



Bar crawls, foam parties, and clubbing networks: Mapping the risk environment of a Mediterranean nightlife resort



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ARTICLE INFO

Article history:

Received 1 April 2013

Accepted 4 May 2013

Keywords:

Nightlife tourism
Clubbing travelers
Risk networks
Binge drinking
Recreational drugs

ABSTRACT

Mediterranean nightlife destinations draw millions of visitors annually with promises of sun, sea, sand, unrestricted drinking, and round-the-clock partying. In these risk environments young adults engage in excessive drinking, recreational drugs, and casual sex. This study is designed to elucidate the physical space of clubbing settings where health and safety risks unfold; delineate the social organization of risk and identify stakeholders and primary players involved; ascertain risk exchanges and transactions among these populations; and explore potential multifaceted solutions for harm reduction. Ethnographic assessment of risk environments in Ayia Napa, Cyprus included participant and non-participant observations, geomapping, informal discussions, and secondary data collection. Results revealed an array of individual, public health, and safety risks exacerbated by characteristics of the spatial environment. Increased hospital visits due to drinking, substance use, or acts of violence along with incidence of STIs/HIV, unplanned pregnancies, sexual assaults, and even death, were revealed during data analysis.

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1. Introduction

In growing numbers, young adults are flocking to clubbing and nightlife destinations around the world for the purpose of following famous DJs, participating in local music scenes, and round-the-clock partying characterized by bar crawls, foam parties, and sailing party cruises where the main attractions are cheap free-flowing alcohol and recreational drugs (Tutenges & Hesse, 2008). Youth travel, in southern European resorts in particular, frequently involves excessive drinking and resultant adverse outcomes, such as blackouts, falls/injuries, accidents, vandalism, fights, sexual risk-taking or assault, and even death (Carter et al., 1997; Recassens, 2008; Roberts, 2009). Mirroring a number of coastal European locales in the Mediterranean where this particular type of travel activity is increasing, the Cypriot resort town of Ayia Napa has not only developed into a “clubbing” capital but has also started to experience a series of health ramifications for travelers and locals alike.

Empirical evidence from qualitative as well as quantitative studies underscores the public health importance of social and physical environments—which hold particularly true for clubbing destinations, regardless of where they are (Andrews, 2005; Apostolopoulos, Sönmez,

& Yu, 2002; Bell, 2008; Calafat & Juan, 2003; Carter et al., 1997; Ford & Eiser, 1996). Significant increases have been recorded in youth substance misuse (Bellis, Hale, Bennett, Chaudry, & Kilfoyle, 2000; Bellis, Hughes, Bennett, & Thomson, 2003; Bellis, Hughes, Calafat, Juan, & Schnitzer, 2009; Bellis, Hughes, Thomson, & Bennett, 2004; Hayward & Hobbs, 2007; Hesse, Tutenges, Schlieve, & Reinholdt, 2008; Hughes, Bellis, McVeigh, & Thomson, 2004; Tutenges & Hesse, 2008) as well as sexual risk-taking (Apostolopoulos et al., 2002; Hobson & Josiam, 1992, 1996; Josiam, Hobson, Dietrich, & Smeaton, 1998; Matilla, Apostolopoulos, Sönmez, Yu, & Sasidharan, 2001; Sönmez et al., 2006) and accidents and violence resulting from intoxication (Bellis et al., 2000; Briggs, Tutenges, Armitage, & Panchev, 2011; Downing et al., 2011; Hughes et al., 2008; Pritchard and Morgan, 1996; Thomas, 2006; Sönmez, Theocharous, Apostolopoulos, Nathanael, and Mathioudakis, 2009) during holidays. Club-goers, in particular, are over 10 times more likely to try stimulant drugs compared with young people in the general population (EMCDDA, 2006). It might be surmised that clubbing vacationers are more likely to experiment with recreational drugs during their vacations than other types of holiday makers. Clubbing destinations are purposefully packaged and aggressively marketed by transnational tour operators [TO] to that segment of youth travelers seeking hedonistic playgrounds that offer unrestrained drinking and round-the-clock partying with others of their own age, a host of activities that permit behaviors unconstrained by social norms at home, and music and dancing to offer a release from customs of the civilized social spaces of daily life (Bellis et al., 2000; Duff, 2008, 2010; Ford & Eiser,

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1996; Hayward & Hobbs, 2007; Hollands, 1995; Pizam, Reichel, & Uriely, 2001; Pritchard and Morgan, 1996; Redmon, 2003; Ryan & Martin, 2001). Recreational drugs and alcohol in large quantities are sometimes consumed in order to facilitate or enhance other activities, such as partying, sex, or social interaction or to increase spontaneity and a sense of connectedness with oneself, one's friends, or even strangers (Duff, 2008). In this context, informal, multimodal social networks have evolved with sensation-seeking youth travelers at their core who travel to different destinations for similar experiences involving excessive drinking and round-the-clock partying. Other network members include international and local representatives of the tourism sector that package, market, and facilitate clubbing tourism activity and a host of others who randomly move through these networks. Beyond these immediate network members exist a broader, more complex, and dynamic web of stakeholders that include both sending and receiving regions, local businesses, members of local communities, healthcare providers at both receiving and sending regions, and law enforcement organizations—to name a few.

The consequences of excessive drinking on young adults in nightlife urban and resort settings have been well documented (Bell, 2008; Calafat et al., 2010; Grazian, 2008; Hadfield, 2009; Hughes, Bellis, et al., 2011; Hughes et al., 2008; Hughes, Quigg, et al., 2011; Jayne, Valentine, & Holloway, 2008; Tutenges, 2009, 2011). Yet, the role of the multilayered and intertwined nightlife and tourism sectors (e.g., bars, resorts, TOs) and various other stakeholders as well as the potential effects of associated social and risk networks that characterize clubbing destinations on young people's safety and health require greater understanding using a complexity science approach (von Bertalanffy, 1968).

Within the paradigms of healthy settings and social networks (Stokols, Grzywacz, McMahan, & Phillips, 2003; World Health Organization, 1986) frequently used by public health researchers, this paper views young adults' elevated nightlife risks as attributable not only to individual factors (i.e., excessive alcohol consumption), but also to the environment that the nightlife and tourism sectors create for the purpose of revenue maximization (Graça, 2008; Graham, Bernards, Osgood, & Wells, 2006; Lindsay, 2005; Pritchard and Morgan, 1996; Roberts, 2009) as well as the broad complex and dynamic system of the tourism sector involving numerous stakeholders in the creation of the settings and opportunities to cater to this segment of travelers. As a response to increasing health and safety problems linked to behavioral risk taking of youth travelers, Newtonian approaches to understanding the underlying causes of these risk taking behaviors have utilized deterministic, mechanistic, and reductionist principles (Dekker, 2011; Zimmerman, Lindberg, & Plsek, 2001). This paradigm singles out only a few components—such as risk perceptions or risk taking behaviors—of usually multilevel and dynamic health problems and analyzes them in isolation, leading to predictable outcomes (Diez Roux, 2012; Resnicow & Page, 2008). This approach presents not only an incomplete picture of the problem under investigation but also one that is mostly inaccurate (Ness, Koopman, & Roberts, 2007; Urban, Osgood, & Mabry, 2011). Prevalent public-health conceptual models (i.e., disease pathways, interaction)—designed to apply linear statistical techniques in order to understand proportional relations among variables that assume unidirectional causality—have guided researchers toward which factors to include in our conceptual frameworks and their possible interactions (Diez Roux, 2011, 2012; Urban et al., 2011; Zimmerman et al., 2001). Consequently, these models have defined the direction of current efforts to minimize risks, such as health education for youth travelers. While these approaches may have some benefits, when we need to delineate the attributes and functions of specific components of a relatively simple health problem (Eve, Horsfall, & Lee, 1997), a more complete understanding of separate elements of “problems of organized complexity” (Weaver, 1948) does not necessarily lead to a better understanding of the behavior of a complex system as a whole, because “the whole is not always the sum of its parts” (Miller & Page, 2007). The methodological and analytical tools of

such approaches can neither take into account the interrelationships, reciprocity, and the frequently discontinuous nature of links that underlie various health and safety risks nor can they fully recognize pathways linking their various levels (Galea, Riddle, & Kaplan, 2010; Homer & Hirsch, 2006). Reductionist prevention-science methods are not designed to put all the pieces together to yield the much needed big picture. This inaccurate conceptualization of complex and dynamic health problems might also be an explanation for the usually modest proportion of explained variance achieved by traditional prevention research (Trost et al., 2002).

In this paper, we intend to: (a) elucidate the physical space of clubbing settings where health and safety risks unfold for travelers; (b) delineate the social organization of risk and identify the stakeholders involved; (c) ascertain the risk exchanges and transactions among primary players; (d) explore types of adjustments to structural influences with potential for harm reduction; and (e) propose the use of complexity science to understand the dynamic and complex nature of international nightlife tourism that leads to health and safety risks.

2. Clubbing travel and excessive drinking at Mediterranean resorts

Although nightlife and party-focused tourism takes place in many locations around the world, the primary spots for clubbing travel span across the Mediterranean, Aegean, and Ionian seas. Established destinations are located in Spain (Ibiza, Mallorca), Greece (Crete, Corfu, Kos, Rhodes, Zakynthos) and Cyprus (Ayia Napa), with emerging destinations in Bulgaria (Sunny Beach), Slovenia (Izola), Turkey (Alanya, Bodrum, Gümbet, Marmaris), and Egypt (Sharm el Sheikh). Among the most established destinations, Spain's Balearic Islands in particular have been popular for international and national travel and have been receiving large numbers of club-goers. Mallorca receives over nine million visitors annually, mainly from Germany and the UK, with over one and a half million visitors between the ages of 15 and 24 and three and a half million between 25 and 44 (Bellis et al., 2009). Ibiza welcomes one and a half million visitors each summer who are mostly young travelers from the UK, Germany, Italy, and other parts of Spain who are drawn to its international reputation as a nightlife resort, modern dance culture, and ecstasy use (Bellis et al., 2009).

Increases in clubbing destinations represent a response to the immense growth in sensation-seeking youth travelers originating primarily in the UK and Scandinavian countries (primarily Norway, Denmark, and Sweden) who travel to warm destinations for the purpose of partying. International travel to participate in nightlife is an essential element in club-goers functioning as carriers of recreational drug and club cultures around the world. More opportunities for low-cost air travel have allowed more young people to spend more recreational time in other countries (Bellis et al., 2009; Club and Morgan, 1996).

Some cross-cultural research suggests that young people's indulgence in excessive alcohol consumption, frequent or constant partying, and sexual risk behaviors established at home are replicated and even exacerbated at vacation settings (Apostolopoulos et al., 2002; Smith & Rosenthal, 1997). Others have found that sexual behavior on holiday differs from that at home when freedom from social constraints allows individuals to temporarily abandon behavioral norms (Thomas, 2006). Time compression and liminality lead to a rapid establishment of trust in new relationships allowing women to have sex with new partners faster while on holiday than they do at home, which has significant implications for sexual risk (Thomas, 2006). Young tourists originating mainly from Western countries often prefer sun and beach holidays (Richards & Wilson, 2003; WTO, 2009) and frequently include drinking and casual sex in their travel plans. While on holiday, travelers may engage in sexual activities not only with each other, but also with PR staff, strippers, and sexworkers (Briggs et al., 2011).

Youth travel in various contexts has been examined in terms of its health-risk intentions/behaviors as well as the role of advertising in the selling of carefree holidays. Ads for hedonistic holidays that stress

the availability of alcohol and sex were found to be instrumental in influencing travelers' decisions in selecting 'sun and fun' destinations; in fact tourists are often sold images of destinations steeped in the usual sun, sea, sand, and sex with the addition of spirits (Calafat et al., 2010).

Studies with young travelers from Great Britain and New Zealand have brought to light excessive levels of alcohol consumption and casual sex while away from home (Ford & Eiser, 1996; Ryan & Martin, 2001; Ryan, Robertson, Page, & Kearsley, 1996). Studies of North American spring-breakers and Australian "schoolies" found similar results (Apostolopoulos et al., 2002; Hobson & Josiam, 1992, 1996; Josiam et al., 1998; Maticka-Tyndale, Herold, & Mewhinney, 1998; Maticka-Tyndale, Herold, & Oppermann, 2003; Matilla et al., 2001; Sönmez et al., 2006). A growing body of literature documents increasing clubbing-tourism activity in southern European destinations characterized by binge drinking, sexual risk-taking, and recreational drugs (Bell, 2008; Calafat et al., 2010; Grazian, 2008; Hadfield, 2009; Hughes, Bellis, et al., 2011; Hughes et al., 2008; Hughes, Quigg, et al., 2011; Jayne et al., 2008; Tutenges, 2009, 2011). In these studies, not only was travel found to increase the probability of sexual activity, but also young travelers were found to equate vacation-time with loosening of one's sense of responsibility while offering opportunities for unbridled drinking and sexual activity—or a time when anything is permissible (Carter et al., 1997). These high-risk behaviors were linked to the 'situational disinhibition' experienced by tourists in settings that encourage sexual and emotional transience as well as liminality (Ford & Eiser, 1996). Risky behaviors in vacation settings were also associated with situational factors, tourists' expectations of certain types of experiences, peer pressure, risky leisure choices (clubbing, excessive drinking), as well as behavioral intentions for such activities.

Young adults' engagement in risk behaviors, particularly in risk-laden environments, can lead to tragic consequences. This population has been associated with dangerous activities such as excessive alcohol and recreational drug use, which then lead to physical risk-taking (e.g., jumping from hotel balconies), violent behaviors (e.g., sexual assault, fights), and driving while intoxicated leading to fatal accidents (Pizam et al., 2001). Data for just one year (2010–2011) on Britons on holiday at Mediterranean clubbing resorts are staggering: out of 12.3 million Britons who visited Spain, 1,745 police arrests, 1,024 hospitalizations, 19 reported rapes, and 1,639 deaths; for 2.3 million Britons who visited Greece, 112 police arrests, 452 hospitalizations, 15 reported rapes, and 133 deaths; and 1.3 million Britons who visited Cyprus, 150 police arrests, 113 hospitalizations, four reported rapes, and 216 deaths were recorded (Foreign and Commonwealth Office, 2011). In one particular study, researchers predicted that one in every 20 of the thousands of holidaymakers in Mallorca or Ibiza would be involved in some type of violence (Hughes et al., 2008).

Considering the foregoing, a clear focus on situational and social contexts of nightlife and clubbing venues, rather than just individual tourist behavior, has the potential to contribute more to the puzzle of the etiology of young adults' health risk behaviors, which in turn can assist in developing harm reduction strategies.

3. Methods

3.1. Study setting

The town of Ayia Napa in Cyprus (southeastern Mediterranean island-state) was selected as the study site. In the 1970s Ayia Napa was transformed from an agricultural region into a rapidly-growing resort catering to a mass, 'sun-sea-sand' tourist market mainly for youth seeking nightlife experiences. By the early 1990s, Ayia Napa was renowned as the clubbing capital of the Mediterranean, evolving into a dominant nightscape attraction of the garage club scene,

and became very popular with British grime, house, and garage DJs and MCs for holidays and gigs in its venues. By the early 2000s, it had grown into a clubber's paradise, competing with Ibiza, Rhodes, and Corfu, drawing over 400,000 British, Scandinavians (primarily Danish, Swedish, Norwegian), and Russian tourists annually between June and October alone (Cyprus Tourism Organization, 2008).

3.2. Data collection

A rapid ethnographic assessment was conducted over a period of five weeks between July and August in 2009 with four trained field researchers following Institutional Review Board approval of the study by the Cyprus University of Technology. *Participant* and *non-participant observations* were used to uncover the human-social geography of the clubbing environment and to capture interactions of tourists within risk settings. *Non-participant observation* took place during both daytimes and nighttimes at the town's central square and its surrounding streets where most of the drinking and dancing (D and D) venues, clubs and bars are located, along Nissi beach (the town's most popular), and at randomly selected hotel pool-fronts. A series of photographs was taken along with fieldnotes of observations. To conduct *participant observation*, four ethnographers took several of the scheduled boat trips, participated in both daytime and nighttime beach parties, frequented randomly selected nightclubs, bars and pubs, and attended three after-parties beginning at around 3 am and continuing until morning. Ethnographers were instructed not to drink alcohol and to explain to individuals they spoke with that they were conducting research on clubbing vacationers.

Geomapping was employed to understand the social and spatial patterns of the built environments where risks unfold in order to place clubbers within these risk spaces and match the human and social dimensions with the physical geography of risk. Ethnographers recorded spatial patterns of the built environment in terms of streets, public squares, D and D venues, accommodation and eating establishments, and the general topography, design and layout of the physical risk space to later match with populations and their risk interactions. Additionally, *informal discussions* were engaged in with key informants, gatekeepers, stakeholders, and tourists to get a better understanding of the overall clubbing environment, the social dynamics of the nightlife environment, key players, and the extent of risk interactions and exchanges the participants had engaged in or witnessed. Respondent-driven sampling procedures were used to recruit 38 participants for these discussions. Following this first phase of ethnography and data evaluation, questions were developed for the purpose of conducting targeted *semi-structured interviews* with 28 key informants, tourism stakeholders such as government and law enforcement officials, clubbing tourists, and staff employed by D and D venues and hospitality businesses (Table 1). All participants were explained the purpose of the research. Participant names were not recorded to assure confidentiality for tourism stakeholders and anonymity for vacationers. Those vacationers who appeared too drunk to understand questions or implications of their participation were not interviewed.

Secondary data collection involved obtaining: records from police departments on drug use and violence; local hospitals on reports and records of injuries, emergency room visits, sexual assaults, and abortions performed on holiday reps and public relations (PR) staff as well as tourists; randomly-selected pharmacies for contraception methods requested, including morning-after pills; local government offices on tourist arrivals and revenues; various tourism enterprises such as hotels, apartments, pensions, and restaurants; Internet postings related to promotions by TOs; publicity materials distributed by members of the leisure industry, such as TO brochures and flyers; and media reports and newspaper articles.

Table 1
Sources of collected data.

Sources	Informal discussions	Semi-structured interviews
Foreign clubbing tourists (visibly sober)	3	10
Foreign clubbing tourists (visibly intoxicated)	10	–
Drink and dance venue management	–	4
Drink and dance venue staff	1	6
Masters of ceremonies (MCs)	–	2
Local representatives of TOs	–	1
Accommodation/food and beverage management/staff	4	4
Sexshop staff	1	–
Taxi drivers	2	–
Life guards	–	4
Journalists	–	2
Pharmacists	2	–
Hospital staff	1	–
Government officials	–	4
Law enforcement/narcotics unit	–	1
British military police	2	–
United Nations soldiers	2	–
Total	28	38

3.3. Data analysis

Grounded in social ecological models, our analytical framework focused on the community context of Ayia Napa, the social context of the resort, the tourism sector's organizational context, the environmental context, and interpersonal and intrapersonal factors to determine health risks. Field notes were transcribed and entered into NVivo (Version 8) for textual analysis. Preliminary thematic coding was used to establish relationships between the risk-enabling space of Ayia Napa's nightlife, populations and social networks, and risks and consequences of risk behaviors leading to health and safety problems. An open coding approach was used to bracket text sections into themes (Emerson, Fretz, & Shaw, 1995). The nature of the data warranted multilayered coding of text into several themes following the establishment of inter-coder reliability and validity (Denzin & Lincoln, 1994), which was repeated as new coding categories of inquiry emerged. Once preliminary thematic bracketing was completed, data analysis aimed to complete four tasks: (1) axial coding and memoing to explore themes and relationships between them for clubbing spaces and nightlife activities; engagement of travelers with these milieux; their drinking and sexual behaviors; and relationships and interactions between clubbing tourists, TO reps, D and D venue staff, and locals along with their consequences; and various effects of drinking behaviors; (2) thick descriptions of the clubbing environment for additional details; (3) explanations of how nightlife venues and the overall clubbing context influence drinking behaviors and sexual interactions and expose populations to risk; and (4) conceptual mapping to graphically explore relationships among foregoing themes.

4. Results and discussion

Findings shed light on the sociocultural organization, structure, and topography of the physical and social context of Ayia Napa's nightlife and clubbing tourism and reveal that as one of the Mediterranean's most popular clubbing destinations, Ayia Napa's nightlife resort setting presents multiple and high risks for young adults. Findings delineate the ways this risk-enabling space increases the vulnerability of foreign youth travelers and locals to alcohol bingeing, drug use, and STI/HIV risk. They also uncover the multitude of intertwined populations and their informal multimodal social and risk networks, and ascertain interactions among structural, spatial, sexual, network, psychosocial, and sociodemographic properties and processes as well as their role in STI risk exposure and potential acquisition and other health risks.

4.1. Risk-enabling space

The risk-enabling space of Ayia Napa's nightlife was viewed broadly to include not only the resort topography, geomorphology, and climate but also the Cypriot institutional framework, policies of travel corporations, and related Internet websites (Table 2).

Geomapping revealed that Ayia Napa is divided into districts based on clubbing tourists' activities and times of day they take place. The primary *dance and drinking district* at and around the town's main square (Seferis Square) includes nearly 250 bars and pubs and D and D venues (e.g., Castle, Mythology, Abyss, Aqua Club, Buzz, Gas Club, Sun City, BedRock Inn, Mambo Bar, Titanic Pub), 10 discos or night clubs, 5 strip clubs or cabarets, about 10 bars dedicated to specific nationalities (e.g., Scottish, Irish, Scandinavian, and Norwegian pubs), and about 174 eateries, including restaurants, snack bars, and cafeterias.

The clubs and D and D venues attract well-known DJs (e.g., Ministry of Sound, Mauro Picotto, Tall Paul, Mark Night, Gavyn Mytchel, Dubfire/Deep Fish, Supa D, Slim Ting, Funky Junky, Candy Shop, Ghetto, Griminal, Roll Deep, Spyro, B.O.D.R., Bass Boy, DJ Nightmare) and droves of their followers. Because the main venues are located at the center of Ayia Napa in a square formation, bar crawls are made easier. Groups of young clubbers hopping from one to another involve heavy drinking particularly because of ongoing alcohol specials (e.g., several shots for €2–5, fishbowls for €10–15, 2-for-1 prices, half-price cocktails). It is also in this region that fights, injuries, and accidents occur with greater frequency and disruptive behaviors and sexual behaviors are often observed in public.

In the *beach district*, lie Nissi Beach (among Europe's most popular beaches) and Sandy Beach. These areas come alive with tourists, life-guards, DJs, and barmen as foam parties, beach parties, various competitions, and other D and D events get underway each day. Various clubs hold their own beach parties throughout the week. Also occurring in

Table 2
Risk-enabling space.

Components	Characteristics
Travel corporate policies	<ul style="list-style-type: none"> Marketing strategies of TOs specializing in clubbing tours for demographic segment Lack of health advice or warnings against health and safety risks
Cypriot institutional framework	<ul style="list-style-type: none"> Tourism policies sanctioned by government and tourism stakeholders Enforcement/lack of enforcement of health and safety legislation Policies of tourism and city planning departments Available health services at tourist destinations such as Ayia Napa
Resort topography	<ul style="list-style-type: none"> Presence of and assistance from law enforcement Nearly 250 bars/pubs, clubs/discos, and D&D venues About 10 bars dedicated to nationalities Strip clubs, water parks, public squares (e.g., Seferis) and main strolling strips Variety of accommodation establishments (hotels, pensions, apartments) and about 174 eateries including restaurants, snack bars, and cafeterias Organized partying events by pools, on beach and boats (e.g., Ayia Napa Festival, raves, poolside/beach foam parties, private room parties, after parties, boat/cruise parties, ceremonies, music events, competitions, water sports, Bungee jumps, scuba diving, paragliding, and water-skiing)
Geomorphology and climate	<ul style="list-style-type: none"> High temperatures that attract northern European tourists (May–October > 80; July–August > 90) Sea, sand, and sun type of mass tourism activity
Internet	<ul style="list-style-type: none"> Numerous promotion sites run by TOs specializing in clubbing tours (e.g., Club 18–30, ClubbingTours) Social network sites, with particular emphasis on those that encourage clubbing (e.g., DontStayIn.com, MixMag.net, Skiddle.com, HarderFaster.net, WhereCanWeGo.com, Ents24.com, ClubTickets.com)

this district is a variety of water sports activities. The crowds that gather here also attract minor crime from time to time.

“...we hold a beach party at Sandy Beach every Tuesday; the price is €49 for three hours of unlimited alcohol and food...”

[Club staff member, Ayia Napa, 2008]

Related but distinct is the *cruise district* which is located along the town harbor (often referred to as Limanaki) and where boat parties (e.g., Fantasy Boat Party) are initiated, often beginning with a pre-party. Cruise boats, such as the three-level Napa Queen, are equipped with several bars, dance floors, lounge areas, showers, cabins, and changing areas. The boats make several swimming stops along the Mediterranean, offering guests entertainment via DJs and other entertainers, party games, and watersports. Boat parties are well known for giving tourists the opportunity to continue at sea the same drinking, dancing, and sexual activities they engage in on land. Several of these parties last only from 9 to 11 pm and charge €5, which includes one drink. Finally, *after parties* are usually organized at various types of accommodations surrounding the town of Ayia Napa. These parties, which usually conclude the day's and evening's partying activities involve heavy drinking, dancing and recreational drug use, and are often viewed as sex parties at hotel rooms, pool sides, at hotel or apartment hot tubs, and garden areas (Fig. 1).

4.2. The 24-hour party

A temporal component of Ayia Napa's risk-enabling space involves the manner in which parts of the 24-hour day are designated for certain activities. Nighttime activities begin around 6 pm with bar crawls, which can involve over 200 people at times, and continue with visits to clubs, attending parties, participating in or watching dance and music

competitions, then going to after parties that can continue until about 6 am. Following a few hours of sleep, daytime activities begin again around 10 am with drinking, socializing, and sunbathing by the hotel or apartment poolside and continue until about 6 pm with a variety of activities including water sports (e.g., scuba diving, jet skiing, paragliding), land sports (e.g., Bungee jumping, quad biking), a number of simultaneous parties (e.g., foam, beach/pool, day cruise), and contests and competitions (e.g., wet T-shirt, drinking, dancing). While not everyone follows this schedule, these activities are available for those able and interested in participating and want a constant party atmosphere. Considering how late in the night (or early in the morning) travelers get to sleep, the level of sleep deprivation is not surprising. Further, they spend prolonged periods of time under constant sun exposure, while they continue to consume large quantities of alcohol. Participation in various water and land sports activities hold the potential for serious accidents, particularly considering the amount of alcohol consumed often in temperatures exceeding 90°F. The next day, the same schedule is followed but as evening activities begin, clubbers are already sleep deprived and intoxicated at varying levels from the day's activities. One clubber detailed her day:

“...wake up late in the morning, at around 3 pm go to Nissi Beach to swim or have fun, find out what's happening at night, which DJ is playing at the bar...around 5–6 pm leave to start getting ready for the night...some people go to boat parties and leave around 7–8 pm and get back about midnight...this is when the main square is full... you see groups of people coming from all around the area and entering bars...there is very loud music and people are dancing and flirting everywhere...bars have music until about 2 am, that's when we go to the clubs to continue with fun...we get free tickets and it's like a chain...go to this party, to get tickets for this bar, go to this bar to get



Fig. 1. Ayia Napa's party zones.

free tickets for this club'...clubs only stay open until 4:30 am...then we continue to some after party places by hotel bars or someplace like that until 8 am."

[Clubbing tourist, Ayia Napa, 2008]

"...Top DJs and promoters have flocked to Ayia Napa and with all the gorgeous beaches, bodies and bars who can blame them?"

[Freestyle 2003 brochure's Cyprus section]

4.3. At-risk populations and networks

Data revealed a network of populations that were categorized as primary risk suppliers, primary risk consumers, risk intermediaries, and peripheral players. *Primary risk suppliers* include TOs and TAs that sell risk-filled travel packages; their onsite holiday representatives (holiday reps) who encourage tourists to drink and party round-the-clock; owners of D and D venues that engage in hard-selling of alcohol to maximize profits via drink specials that use cheap liquor; venue decoration; staff working at D and D venues; local businesses that offer opportunities for extreme sports, including bungee jumping, jet skis, and parasailing; businesses that rent quad bikes to tourists who are often intoxicated; local drug suppliers; visiting and local gangs; and members of the local mafia (Table 3).

A particular focus on the TOs/TAs and holiday reps is warranted here. Among those selling holidays in the Mediterranean with a heavy emphasis on nightlife and the bar and club scene, Club 18–30 (Thomas Cook), 2wenty's Holidays (First Choice Holidays), Thomson, Freestyle (TUI/UK), and Olympic Holidays are considered market leaders. All-inclusive packages offering cheap airfare, accommodation, meals, and all-you-can drink opportunities are gaining popularity with prices starting as low as €250 for a one-week holiday. TOs/TAs heighten the sensational, ritualized experience of clubbing and attract young holidaymakers with graphic quotes focused on round-the-clock drinking and partying, as evidenced by excerpts from their promotional materials and various newspaper reports below. These quotes offer evidence regarding the key role the leisure industry plays in generating risk-taking behaviors of young holiday makers:

"...You get more for your moolah when you party with 2wenty's, with top Reps, bar crawls, booze cruises and loads of shape-throwing on the dance floor".

[2wenty's, 2009]

"...Ayia Napa rocks 24/7, so if you want a peaceful holiday then book a coach tour with your Granny!...Both day and night the action never stops, the question is have you got what it takes?"

[Club 18–30, 2003]

"...Now there are nights out, and there are Freestyle nights out. We've got bar crawls that take in some of the best venues in places like Ayia Napa. We've got parties with every prefix, including beach, pool and foam. And we've got cruises that set sail with a generous supply of food, drink and people on the same wavelength as you. In Ayia Napa we can sort all your club tickets for you. Plus there are special events like the wet and wild water party at Nissi Beach, and the 50 cents/night when all your drinks cost, you guessed it, just 50 cents. Just remember to re-set your body clock—in this party playground, sleep is strictly reserved for daytime".

[Freestyle, 2009]

TO/TAs exert enormous power over clubbing destinations because they can control where the crowds go each year. Interviewed venue owners in Ayia Napa expressed how these companies can determine not only which destinations tourists go to, but also which venues and accommodations they stay at while there:

"...there are different TOs for different countries and they have lots of power in their hands...meaning they somehow control the people that travel with them...what they do is find specific accommodations and promote specific bars and clubs...they formulate the typical day of their clients...there are agreements between hotel owners, club owners, and tour operators..."

[Club owner, Ayia Napa, 2008]

TOs/TAs hire large numbers of young people to serve as holiday reps, whose main responsibilities include answering customer questions and solving problems onsite, conducting welcome meetings for new arrivals, organizing events and activities, transferring guests from airports to hotels and back. There is an unwritten job description, however, which involves participating in the hard-selling of alcohol, getting tourists to spend as much money as possible, and in some cases even having sex with tourists. Several quotes from holiday reps from secondary sources confirm this:

"...rule was the more drunk you got the guests, the better they'd think their night out was...guests paid around €35 each to join 100-strong bar crawl, thinking they'd get 1 drink in each of 7 bars...but we knew

Table 3
Key members of clubbing networks.

Title	Description/function
Clubbing tourists	Sensation-seeking youth travelers primarily from northern European and Scandinavian countries, as well as Russians, and Israelis between the ages of 18 and 26 who follow DJs and MCs to various nightlife resort destinations at peak season (June–August) to stay from one to two weeks. Their main goal is to drink, party, and enjoy the sun for as little cost as possible.
Holiday reps	Also known as customer service reps, resort reps, and overseas reps, depending on TOs/TAs they work for. Often meet youth holidaymakers at the airport, present them with useful information, hold welcome meetings, visit hotels on a regular basis to offer guidance and support, display high levels of customer service, resolve problems, guide excursions, complete paperwork, spend time with clubbers, encourage tourists to drink during bar crawls, and at times have sex with tourists.
PR staff	Public Relations staff linked to clubs, open air bars and beach bars in Ayia Napa, mainly females who are provocatively dressed, persuade customers walking past to take advantage of drink specials, using flyers.
MCs/EMCEEs	Master of ceremonies, also known to mean Microphone Controller, Mic Checka, Music Commentator, and the one who Moves the Crowd. Associated with hip-hop music and culture, uses rhyming pre-written or freestyled verses to introduce and praise the DJ s/he works with, to hype up the crowd, pay homage to his/her own stature, or to comment on society. Originated from the dance halls of Jamaica.
DJs	Disk jockeys or deejays, linked to clubs, open air bars, beach bars, and beach parties in Ayia Napa. Responsible for selecting and playing recorded music for audience, hip-hop disk jockeys select and play music using multiple turntables of phonograph records. Main focus is on the music they play, how they mix tracks in and out, and add energy to a track. Build sets by choosing tracks to control crowd's energy level and use beat mixing and beat matching techniques for seamless transition between tracks.
TOs/TAs	Tour operators and travel agents specializing in nightlife/clubbing vacation packages.
Owners/operators of D&D, bar, club venues	Offer events (DJs, MCs, contests) and products (drink specials) to attract clubbing tourists at the destination to their particular venue.
Staff working at venues	Bouncers, bartenders, wait staff working at venues that are in close contact with serving and managing clubbing tourists.

bar owners would be offering 4 shots for price of 1, so guests would actually down 28 drinks each”.

[Holiday rep Nicholas, *Mail Online*, 2008]

“...group of 200 will go to a bar and drink as much as they can as quickly as they can, encouraged by reps who are on commission from bars...at midnight, reps send their charges out into the street, where they go wild...they just abandon them...there's no safe escort back to the hotel”.

[Clarke, *Mail Online*, 2008]

Primary risk consumers include foreign clubbing tourists who come to Ayia Napa; seasonal tourism-sector staff who work in close proximity to risk suppliers; locals who live and work in Ayia Napa; and relationship partners of both tourists and locals who may engage in risk behaviors. Those identified as *risk intermediaries* include owners and managers of local accommodations; personnel who work at local clubs, bars and D and D venues, such as bouncers, bartenders, and public relations (PR) staff who stand outside each venue to persuade customers to accept sales or drink promotions, and attract passers-by with flyers and verbal offers; organizers of party events; MCs and DJs who attract visitors to various venues; and webmasters of various internet websites dedicated to clubbing or moderators of chatroom or blogs designed to attract people to Ayia Napa and other similar clubbing destinations. *Peripheral players* include members of local law-enforcement who respond to complaints, intervene in skirmishes, and arrest individuals for crimes; members of local government, such as local bus drivers, other members of public transportation, or workers who respond to street lighting issues; local first-response emergency workers, ambulance drivers, and hospital emergency-room and other first-aid staff; members of commercial transportation such as taxi drivers; and staff working in the local tourism and hospitality sector, including hotel workers, visitor's information offices, staff working in other tourism businesses, and food and beverage venue staff.

“...last week the [club name] club was shut down by the police, they took their audio equipment and also they took the drinks because they didn't have any license.”

[Member of Anti-Drug Team, Ayia Napa, 2008]

“...two nights ago, the [club name] had very loud music later than they were allowed [clubs are permitted to play loud music until 2 am]...and it was like 3–4 am. The police were there but they did not say anything...because some people [club owners] control Ayia Napa...they are like the big heads of Ayia Napa.”

[PR, Ayia Napa, 2008]

4.4. Risks and consequences

Ramifications resulting from round-the-clock drinking and partying in Ayia Napa were categorized as (a) individual and public health risks and (b) safety risks. The most obvious *health risks* were linked to excessive drinking over the course of the individual's vacation, often leading to passing out, sickness from low-grade alcohol used in drink specials, and even leading at times to hospital visits due to alcohol poisoning. Other individual health risks include having sex with strangers, sex with multiple partners, and unprotected sex, which in turn lead to contracting STIs/HIV as well as unplanned pregnancies; and in those instances that visitors use or experiment with drugs, possible overdoses and other problems related to mixing drugs with alcohol. The following quotes from our interviews and secondary sources illustrate some of these risks, not only in Cyprus but also in similar destinations:

“...Scandinavians engage in more sexual behavior...there are some incidents of orgies and also some STDs were reported...Israelis

(mainly boys) come to Ayia Napa just before going to the army...they want to have as much fun as possible since they are going to be restricted for two years...”

[PR, Ayia Napa, 2008]

“...several people approach me every night and ask about drugs...they ask for marijuana, ecstasy, and cocaine...in the past you could see drugs being sold in the clubs but not anymore...but there are drugs sold in [name of club]...”

[PR, Ayia Napa, 2008]

“...you can have free drinks...for example you get in for €15 and you have 5 free shots of your choice...in some bars you can also get free alcohol drinking from the same bottle which goes around the place from hand to hand or from beautiful girls who offer it to the customers...an average entrance fee for clubs is around €15–20 but some might be more expensive if they have a well known DJ that night...”

[Club staff, Ayia Napa, 2008]

“...most tourists I know are not having protected sex...from what I hear...condoms are not used...”

[Club staff, Ayia Napa, 2008]

“...lethal mix of Baileys, chili powder, tequila, absinthe, ouzo, vodka, cider and gin, plus a 'secret ingredient'...served in a giant fish bowl, costs around €10...quite usual for one to drink 2 liters in an evening...”

[Nicholas, *Mail Online*, 2008]

“...17-year old died in Zante...after choking on his own vomit and suffering a heart attack after drinking too much alcohol...teenage drowned in Ibiza after taking deadly cocktail of ecstasy, cocaine, cannabis, and alcohol...young men and women—wander the streets like the living dead...semi-comatose...”

[Clarke, *Mail Online*, 2008]

“...a poll of 10,000 Britons holidaying in Ibiza, Magaluf and Ayia Napa found that 79% on holiday were unfaithful to partner left at home...yet 61% still chose not to use a condom”.

[Naish, *Times Online*, 2005]

“...there is a great deal of sexual infection...we're seeing a lot of people with gonorrhoea...one girl or boy might infect 10 to 20 other people on their holiday...I heard of one girl who was supposed to have had sex with 6 men in one day...no one seems to be using protection”.

[Clarke, *Mail Online*, 2008]

Discussions with staff working at Ayia Napa pharmacies revealed that while numbers may change, there are regular requests for morning-after contraceptive pills during the height of the season:

“...some days we sell 10 pills, some other days 2–3, and on average about 5 pills a day...when Africans are in Ayia Napa there is a significant increase in the sales of the contraceptive 'morning-after' pill...”

[Pharmacist, Ayia Napa, 2008]

Safety risks include a multitude of accidents and injuries resulting from intoxication. In some extreme cases when high levels of intoxication lead to accidents involving vehicles such as autos, quad bikes, mopeds, and jet skis, or adventure sports experiences tragic results can lead to death. Other risks to personal and public safety include overdoses, alcohol poisoning, aggression leading to physical fights or stabbings initiated by drunk and disorderly tourists or locals or

members of rival gangs, sexual assault, as well as vandalism and various types of property damage (Calafat and Juan, 2004). Quotes below from our interviews and secondary sources illustrate some of these problems:

“...incidents we face are related to alcohol use because people drink a lot, they go into the sea and their body temperature is not controlled very well, they feel dizzy and have incidents of thermoplixies...some are vomiting because they have eaten too much, they have drank alcohol...”
[Lifeguard, Nissi Beach, Ayia Napa, 2008]

“...in 2004, in Ayia Napa, there were many police arrests after learning of a mass orgy on the Napa Queen cruise boat with under-aged girls because no IDs were checked...”
[Club staff, Ayia Napa, 2008]

“...Nissi Beach has many incidents of drowning and violence...there were a few fights among the African and Afro-Caribbean British that we had to stop...last week there was a stabbing...”
[Lifeguard, Ayia Napa, 2008]

“...in the last few years there are many incidents of violence on the beach from Slovenians, Polish, and Bulgarians working in Cyprus...they are completely drunk...this is the same phenomenon as with the black African and Afro-Caribbean British...these incidents are related with alcohol or drugs...about 100 incidents each month...”
[Lifeguard, Ayia Napa, 2008]

“...there are underwater currents and this is why we get more incidents of people because of alcohol consumption...many more than 20 every month.”
[Lifeguard, Nissi Beach, 2008]

“...it's like a common secret that the owner of [name of club] hires girls, beautiful girls, not any girls but beautiful ones, because he wants to have sex with them...”
[Club staff, Ayia Napa, 2008]

“...I've been working Ayia Napa for the last 9 years, have worked in several clubs and bars...Ayia Napa is not safe in terms of bouncers. Bouncers are ready to beat up people and so there are many incidents throughout the season...at the [name of club], somebody approached a girl that happened to be the girlfriend of someone who worked at the club...one of the bouncers pushed him down the stairs to the street and then to the square of Ayia Napa—that man died...”
[Club staff, Ayia Napa, 2008]

“...things usually turn nasty at about 2–3 am and there is often fighting...it has even turned violent in the medical centre when doctors are treating young men injured in brawls...police with guns arrived after 20 youths from one gang, then 20 from another came in and started a riot...”
[Clarke, Mail Online, 2008]

5. Concluding remarks

These ethnographic findings provide the foundation for the subsequent phase of our epidemiological investigations on the multiplicity and complexity of bingeing and potential STI/HIV infection and

transmission risks at coastal locales where “club tourism” unfolds. “Cheap international travel and open borders within Europe have been commercially exploited to create nightlife resorts where risks to health, such as injury and violence, frequently result from highly intoxicogenic environments” (Hughes, Bellis, et al., 2011, p. 88). The reduction of alcohol use among young people has become a major European public health priority (Hughes, Quigg, et al., 2011). Addressing substance use problems that “multinational communities present in international settings requires international coordination beyond most prevention and harm reduction organizations...approaches should not only seek to implement prevention and harm minimization measures for nightlife tourists, but also explore what such settings have learnt about managing hundreds of thousands of binge drinkers and drug users all socializing within a relatively contained environment” (Bellis et al., 2009, p. 85).

There is an urgent need for effective harm-reduction interventions to create healthier and safer recreational settings at destinations and combined efforts at both tourist generating and receiving destinations to minimize risk for young holidaymakers. Environmental factors associated with increased or reduced alcohol use and harm have been categorized as physical factors, social factors, and staffing factors (Hughes, Bellis, et al., 2011; Hughes, Quigg, et al., 2011). Here recommendations are made to traveler generating countries, traveler receiving countries, governments, non-governmental bodies, and members of the tourism sector.

The responsibility for protecting travelers should be shared by all stakeholders. Based on the results of this exploratory ethnographic work, specific recommendations are made for both traveler generating and receiving countries, governments, as well as the tourism sector to minimize risk and increase traveler awareness of hazards (Table 4). These recommendations will not be enough, however, to solve the broader problems discussed earlier. A more comprehensive approach is needed, that involves all stakeholders in order to find more effective solutions. Reductionist approaches provide a compartmentalized and usually incomplete and ultimately inaccurate understanding of multilevel and dynamic health problems. In contrast, complexity science integrates various aspects of public-health models and reframes the problem under investigation by changing the unit of analysis from the broken parts of a closed system to an open system as a whole (Dekker, 2011; Jayasinghe, 2011)—thereby bridging various micro, meso, and macro domains. This transition not only requires a fundamental mind shift but most importantly it urgently needs major investments in theory, methods, practice, and policy (Best, 2011; Best & Holmes, 2010; Dekker, 2011). Although not new, complexity science can be considered in its infancy in terms of application—particularly to the study of tourism—and provides the language and conceptual frameworks to help researchers understand the big picture (Zimmerman et al., 2001). It encapsulates dynamic, complex, and time-delayed phenomena characterized by nonlinear, bidirectional and dense interactions among multiple and multilevel components (or systems) that are self-organizing and have emergent properties, are dependent on initial conditions and adaptable to changing conditions, and are in a constant state of disequilibrium (Agar, 1999; Dekker, 2011; Holland, 1995, 2012; Lawson, 2011). These characteristics can also describe many situations involving large numbers of travelers flowing through regions and engaging in various activities.

Grounded in ideas developed in the 1920s (von Bertalanffy, 1968), complexity science rests on the following key features: (a) *dynamic and complex systems* that arise from an intricate interplay of multiple and multilevel, evolving factors over time and across diverse settings and contexts; (b) *nonlinearity* involving reciprocal interactions among multiple, densely connected, oftentimes overlapping, and recursive feedback and feedforward loops that are circular couplings of events that link and release and link again from outside and from within the system; (c) systems are sensitively *dependent on initial conditions* as

Table 4
Recommendations.

Title	Description/function
Traveler generating countries	<ul style="list-style-type: none"> • Mandating current/comprehensive health advice/advisories for travelers made available through government website or other central location. • Dissemination of health warnings via travel brochures. • Assuring elimination of deceptive and overly aggressive marketing efforts by industry members. • Mandating and enforcing greater scrutiny for all-inclusive vacation packages that include alcohol. • Focusing on conflict of interest for holiday reps who receive commissions from destination D&D venues and who oversee travel groups. • Implementing corporate social responsibility legislation.
Traveler receiving countries	<ul style="list-style-type: none"> • Providing mobile first-aid health services located at clubbing centers. • Providing efficient, safe, and affordable public transportation and accessible taxis. • Arranging for visible multilingual signage around town and offering comprehensive and current multilingual health advice upon arrival. • Violence prevention efforts, including requiring proper training of venue staff to handle emergencies and difficult patrons or situations. • Enforcing closing hours of venues and local drinking age. • Mandating onsite licensing and use of helmets for rental vehicle (quad bikes, jet skis) transport companies. • Law enforcement efforts that include proper and periodic training for police, such as crowd control; targeted policing; adequate police presence and rapid response/assistance teams at hot spots. • Assuring availability and accessibility of condoms to visitors. • Mandating and enforcing proper planning and building codes for D&D venues, and working with industry developers to assure that local bar, club, and D&D venues are safe in terms of their structure, layout, and rules.
Governments	<ul style="list-style-type: none"> • Development of appropriate legislation, assuring oversight for international and central government regulatory bodies, mandating travel advice, and working with state health services. • Government involvement in national tourism board marketing efforts and policies. • International and central/local government legislation to assure safety of incoming travelers. • Current and multilingual travel advice for visitors. • Both local law enforcement and state health services' assurance of individual and public health and safety in clubbing tourist centers.
Non-governmental organizations and trade associations Tourism sector	<ul style="list-style-type: none"> • Bodies such as travel consumer organizations, alcohol consumer organizations, corporate responsibility bodies, and various citizen pressure groups' involvement in how local tourism industry develops, minimizing public health and safety problems, and for development of effective preventive interventions. • Practice of corporate social responsibility when marketing vacations to youth involving bingeing and other risks. • Commitment to shared responsibility for maintaining order and assuring health/safety of visitors and locals by night entertainment venues, accommodation establishments, recreation enterprises, food and beverage establishments, and others.

changes to the system often do not lead to proportional results, or the “butterfly effect” in which small changes can lead to disproportionately huge effects later on; and (d) systems are *self-organized* without hierarchy and central control and exhibit *adaptation* that allows them to modify their structure in order to cope with environmental influences involving continuous and discontinuous changes and unpredictable outcomes (*emergent properties*) (Eve et al., 1997; Goldberger, 2004; Holland, 1995, 2012; Jayasinghe 2011; Miller & Page, 2007; Page, 2008; Resnicow & Page, 2008; Zimmerman et al., 2001).

Systems with these attributes, also known as *complex adaptive systems* (Miller & Page, 2007), are defined as “a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's action changes the context of other agents” (Plesk & Greenhalgh, 2001). Along these lines, networks of clubbing tourists that converge in various destinations and engage in risky behaviors in environments with which they are unfamiliar can be viewed as *complex adaptive systems* within which several interconnected components and factors or sub-systems are embedded. Not only the changing members of social networks of clubbers, but also choices of destinations demonstrate a dynamic nature. As *complex adaptive systems* have a number of linked properties, each one can be seen as both a cause and effect of the other properties (Miller & Page, 2007). The following example with clubbing tourists provides additional detail on how clubbing tourists' health and safety failures operate as *complex adaptive systems*.

Several diverse and multilevel factors—both internal and external to this “system”—interact with one another through a range of diverse pathways, so that the system either maintains a “preferred” status quo or adapts to various influences (Jayasinghe 2011). Key causal pathways can be categorized into five broad sectors: (1) *traveler generating countries*; (2) *traveler receiving countries*; (3) *governments*; (4) *non-governmental organizations*; and (5) *members of the tourism sector*. These diverse sectors do not have stable hierarchical structures; instead, they have multiple levels of *heterarchical* patterns of interrelations and interactions that are overlapping, divergent, coexistent, and have mixed ascendancy (Jayasinghe 2012). Pathways of influence

flow from several components (e.g., overly aggressive alcohol marketing; lack of appropriate health warnings; insufficient health education; willingness of tourist destinations to provide low-cost drinking opportunities), while their relative importance evolves with time resulting in a constant change of hierarchical paths of influence to clubbing tourists' health and safety risks. These processes in the entire system demonstrate complex nonlinear dynamics, as they clearly violate the linearity principles of proportionality and superposition. We propose utilizing systems, complexity, and chaos science methodologies to better understand health and safety problems experienced by travelers, while underdeveloped, they are highly promising in the context of rapidly increasing complexity, failures, and upcoming challenges affecting the tourism system.

Acknowledgment

The study was funded by an internal grant from the Cyprus University of Technology.

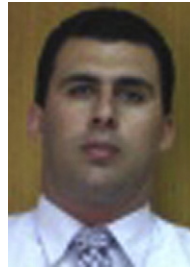
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