Table 1 Summary of key articles selected to review current needs, activities, stakeholders and solutions related to at-risk youth and young adults in the Middle East and North Africa (MENA) region (*continued*)

Author(s); citation	Year	Country/region	Study design	Target group/ subject	Key themes and findings	Implications and solutions
Effects of conflict and trauma on mental health						
Afifi RA et al. (5)	2011	Lebanon	Community-based participatory research	Mental health in adolescents	Using community-based participatory research to develop mental health interventions ensures greater relevance, feasibility and sustainability of solutions	Engage directly with the community when identifying problems and possible interventions for mental health
Al-Bahrani M et al. (25)	2013	Oman	Cross-sectional study	Adolescents' coping styles	Adolescents with high levels of perceived problems had higher maladaptive coping styles than those with low level problems. Females were more likely to use maladaptive coping styles than were males	Focus on strategies to enhance adaptive coping styles (e.g. seeking social and spiritual support, focusing on positive thinking, etc.)
Barber BK (53)	2008	Bosnia, Palestine	Cross-sectional study	Youth experiences with political violence	Youth experiences in conflicts can vary considerably, in how youth perceive the logic and legitimacy of the conflict, the roles they play in it, and the ways they incorporate their experiences into their personal and social development	When researching conflict, improve and broaden assessments of conflict and adaptive functioning by incorporating cultural differences. Pay more attention to females' experiences in conflict
De Jong JT et al. (54)	2003	Algeria, Cambodia, Ethiopia, Palestine	Epidemiological survey	Post-conflict mental health	An association was found between the range of prevalence rates of PTSD and the diversity of risk factors for PTSD in different post-conflict countries	Public mental health programmes need to consider that symptoms of PTSD in different populations could result from different determinants
Dimitry L (55)	2012	Middle East	Systematic review (71 papers)	Mental health in conflict youth	Children in conflict zones are exposed to high levels of traumatic experiences. The number of conflict-related traumas correlates positively with PTSD and mental health issues	Ensuring children's basic needs is paramount. School and community interventions should be culturally acceptable, practical and affordable. Psychiatric/ psychological support needs to be made accessible
Holmes D (21)	2012	Lebanon	Profile	Profile of a refugee youth	Including youth mentors from within the community is a critical component for the sustainability of mental health and youth-focused interventions	Engage youth mentors as "agents of change" in refugee/conflict situations
Persike M, Seiffge-Krenke I (56)	2014	Global (21 countries)	Cross-sectional study	Adolescents' perceptions of stress	The highest parent-related stress among youth was in southern Europe, Latin America, Middle East and Asia. Stress due to relationship with parents was higher than stress due to relationships with peers.	When working with adolescents increased awareness is needed of how prevailing values and cultural background influence stress perception
Rhiger M et al. (57)	2008	Israel	Cross-sectional study	Youth exposure to trauma	A high prevalence of exposure to trauma was identified among Israeli youth (85% of students reported exposure), but incidence of war or conflict events was not significantly linked to trauma symptomatology	Awareness is needed of the "functional adaptation" of youth with long-standing exposure to conflict (e.g. exposure to attacks), resulting in increased community cohesion and social support
Sagy S et al. (58)	2002	Palestine and Israel	Observational study (longitudinal study of 2 groups)	Social knowledge and empathy among youth in conflict	Low levels of empathy and high levels of anger existed between Israeli/Palestinian adolescents. Historical interpretations and future expectations were expressed through the societal lens	Coexistence between the 2 nations needs to be based on mutual recognition of the narrative and legitimacy of each side
Sagy S, Adwan S (59)	2006	Palestine and Israel	Observational study (longitudinal study of 2 groups)	Hope among youth in conflict	Despite evidence of collectivism in Israeli and Palestinian societies, youth gave priority to individualistic hope over hope for others	Find ways to harness individual hope for adolescents in conflict areas, and build on existing hope for the collective good
Shaar KH (60)	2013	Lebanon	Systematic review (11 papers)	Trauma in adolescents in conflict	Prevalence of PTSD in Lebanese adolescents has increased over time, with each conflict: from 8.5%-44.7% for the civil war, 21.6% for the Grapes of Wrath War, and 15.4%-35.0% for the 2006 July War.	Provision of counselling and treatment services at school and community level could ameliorate the consequences of war for vulnerable populations
UNICEF (61)	2011	Middle East / North Africa	Programme evaluation	Evaluation of programme for youth and adolescents	Young people in MENA feel marginalized politically, economically and socially	With the right support, the strong appetite for change that currently exists in the region can be harnessed in a positive direction both for adolescents and youth as individuals
WHO (62)	2010	Global	Briefing report	Violence prevention in youth	Preschool enrichment and social development programmes are associated with reduced aggressive behaviour and violent crime in childhood and later life	Life skills interventions are used throughout the world to improve young people's life chances through increasing educational participation
Migration						
Chatty D (6)	2007	Middle East	Community-based participatory research	Youth living in prolonged migration	Obtaining refugee status was linked to marginality and exclusion in the original homeland. Multiple, conflicting identities were present among refugee youth	Refugee youth highlighted opportunism and agency as key factors: seeking education, wage labour or self-employment while contributing to their families
Fargues P (63)	2008	Middle East / North Africa	Analytical report	MENA demographic and migration patterns	Main triggers of migration from MENA to Europe are: youth bulge; lack of opportunities in home countries; untenable population density; unresolved conflicts	MENA's economic and demographic circumstances make it a promising source of flows to Europe, particularly circular-migration flows
Tober DM et al. (31)	2006	Islamic Republic of Iran and Afghanistan	Ethnographic study, including interviews and observations	Family planning uptake in refugee populations	Islamic Republic of Iran's family planning programme has been successful with the Iranian population but less so with Afghan refugee population. Afghans were marginalized due to cultural differences and were less likely to use family planning	Experience of losing children to war and sickness results in refugees wanting to have larger families. Family planning programmes must take this into account, while taking account of cultural and religious sensitivities
Labor, employment and the "youth bulge"						
Assaad R, Roudi-Fahimi F (3)	2007	Middle East / North Africa	Ecological study/ expert opinion	Youth employment potential	MENA countries have diverse economies and populations. Strengthening human capacity among youth cannot succeed without fundamental reforms	Adopt development policies that realign economies in 3 ways: reinvent the private sector; integrate with the world economy; and manage oil resources better
Bricker NQ, Foley MC (42)	2013	Middle East	Ecological study	Youth, violence and the labour market	The Youth Risk Factor (ratio of youth population to total labour force) can be used to predict where conflict may emerge next. Emphasis is needed on the importance of labour market reforms. Improving access and quality of education did not always lead to reduced risk of conflict	Subsidize and invest in apprenticeships, trade schools and internships to make transition into the labour force more gradual and less frustrating for youth
ILO (64)	2013	Global	Analytical report	Global employment trends for youth	Middle East has the highest youth unemployment rate (28.3% in 2012, projected to increase to 30.0% in 2018). More than 1 in 4 economically active young people are unemployed	Five key areas were identified: employment and economic policies; education and training; labour market policies; entrepreneurship and self-employment; and labour rights that are based on international standards
Ortiz I, Cummins M (65)	2012	Global	Policy analysis	Employment crisis due to "youth bulge"	Lack of employment opportunities for young persons, aggravated by the youth bulge, should be a primary concern for policy-makers	Employment should be generated through: macroeconomic and sector policies; active labour market policies and programmes; labour standards; social protection and dialogue
Thabet AA et al. (66)	2011	Palestine	Cross-sectional study	Labour and mental issues in youth	Children worked an average of 6.8 h a day and only 37% had adequate rest. Poor mental health was predicted by socioeconomic determinants and factors relating to under-age employment	Policy, legislation and preventive programmes from statutory and voluntary agencies should adopt an integrated approach to meeting children's mental health needs
Urdal H (41)	2006	Global	Ecological study	"Youth bulges" and violence	Youth bulges provide greater opportunity for violence through abundant supply of youth with low opportunity cost, and are associated with a risk of internal armed conflict	Economic structural factors need to be in place to realize opportunities for economic bonuses from the large youth cohorts entering the job market
Education, resilience, and functioning in youth in conflict						
Buckner E, Kim P (67)	2012	Palestine	Experimental Study	Conflict and education in adolescents	Higher conflict exposure was equated with lower levels of executive functioning in adolescents. Living in an urban environment was a strong predictor of executive functioning and mental planning performance in this population.	Use mobile technologies as a versatile learning and assessment resource for children in conflict, to encourage problem solving, strategic planning, creativity and critical reasoning
Fergus S, Zimmerman MA (8)	2005	Global	Expert opinion	Theoretical frameworks for development of adolescents in conflict	Resilience models were used to understand why some youth exposed to risk were able to avoid negative outcomes. Parental factors are consistent, critical resources for youth	Public health interventions that use a resilience approach need to pay particular attention to the unique features of the population of interest and the context in which the approach is employed
Parkinson S (15)	2014	Syria, Lebanon	Descriptive report	Education for Syrian refugees in Lebanon	Educational exclusion has a profound impact on refugees from Syrian Arab Republic, denying benefits and exposing children to further risks. Literacy rates have dropped dramatically from 83.6% in 2008	Financial and administrative hurdles to education (e.g. getting previous report cards officially stamped, paying for permits, etc.) need to be a reduced
Soltanifar M (68)	2011	Middle East	Expert opinion	Theoretical framework for youth education and fundamentalism	Answering why youth join fundamentalist groups, and what role education plays, are complex issues that require more study. Political, cultural, religious and educational nuances need to be taken into account	Studies should take into account the differing methods of communication between political structures, and the existence of both formal and informal educational systems
UNICEF / Issam Fares Institute for Public Policy and International Affairs (69)	2011	Middle East	Analytical report	Challenges and needs of Arab youth	Family and religion characterize Arab youth identities and influence their vision and priorities. The public sphere of social and political activism is male-dominated	Young people can be agents of change if they are empowered to participate in: finding solutions to conflict; building peace; and reconstructing communities following conflict

UNICEF = United Nations Children's Fund; WHO = World Health Organization; ILO = International Labour Organization; PTSD = post-traumatic stress disorder; UAE = United Arab Emirates.