2002 Commonwealth Games	UK	1196	B	I, II, III, V, VII, XII	✓		✓	✓
Qi, Gibson, and Zhang (2009)	2008 Olympic Games	China	350	E	I, III, IV, V, VII	✓		✓	✓
Raybould (1998)	The Fraser Island Fishing Expo	Australia	425	A	I, IV, V	✓		✓	✓
Ryan and Lockyer (2002)	2000 South Pacific Masters Games	New Zealand	290	#	I, II, III, IV, V	✓	✓	✓	✓
Saayman, Saayman, and du Plessis (2005)	2003 Cricket World Cup	South Africa	965	E	I, V	✓	✓	✓	✓
Saayman and Saayman (2006)	3 Arts festivals (Klein Karoo Nasionale Kunstefees, Grahamston National Arts Festival and Aardklop Arts Festival)	South Africa	1173	E	I, VII	✓	✓	✓	✓
Saleh and Ryan (1993)	Undisclosed jazz music festival and the Saskatchewan Handcraft Festival	Canada	279	A	I, III, IV	✓		✓	✓
Schneider and Backman (1996)	Jerish Festival for Culture and Arts	Jordan	410	E	I, III, IV	✓	✓	✓	
Schofield and Thompson (2007)	2005 Naadam Festival	Mongolia	539	B	I, III, IV, V, VII	✓	✓	✓	✓
Scott and Turco (2007)	2005 Little League World Series	USA	341	B	I	✓	✓	✓	✓
Scott (1996)	3 Urban festivals (Bugfest, Holiday Lights Festival, Maple Sugaring Festival)	USA	442	A	I, II, IV, XII	✓		✓	✓
Shani, Rivera, and Hara (2009)	Zora! Festival	USA	1110	E	I, II	✓	✓	✓	✓
Shanka and Taylor (2004a)	Taste of the Valley Food and Wine Festival	Australia	700	E	I, II, IX	✓	✓	✓	✓
Shanka and Taylor (2004b)	Taste of the Valley Food and Wine Festival	Australia	700	E	I, II, XII	✓	✓	✓	✓
Slack, Rowley, and Coles (2008)	24:7 Theatre Festival	UK	881	B	I, II	✓			✓
Smith (2007)	3 events (New Zealand International Sevens, the New Zealand International Arts Festival, The Writers and Readers Week)	New Zealand	1778	B, E	I	✓	✓	✓	✓
Smith (2008)	4 events (New Zealand International Sevens, Wellington Dragon Boat Festival, the New Zealand International Arts Festival, The Writers and Readers Week)	New Zealand	2079	B	I, X		✓		✓
Snelgrove, Taks, Chalip, and Green (2008)	2005 Pan American Junior Athletics Championships	USA	777	B	I, IV, VII, VIII	✓	✓	✓	
Snowball and Willis (2006)	2003 South African National Arts Festival	South Africa	78	E	I, VII	✓		✓	✓
Solberg, Andersson, and Shibli (2002)	4 Events (1999 IIHF Ice Hockey, World Judo Championship, World Indoor Climbing and the World Championship in Nordic Ski Championships)	Norway, UK	4167	C, E	I		✓	✓	✓
Taks, Chalip, Green, Kesenne, and Martyn (2009)	2005 Pan American Junior Athletics Championships	USA	415	B	I, II, V, VI, VII	✓	✓	✓	✓

Table 1 (continued)

Author (date)	Event name	Country	Sample size	Method	Data analysis	Demographic	Geographic	Psychographic	Behavioral
Tang and Turco (2001)	Kodak Albuquerque International Balloon Fiesta	USA	472	E	I, VII	✓		✓	✓
Taylor and Shanka (2002)	A Taste of the Valley	Australia	598	B	I, IV, V, VII	✓	✓	✓	✓
Thompson and Schofield (2009)	Eritin Gurvan Naadam	Mongolia	539	B, E	I, III, IV, V, VI	✓	✓	✓	✓
Uysal et al. (1993)	Travelers Rest's County Corn Festival	USA	174	E	I, IV, V, XII	✓	✓	✓	✓
Van Zyl and Botha (2003)	Aardklop National Arts Festival	South Africa	240	B, E	IV, V	✓	✓	✓	✓
Walo, Bull, and Breen (1996)	NCUSA Games	Australia	400	B, E	I, III	✓	✓	✓	✓
Wickham and Kerstetter (2000)	First Night®	USA	184	A, B	I, VIII	✓	✓	✓	✓
Woodsnam, Elroy, and Van Winkle (2009)	Winnipeg Fringe Theatre Festival	Canada	307	A, B	I, VII	✓	✓	✓	✓
Wooten and Norman (2008)	Kentuck Festival of the Arts	USA	144	E	I, II, IV, V	✓	✓	✓	✓
Xie (2003)	Applebutter Festival	USA	582	B	I, III	✓	✓	✓	✓
Xu and Pegg (2007)	2005 Australian University Games	Australia	1039	B	I	✓	✓	✓	✓
Yeung and Yee (2010)	Chinese New Year Festival	China	250	B	I, VII	✓	✓	✓	✓
Yuan, Cai, Morrison, and Linton (2005)	Undisclosed regional wine and food festival	USA	501	B	I, IV, V, XI	✓	✓	✓	✓

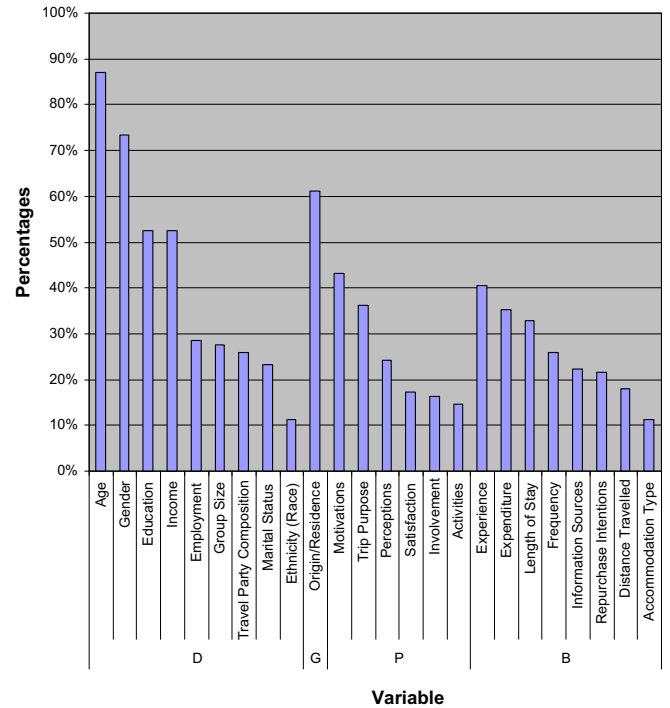


Fig. 1. Segmentation variables used by event researchers.

analysis techniques employed (see Table 2). Larger sample sizes were observed for studies employing cluster analysis and regressions with an average sample size of 800 and smaller sample sizes were observed for studies employing discriminant analysis, correlations, factor analysis and *t*-tests. It was noted that only three of the data analysis techniques utilized by event researchers (*t*-tests, factor analysis, and analysis of variance) were significantly different from the average sample size.

4. Discussion

Market segmentation presents an opportunity for event tourism in that it profiles the event attendees that can be targeted through appropriate marketing mixes. Despite many academic papers in the event segmentation literature seeking to segment attendees, this is the first known paper that has aimed to categorize studies as a reference point for current academics and practitioners.

This paper provides a detailed analysis for event researchers on the market segmentation approach utilized by past researchers. It

Table 2 Sample sizes.

Data analysis technique	Number of studies using this technique	Average sample size analyzed	Sig.
Descriptive statistics	111	682.6	.957, ns
Chi-square	27	652.6	.357, ns
<i>t</i> -test	29	492.1	.043*
Factor analysis	48	460.6	.001*
Analysis of variance	38	444.4	.004*
Cluster analysis	16	808.8	.146, ns
Regression	25	806.4	.152, ns
Correlation analysis	9	439.0	.196, ns
Discriminant analysis	5	400.4	.249, ns
Qualitative	4	617.5	.433, ns
Post-hoc analysis	5	474.2	.244, ns
Other	11	548.9	.448, ns

Note: ns = not significant. \* = significant *p* < .05.

also provides guidance to researchers on the recommended adequate sample size and data analysis approaches. A total of 120 papers from the event segmentation literature were reviewed. It was felt that a summary of key characteristics would provide researchers with a useful reference guide to previous studies. For example, if a researcher is aiming to identify which of the segmentation variables were most applicable to their study, they can see from Fig. 1 that variables such as age, gender and origin (place of residence) are the most frequently mentioned. Furthermore, if the researcher is considering a specific data analysis technique, they can determine what has been utilized. For example, despite descriptive statistics being frequently applied, the research suggests that this is often in combination with other methods such as a factor analysis or chi-square tests.

A contribution to the literature from this review is that multiple segmentation bases should be employed when seeking to classify event attendees. Whilst many authors (e.g. Formica & Uysal, 1998; Mohr et al., 1993; Uysal et al., 1993) have suggested that psychographics (e.g. motivations) should be the emphasis of research, this review suggests that other segmentation bases should be used to classify attendees. Segmentation based on a single base may not be representative of all visitors (e.g. Bowen, 1998; Loker & Perdue, 1992; Moscardo, Pearce, & Morrison, 2001). As argued by March and Woodside (2005), people in the same demographic groups can also have very different psychographic profiles. Further Loker and Perdue (1992) argue that combining descriptive variables (e.g. demographic and/or geographic segmentation) with predictive factors (e.g. psychographic and/or behavioral segmentation) provides a clearer insight into marketing and communication strategy formulation. Moscardo et al. (2001) also claim that the use of geographic variables such as usual residence provides important descriptors to use in the development of marketing strategies and should be used in combination with psychographic or behavioral segmentation.

Demographics, unlike psychographic and geographic variables, are directly observable (Scott & Parfitt, 2004) and hence more able to guide managerial decision making. As noted by Tkaczynski et al. (2009), demographic factors are useful for classifying tourists into key groups. These groups are used to guide key marketing decisions, for example, where best to allocate limited budgets. While demographic variables are not able to predict which types of tourists will use a service, they are likely to continue to play an important role in managerial decision making.

Within the marketing literature (e.g. Aaker, Kumar, & Day, 2003; Hair, Black, Babin, Anderson, & Tatham, 2006; Malhotra, 2004) there have been several data collection methods and data analysis techniques that have been recommended for segmentation studies. These methods were mirrored in the events literature. Getz (2005, p. 336), in his review of market research in the event sector, argues that visitor surveys are the most frequently applied method. Getz (2005, p. 336) concludes that 'whether by self-completed questionnaire, direct interview, or logbooks, visitor surveys provide essential information for marketing and evaluation of events and event tourism'. However, a variety of other data collection methods such as in-depth interviews and observations have also been used by event tourism academics (Getz, 2005, 2007; Goldblatt, 2008; Hoyle, 2002; Veal, 2005). From our review, it appears that visitor surveys dominate as a data collection method in event segmentation studies. We note here that little has been published within events marketing textbooks in regards to recommended data analysis techniques for attendee profiling suggesting a need for work in this area.

A further contribution to this research has been the determination that there is no significant relationship between the year of publication and sample size. Whilst data analysis packages such as

SPSS has facilitated the level of analysis in studies published recently as opposed to the early 1990s, it can be concluded that event segmentation researchers are using similar sample sizes regardless of the year of publication. However, as it was noted that data analysis techniques such as factor analysis and analysis of variance have been found to be statistically significantly different based on the study's publication year, it can be concluded that the increasing development of certain data analysis applications in computer packages such as SPSS may be facilitating the level of analysis for current event segmentation researchers.

## 5. Limitations and opportunities for future research

Whilst this research has synthesized the events segmentation literature, it should be noted that there are a few limitations. It is quite possible that there are industry reports and other event segmentation studies conducted by practitioners that have not been published in the academic literature. Based on this issue, this study aimed to classify only academic papers addressing events. A second limitation of this research is that whilst many event segmentation papers have been reviewed, these studies are often tourist focussed which could be a serious omission. Future research needs to incorporate residents if the event attracts a proportion of residents.

The review acknowledged that several different segmentation variables were utilized. This research has identified 24 variables that were more dominant than others. An opportunity for future research is to interview event stakeholders of an event to identify which variables they consider are most useful for profiling attendees. The concept of stakeholder theory is growing in significance in the events literature (e.g. Getz, 2005, 2007; Goldblatt, 2008; Merrilees, Getz, & O'Brien, 2005; Spiropoulos, Gargalianos, & Sotiriadou, 2006) and future research should incorporate stakeholder views to obtain a more holistic understanding of the types of attendees that are attracted to an event.

It was noted in our review that whilst 12 data analysis techniques have been employed, several methods (e.g. descriptive statistics, factor analysis and chi-square tests) dominate the approach researchers have employed to market segmentation. Other techniques, e.g. TwoStep® cluster analysis (Hsu, Kang, & Lam, 2006; Rosenbaum & Spears, 2006; Tkaczynski et al., 2009) have been employed in other fields such as destination segmentation suggesting there is an opportunity for future research is to ascertain which methods are most predictive of future event attendees.

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