

This is the author-created version of the following work:

Akosah-Twumasi, Peter, Emeto, Theophilus I., Lindsay, Daniel, Tsey, Komla, and Malau-Aduli, Bunmi S. (2018) *A systematic review of factors that influence youths career choices – the role of culture*. *Frontiers in Education*, 3 .

Access to this file is available from:

<https://researchonline.jcu.edu.au/54474/>

© 2018 Akosah-Twumasi, Emeto, Lindsay, Tsey and Malau-Aduli. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Please refer to the original source for the final version of this work:

<http://doi.org/10.3389/feduc.2018.00058>

A systematic review of factors that influence youths career choices - the role of culture

Peter Akosah-Twumasi^{1, 2*}, Theophilus I. Emeto^{3, 2}, Daniel Lindsay^{3, 2}, Komla Tsey², Bunmi Malau-Aduli^{1, 2}

¹College of Medicine and Dentistry, James Cook University, Australia, ²College of Arts, Society and Education, James Cook University, Australia, ³Public Health & Tropical Medicine, James Cook University, Australia

Submitted to Journal:
Frontiers in Education

Specialty Section:
Educational Psychology

Article type:
Systematic Review Article

Manuscript ID:
348903

Received on:
31 Jan 2018

Revised on:
15 Jun 2018

Frontiers website link:
www.frontiersin.org

Conflict of interest statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest

Author contribution statement

PAT wrote the article. TIE, DL, BMA and PAT critically appraised the literature. TIE, DL and KT reviewed and edited the article. All authors read and approved the final manuscript for submission.

Keywords

Career choices, Youths, collectivist culture, Individualistic culture, Cross-cultures

Abstract

Word count: 200

Good career planning leads to life fulfillment however; cultural heritage can conflict with youths' personal interests. This systematic review examined existing literature on factors that influence youths' career choices in both collectivist and individualistic cultural settings from around the globe with the aim of identifying knowledge gaps and providing direction for future research.

A systematic review strategy using the Joana Briggs Institute's format was conducted. The ERIC, PsychInfo, Scopus and Informit Platform databases were searched for articles published between January 1997 and May 2018.

A total of 30 articles were included in the review, findings revealed that youth from collectivist cultures were mainly influenced by family expectations, whereby higher career congruence with parents increased career confidence and self-efficacy. Personal interest was highlighted as the major factor that influenced career choice in individualistic settings, and the youth were more independent in their career decision making. Bicultural youth who were more acculturated to their host countries were more intrinsically motivated in their career decision making.

Further research is imperative to guide the understanding of parental influence and diversity, particularly for bicultural youths' career prospects and their ability to use the resources available in their new environments to attain meaningful future career goals.

Funding statement

PAT is a recipient of James Cook University scholarship (Research Training Program Stipend).

1 **A systematic review of factors that influence youths career choices – the role of culture**

2 Peter Akosah-Twumasi^{1*}, Theophilus I. Emeto², Daniel Lindsay², Komla Tsey³, Bunmi S.
3 Malau-Aduli¹

4 ¹College of Medicine and Dentistry, James Cook University, Townsville, Australia

5 ²College of Public Health, Medical and Veterinary Sciences, James Cook University,
6 Townsville, Australia

7 ³College of Arts, Society and Education, James Cook University, Cairns, Australia

8

9 *Email: peter.akosahtwumasi@my.jcu.edu.au

10

11

12

13

14

15

16

17

18 **Keywords: Career choice; youths; collectivist culture; individualistic culture, cross-**
19 **cultures.**

20

21

22

23

24

25

26

27

28 **Abstract:**

29 Good career planning leads to life fulfillment however; cultural heritage can conflict with
30 youths' personal interests. This systematic review examined existing literature on factors that
31 influence youths' career choices in both collectivist and individualistic cultural settings from
32 around the globe with the aim of identifying knowledge gaps and providing direction for future
33 research.

34 A systematic review strategy using the Joana Briggs Institute's format was conducted. The
35 ERIC, PsychInfo, Scopus and Informit Platform databases were searched for articles published
36 between January 1997 and May 2018.

37 A total of 30 articles were included in the review, findings revealed that youth from collectivist
38 cultures were mainly influenced by family expectations, whereby higher career congruence
39 with parents increased career confidence and self-efficacy. Personal interest was highlighted
40 as the major factor that influenced career choice in individualistic settings, and the youth were
41 more independent in their career decision making. Bicultural youth who were more
42 acculturated to their host countries were more intrinsically motivated in their career decision
43 making.

44 Further research is imperative to guide the understanding of parental influence and diversity,
45 particularly for bicultural youths' career prospects and their ability to use the resources
46 available in their new environments to attain meaningful future career goals.

47
48
49
50
51
52
53
54
55
56
57
58
59

60 **Introduction**

61 Career choice is a significant issue in the developmental live of youths because it is reported
62 to be associated with positive as well as harmful psychological, physical and socio-economic
63 inequalities that persist well beyond the youthful age into an individual's adult life (1, 2). The
64 term "youth" is described by the United Nations Educational Scientific and Cultural
65 Organisation (UNESCO) as a more fluid category than a fixed age group and it refers to young
66 people within the period of transitioning from the dependence of childhood to adulthood
67 independence and awareness of their interdependence as members of a community (3).

68 The complexity of career decision-making increases as age increases (4). Younger children are
69 more likely to offer answers about their ideal career which may represent their envisioned
70 utopia and phenomenal perceptions about what they want to do when they grow up (5). As
71 children get older, they are more likely to describe their career choice as a dynamic interplay
72 of their developmental stages and the prevailing environmental circumstances (5). Youth career
73 decision-making is required to go through a process of understanding by defining what they
74 want to do and exploring a variety of career options with the aid of guidance and planning (6).
75 Proper handling of the process affirms individual identity and fosters wellbeing, job satisfaction
76 and stability (7).

77 Many theoretical models have been proposed to explain the process of career development and
78 decision-making, one of which is the Social Cognitive Career Theory (SCCT) by Lent, Brown,
79 and Hackett (1994)(8). According to the SCCT, career development behaviours are affected by
80 three social cognitive processes - self-efficacy beliefs, outcome expectations and career goals
81 and intentions which interplay with ethnicity, culture, gender, socio-economic status, social
82 support, and any perceived barriers to shape a person's educational and career trajectories (9,
83 10). This emphasises the complex interplay between the personal aspirations of youths in their
84 career choices and decision-making and the external influences which act upon them. Carpenter
85 and Foster (1977) postulated that the earlier experiences and influences which individuals are
86 exposed to form the bedrock of how they conceive their career aspirations(11). These authors'
87 assertion lends support to the tenets of SCCT and they have developed a three-dimensional
88 framework to classify the factors that influence career choice. Carpenter and Foster proposed
89 that all career-influencing factors derive from either intrinsic, extrinsic or interpersonal
90 dimensions. They referred to the intrinsic dimension as a set of interests related to a profession
91 and its role in society. Extrinsic refers to the desire for social recognition and security

92 meanwhile the interpersonal dimension is connected to the influence of others such as family,
93 friends and teachers (11).

94 Further exploration by other researchers reveal that *youth who are motivated by intrinsic*
95 *factors are driven by their interests in certain professions, and employments that are personally*
96 *satisfying* (7, 12). Therefore, intrinsic factors relate to decisions emanating from self, and the
97 actions that follow are stimulated by interest, enjoyment, curiosity or pleasure and they include
98 personality traits, job satisfaction, advancement in career and learning experiences (7, 13, 14).
99 Extrinsic factors revolve around external regulations and *the benefits associated with certain*
100 *occupations* (15).) *Prestigious occupations, availability of jobs and well-paying employments*
101 *have also been reported to motivate youth career decision-making* (13). *Consequently,*
102 *extrinsically motivated youth may choose their career based on the fringe benefits associated*
103 *with a particular profession such as financial remuneration, job security, job accessibility and*
104 *satisfaction* (13, 16, 17). Interpersonal factors encompass the activities of agents of
105 socialisation in one's life and these include the influence of family members,
106 teachers/educators, peers and societal responsibilities (12, 18, 19). *Beynon et al. reported that*
107 *Chinese-Canadian students' focus in selecting a career was to bring honour to the family* (20).
108 *Students who are influenced by interpersonal factors highly value the opinions of family*
109 *members and significant others; they therefore consult with and depend on these people and*
110 *are willing to compromise their personal interest* (21).

111 Studies have shown that cultural values have an impact on the factors that influence the career
112 choices of youths (22-26). Culture is the collective programming of the mind that distinguishes
113 one group of people from another (Hofstede, 2001, p.9)(27). *Hofstede's (1980) seminal work*
114 *on culture dimensions identified four major cultural dimensions in his forty-country*
115 *comparative research* (28). *The first dimension is known as 'individualism-collectivism.'* *In*
116 *individualistic cultures, an individual is perceived as an 'independent entity,' whilst in*
117 *collectivistic cultures he/she is perceived as an 'interdependent entity'. That said, decision-*
118 *making in individualistic cultures are based on individuals 'own wishes and desires, whilst in*
119 *collectivistic cultures, decisions are made jointly with the 'in-group' (such as family,*
120 *significant others and peers), and the primary objective is to optimize the group's benefit. The*
121 *second dimension is power distance. In high power distant cultures; power inequality in society*
122 *and its organizations exist and is accepted. The third dimension - uncertainty avoidance*
123 *denotes the extent to which uncertainty and ambiguity is tolerated in society. In high*
124 *uncertainty avoidant cultures, it is less tolerated, whereas in low uncertainty avoidant cultures*

125 *it is more tolerated. Lastly, masculinity and femininity dimension deals with the prevailing*
126 *values and priorities. In masculine cultures, achievement and accumulation of wealth is valued*
127 *and strongly encouraged; in feminine cultures, maintaining good interpersonal relationships*
128 *is the priority.*

129 *In his later work on “Cultural Dimension Scores”, Hofstede suggested that countries’ score*
130 *on power distance, individualism, masculinity, uncertainty avoidance, long-term orientation*
131 *and indulgence depicts whether they are collectivist inclined or individualistic-oriented (29).*
132 *Countries that espoused collectivist values may score low and countries that are entrenched in*
133 *individualistic values may score high on the above-mentioned six cultural dimension score*
134 *models (27-29). This model aids the characterisation of countries into either individualistic or*
135 *collectivist cultural settings.*

136 On this basis, western countries like Australia, United Kingdom (UK) and the United States of
137 America (USA) have been shown to align with individualism and such cultures are oriented
138 around independence, self-reliance, freedom and individual autonomy; while African and
139 Asian nations align more closely with collectivism in which people identify with societal
140 interdependence and communal benefits (28, 30). Research indicates that basing cultures on
141 individualistic versus collectivist dimensions may explain the classical differences in career
142 decision-making among youths (30-32). The normative practice in individualistic societies is
143 for the youth to be encouraged to choose their own careers and develop competency in
144 establishing a career path for themselves, while youths from collectivist societies may be
145 required to conform to familial and societal standards and they are often expected to follow a
146 pre-determined career track (33).

147 The interaction between individualistic and collectivist cultures has increased in frequency over
148 the last twenty years due to global migration. Given that different standards are prescribed for
149 the youths’ career selection from the two cultures (collectivist – relatedness, and individualistic
150 - autonomy), making a personal career decision could be quite daunting in situations where
151 migrant families have moved from their heritage cultures into a host country. Friction may arise
152 between the adapting youths and their often traditionally focused and opinionated parents as
153 the families resettle in the host countries.

154 According to a report by the United Nations (UN), the world counted 173–258 million
155 international migrants from 2000–2017, representing 3.4 percent of the global population.
156 Migration is defined by the International Organisation of Migration (IOM) as the movement of

157 a person or a group of persons, either across an international border, or within a state (34). *In*
158 *this era of mass migration, migrant students who accompanied their parents to another country*
159 *and are still discerning their career pathways could be exposed to the unfamiliar cultural*
160 *values in general and the school/educational system in particular (35). On this note, migrant*
161 *students might face a daunting task in negotiating their career needs both within host*
162 *countries' school systems and perhaps within their own family setups. These migrant youth*
163 *undoubtedly face uncertainties and complexities as career decision-making trajectory could*
164 *be different in their heritage cultures compared to the prevailing status quo of the host*
165 *country's culture (25, 36). As youth plan and make career decisions, in the face of both*
166 *expected and unexpected interests, goals, expectations, personal experiences as well as*
167 *obligations and responsibilities, cultural undercurrents underpin what the youth can do, and*
168 *how they are required to think. Some studies have examined cross-cultural variations in factors*
169 *influencing the career choice of youth from both similar and dissimilar cultural settings (24,*
170 *25, 37-39). However, there may be large differences between different migrant populations.*

171

172 Given the influence of cultural heritage on career choice and with the increasing numbers of
173 transitions between cultures, it is important to examine the scope and range of research
174 activities available in the area of youths' career choice, particularly in relation to how
175 movements across cultures affect the youth in their career decision making. *To the best of our*
176 *knowledge, there is no comprehensive review of existing literature available in this area.* Using
177 the three-dimensional framework proposed by Carpenter and Foster (11), this systematic
178 review aims to examine the factors influencing youths' career choices, with particular reference
179 to cultural impact. It will also identify any gaps in the existing literature and make
180 recommendations that will help guide future research and aid policy makers and educational
181 counsellors in developing adequately equipped and well-integrated career choice support
182 systems that will foster a more effective workforce.

183

184

185

186

187

188 **Methods**

189 **Literature search**

190 A systematic review strategy was devised and the literature search was conducted using the
191 Joana Briggs Institute's (JBI) format. The search was conducted between December 2016 and
192 May 2018, utilising James Cook University's subscription to access the following databases:
193 Education Resources Information Centre (ERIC), PsycINFO, Scopus and Informat. The subject
194 and keyword searches were conducted in three parts.

195 1. Career and its cognate terms:

196 "Career development" OR "Career decision" OR "career choice" OR "Career choices" OR
197 "Career planning" OR "Career guidance" OR Career OR Careers OR "Career advancement"
198 OR "Career exploration" OR Vocation OR Vocations OR Vocational OR "Occupational
199 aspiration" OR Job OR Jobs OR Occupations OR Occupation OR Occupational" AND

200

201 2. Youth and its cognate terms:

202 "Youth OR Youths" OR "Young adults" OR adolescent* OR teenage* OR student" AND

203

204 3. Factors and variables:

205 "Intrinsic OR Extrinsic OR Interpersonal OR Individualistic OR Collectivist OR Culture OR
206 Cultures OR Cultural OR "Cross Cultural"

207 The Boolean operators (OR/AND) and search filters were applied to obtain more focused
208 results. The articles included in the final search were peer-reviewed and the references of
209 publications sourced from these searches were hand searched to obtain additional abstracts.
210 Searches of reference and citation lists commenced in December 2016, repeated in March, July
211 and November 2017 and finally May 2018 to identify and include any new, relevant articles.

212

213 **Inclusion and exclusion criteria**

214 Only peer-reviewed articles published in English within the last 20 years (1997-2018) and with
215 full text available were included. Studies included in the final analysis were original research
216 articles that focused on career choices of youth from all cultures *including migrant youth who*

217 *are also known as bicultural (those who accompanied their parents to another country). The*
218 *rationale for using the cultural concepts of collectivist and individualistic cultural settings was*
219 *inspired by Hofstede's Cultural Dimensional Scores Model (29). Abstracts were excluded if*
220 *they focused on students below secondary school level and those already in the workforce as*
221 *the study mainly focused on youth discerning their career choices and not those already in the*
222 *workforce.*

223

224 **Data extraction**

225 Two of the researchers (PAT and BMA) independently assessed data for extraction, using
226 coding sheets. Study variables compared were author and year of publication, country and
227 continent of participant enrolment, cultural setting, study design, participant numbers and
228 educational level, factors influencing career choice and major outcomes. Data were
229 crosschecked in a consensus meeting and discrepancies resolved through discussion and mutual
230 agreement between the two reviewers. The third and fourth authors (T.I.E and D.L) were
231 available to adjudicate if required.

232

233 **Quality of methods assessment**

234 In this study, two reviewers (PAT and TIE) ascertained the quality and validity of the articles
235 using JBI Critical Appraisal (CA) tools for qualitative and cross-sectional studies (40). In any
236 event of disagreement, a third reviewer (BMA) interceded to make a judgement. Both JBI CA
237 tools assess the methodological quality of the included studies to derive a score ranging from
238 0 (low quality) to 8 or 10 (high quality). Using these tools, studies with a total score between
239 0 and 3 were deemed of low quality, studies with a score between 4 and 6 were classed as of
240 moderate quality and studies with scores from 7 were deemed to be of high quality (sound
241 methodology).

242

243

244

245

246

247

248 **RESULTS**

249 **Study selection**

250 Articles retrieved from the initial database search totaled 5,201. An additional 38 articles were
251 retrieved from direct journal search by bibliographic search. A total of 597 records remained
252 after duplicates and unrelated articles were removed. Of this number, 521 were excluded after
253 abstract review mainly for not meeting the inclusion criteria, leaving 76 full text articles for
254 eligibility check. A further 46 were excluded because they focused on career difficulties,
255 counselling, retention, working adolescents or the cultural setting was not stated. Applying this
256 screening process resulted in 30 studies for inclusion in the qualitative review synthesis (see
257 Figure 1).

258

259 **Study characteristics**

260 All three factors (Intrinsic, Extrinsic, and Interpersonal) affecting adolescents' career choices
261 were identified in this review (Figure 2). Out of the 30 articles, five (17%) explored
262 interpersonal factors exclusively (35, 39, 41-43). Majority of the studies, 16 out of 30 (53%)
263 explored interpersonal and intrinsic factors solely (21-24, 36, 37, 44-53).

264 No articles focused solely on extrinsic or intrinsic factors. Two studies each explored the
265 relationship between intrinsic and extrinsic (54, 55) as well as extrinsic and interpersonal
266 factors (56, 57). The remaining five articles (17%) explored all three factors (intrinsic,
267 extrinsic, and interpersonal, (12, 25, 38, 58, 59). Table 1 summarizes the 30 articles included
268 in this article. Intrinsic factors explored in the literature include self-interest, job satisfaction
269 and learning experiences. Extrinsic factors include job security, guaranteed job opportunities,
270 high salaries, prestigious professions and future benefits. Meanwhile, interpersonal factors
271 include parental background, family cohesion, socio-economic status, peer influence and
272 interaction with educators.

273

274 The collectivist cultural settings examined in the reviewed articles included Argentina, Burkina
275 Faso, Bulgaria, China, Croatia, Hong Kong, India, Indonesia, Japan, Mexico, Portugal, South
276 Africa, South Korea, Taiwan and Ukraine; while the individualistic ones were Canada, Finland,
277 Germany, Spain, Switzerland and United States of America. Italy was considered as partly
278 individualistic and collectivist. Fourteen studies included participants from both collectivist
279 and individualistic cultural settings (21-25, 35, 37-39, 41-44, 48, 52, 54-56). Twelve studies
280 focused on collectivist cultural settings (12, 36, 45, 46, 49-51, 53, 57-59). Three studies
281 examined participants who moved from collectivist to individualistic settings (23, 25, 48) and

282 one study considered both cultural dimensions within a single setting (52). Twenty-nine of the
283 included studies used a range of quantitative designs. Participant numbers in these ranged from
284 80 to 2087. One study used qualitative design with 12 participants.

285

286 ***Quality of methods of included studies***

287 *The quality assessment of methods employed in the 30 studies included in this review are*
288 *outlined in Table 1. A qualitative study assessed using the JBI qualitative CA tool was of sound*
289 *methodology (Table 1a). Using the JBI cross-sectional CA tool, 9 of 29 studies (31 %) were of*
290 *sound methodology (score of 6.5 to 7). The other 20 studies (69 %) were of moderate quality*
291 *(Table 1b).*

292

293 **Synthesis of Study Results**

294 *Table 2 and Figure 3 details the study setting and the underlying factors influencing youth*
295 *career choices. Analysis of the reviewed articles revealed four major themes namely:*
296 *extrinsic, intrinsic and interpersonal factors and emergent bicultural influence on career*
297 *choice. These four major themes had several subthemes and are reported below.*

298 **Extrinsic Factors**

299 *Extrinsic factors examined in the reviewed articles included financial remuneration, job*
300 *security, professional prestige and job accessibility.*

301 **Financial remuneration**

302 *Financial remuneration was identified as the most influential extrinsic factor in career choice*
303 *decision. Income was considered as an important component of life, particularly among*
304 *youth who had a higher level of individualism (56, 58). Wüst and Leko Šimić reported that*
305 *German students ranked “a high income” highest with a 3.7 out of 5 score and regarded it as*
306 *the most important feature of their future job in comparison to Croatian students who gave it*
307 *a much lower ranking of 9 out of 12 items (56). While amongst Indian management students,*
308 *it was rated as the third most important factor influencing career choice (58). Financial*
309 *reward was also a high motivator for career decision among Chinese migrant students in*
310 *Canada (25), and in Korean students (55). In contrast, the need for higher remuneration did*
311 *not influence the career decision making among engineering students in India (12), and in*
312 *Japanese senior college students (57).*

313

314 ***Professional prestige***

315 Professional prestige was identified as an important deciding factor for youth career decision
316 making in India (58), South Africa (59), Croatia (56), Japan and Korea (57), which are all
317 collectivist settings. Prestige statuses attached to some occupations were strong incentives to
318 career choices; was ranked as the second most important positive influence in career decision
319 making by over half of the respondents in a South African study, indicating that these youth
320 wanted prestigious jobs so that they could live good lives and be respected in the society (59).
321 Japanese and Korean students were highly influenced by occupational prestige (57); however,
322 the Korean students considered it of higher importance than their Japanese counterparts did.

323 ***Job accessibility***

324 *Job accessibility was also considered as a deciding factor for youth's career decision in a*
325 *collectivist Burkina Faso society where nearness to employment locations prevented students*
326 *from choosing careers related to their preferred fields of endeavour (54). Another study*
327 *explored the perceptions of hospitality and tourism among college students and demonstrated*
328 *that Korean students are more likely to focus on current market trends such as job*
329 *accessibility in comparison to their American counterparts (55), implying that they are less*
330 *flexibility with their choices. However, job accessibility and vocational interest were less*
331 *predictive of career explorations than personality traits in both cultural settings in a different*
332 *study (38).*

333 ***Job security***

334 *Job security was reported as influential in only one study where it was identified as highly*
335 *important by German youth in comparison to their Croatian counterparts (56). They*
336 *suggested that their findings is in line with the uncertainty avoidance index proposed by*
337 *Hofstede, (29) which also takes on a relatively high value for Germans. They provided two*
338 *major reasons for the findings – (1) 'secure jobs' has a tradition for young Germans and (2)*
339 *change in employment contracts in Germany; with fewer employees under 25 having*
340 *permanent contracts (56).*

341

342

343

344 **Intrinsic Factors**

345 *The literature explored intrinsic factors such as personal interests, self-efficacy, outcome*
346 *expectations and professional development opportunities.*

347 ***Personal interests***

348 *Personal interests in career decision-making appeared to be an important factor in the*
349 *selection of a life career(12, 22, 50, 54, 55, 59). Bojuwoye and Mbanjwa ascertained that*
350 *about fifty per cent of youth career decisions are based on their personal interests (59), and*
351 *Gokuladas maintained that students from urban areas are most likely to consider their*
352 *personal interests before societal interests when making career decisions (12). Lent et al.,*
353 *reported that personal interest predict youth's career outcome expectations (50) while Li and*
354 *colleagues indicated that in collectivist Chinese culture, personal interests matter*
355 *significantly however individual preferences are strongly influenced by social comparison*
356 *(49). Atisogbe et al., observed that Swiss students are more influenced by personal interests*
357 *(54). They reported that in Switzerland, interest differentiation was significantly associated*
358 *with self-identity. This scenario was compared to the situation in the collectivist Burkina*
359 *Faso culture where interest differentiation and consistency were less associated self-identity*
360 *(54). Similarly, Korean students were reported to focus on the prevailing market trends such*
361 *as salary, job positions and promotion opportunities in contrast to American student who*
362 *were more future oriented and interested in setting individual desired goal in their reality*
363 *oriented-perceptions (55). Personal interest was also shown to career aspirations in Mexican*
364 *American women (22).*

365 ***Self-efficacy***

366 *Self-efficacy was considered a vital intrinsic factor in the career decision-making process of*
367 *youth (21, 23, 38, 52). Howard et al. reported individualistic and collectivist dimensions in*
368 *two different regions within the same country due to economic factors (52). In collectivist*
369 *cultures, student self-efficacy was linked to their level of congruence with their parents.*
370 *Whereas in individualistic cultural settings, like America, families encourage students to*
371 *become self-sufficient and independent (21, 23, 24, 38, 44)*

372 ***Outcome expectations***

373 *Two studies carried out in collectivist cultural settings reported that youth's outcome*
374 *expectation are contingent/dependent on the degree of perceived congruence with parents*

375 (45, 53). One article that studied the outcome expectations of youth in individualistic cultural
376 set up reported that among students in the United States, strong career maturity, confidence
377 and outcome expectations were culturally based (37).

378 **Professional Development Opportunities**

379 The opportunity for professional development is a major intrinsic career-influencing factor
380 (21, 37, 53). University students in China were influenced by career development and
381 individually motivated (53). While American students were shown to score higher for ideal
382 occupations (21), and influenced by goal motivation and strong career maturity (37). This is
383 similar to high school students in Indonesia, although dependent on congruence with parents
384 (47).

385 **Interpersonal Factors**

386 The literature discussed the extent to which family members, teachers/educators, peers and
387 social responsibilities influence youth's career decision-making.

388 **Influence of family members**

389 Agarwala suggested the father was seen as the most significant individual influencing the
390 career choice of Indian management students (58). This could be understood in the context of
391 a reasonably patriarchal society. According to the study, most of the participants had a
392 professional background. The participants' fathers were mostly professionals, which may
393 have motivated their career selection. In another study, mothers (52.50%) were regarded as
394 the most significant family variable that impacted positively on students' career choices (59).
395 Fathers (18.75%) were the second most significant variables, followed by siblings or
396 guardians (16.25%) (59). Good rapport among family members culminating in an effective
397 communication within the family set up is crucial for laying sound foundation for career
398 decision making. Higher career congruence with parents also increased career confidence
399 and self-efficacy (36, 45-47, 51). Furthermore, parents' profession influences career choice
400 as children from agricultural backgrounds tend to take on their parents' job, while those
401 from industrialised settings have more autonomy and career decidedness (52).

402 Other familial influence on career decision-making according to the results of the only
403 qualitative study in our review, include parental values, parental pressure, cultural capital
404 and family obligations (48). The study indicated the apparent Asian American cultural
405 preference for certain professions/careers. Students indicated that, parental opinion

406 *sometimes put an emphasis on a specific career. In that study, several participants*
407 *emphasized that they were not forced, but “strongly encouraged” (48):*

408 *It’s not like your parents are going to put a gun to your head and say “You’re going*
409 *to be a doctor” but from a young age, they say things like, “You’re going to be a*
410 *great doctor, I can’t wait until you have that stethoscope around your neck.”*

411

412 ***Teachers and Educators***

413 *Teachers and educators are significant figures in the process of youth’s career decision-*
414 *making (12, 41, 52, 53, 57). Cheung et al. and Howard et al. reported that in both collectivist*
415 *and individualistic cultures, teacher are seen as significant figures who are agents of*
416 *development and could have influence on students’ career decision making (41, 52). Cheung*
417 *et al. further reported that students in Hong Kong rated perceived efficacy of teachers higher*
418 *than parents due to lower level of parental education (41). In addition, Cheung and Arnold*
419 *demonstrated a strong student dependence on teachers followed by peers and less of parents*
420 *(53).*

421 ***Peer influence***

422 *Two studies carried out in both cultural settings showed peer influence as a third potent force*
423 *(after parents and teachers) that can significantly impact on the career decisions of youth,*
424 *especially girls (41, 52). Other studies reported that peers are a branch of the significant*
425 *others and as social agents, they influence their kinds through social comparisons and*
426 *acceptance (12, 37, 53, 57, 59).*

427 ***Social responsibilities***

428 *The impact of social responsibility as a driving force in youth career decision-making was*
429 *identified by Fouad et al. (42), who noted that the career decision-making of South Korean*
430 *youth is influenced by societal expectations. This supported by other research, which suggest*
431 *that societal expectations influenced youth career choices in both collectivist and*
432 *individualistic cultures (25, 32, 37, 48).*

433

434

435 **Emergent bicultural influence on youth career choices**

436 Of the 30 articles, only three explored the career decision making of bicultural youths (23, 25,
437 48). Strong family support influenced US-born and Asian-born students as shown by a recent
438 study (23). Hui and Lent found that students with stronger adherence to Asian values were
439 more likely to perceive family support to pursue science related careers (23). High sense of
440 obligation to parents (filial piety), internal locus of control and personal interests were
441 identified as factors that influenced bi-cultural Asian American students' career decision
442 making(48). Bicultural Chinese students who were acculturated to Canada were highly
443 intrinsically motivated (internal locus of control and self-efficacy) in their career decision-
444 making, while those who had stronger Chinese acculturations were influenced by extrinsic
445 (financial stability) and interpersonal (family) factors (25).

446

447 **Discussion**

448 This systematic review examined the existent factors influencing the career choices of the
449 youths from different countries around the globe, from either or both collectivist and
450 individualistic cultural settings. Intrinsic and interpersonal factors were more investigated than
451 extrinsic factors in the reviewed articles. In these articles, intrinsic factors included personal
452 interests, professional advancement and personality traits. Extrinsic factors included
453 guaranteed employment opportunities, job security, high salaries, prestigious professions and
454 future benefits. Meanwhile, interpersonal factors are the activities of agents of socialisation in
455 one's life, such as parental background, family cohesion, socio-economic status, peer influence
456 as well as interaction with other social agents such as school counsellors, teachers and other
457 educators (21, 44, 50, 51, 53).

458 The three factors (intrinsic, extrinsic and interpersonal) relating to career choices are pervasive
459 in both cultures. *Their level of influence on the youth differs from culture to culture and appear*
460 *to be dependent perceived parental congruence leading to self-efficacy and better career*
461 *choice outcomes.* The studies carried out in Canada, Finland, Germany, Spain, Switzerland and
462 United States of America showed a high level of individualism, which typifies intrinsic
463 motivation for career choice. Youths in individualistic cultural settings were influenced by the
464 combinations of intrinsic (personal interest, personality trait, self-efficacy), extrinsic (job
465 security, high salaries) and to a lesser extent, interpersonal (parental guidance) factors and are
466 encouraged to make their own career decisions (32, 43). In contrast, studies carried out in

467 Argentina, Burkina Faso, Bulgaria, China, Croatia, Hong Kong, India, Indonesia, Japan,
468 Mexico, Portugal, South Africa, South Korea, Taiwan and Ukraine showed a high level of
469 collectivism. Youths in collectivist cultures were mainly influenced by interpersonal
470 (honouring parental and societal expectations and parental requirements to follow a prescribed
471 career path) and extrinsic (prestigious professions) (24, 43). The opinions of significant others
472 matter significantly to youths from collectivist cultural settings. Whereas in individualistic
473 cultures, youths tend to focus on professions that offer higher income and satisfy their personal
474 interests (48, 56).

475 Parental influences were found to be significant in collectivist cultural settings (46, 58),
476 implying that youths from this culture value the involvement of significant others, especially
477 parents and other family members, during their career decision-making processes. The
478 activities of parents and significant others are very pivotal in the lives of the youth as they
479 navigate their career paths. Cheung *et al.* reported the role of significant others (teachers) in
480 influencing youth career choices when parents are unable to suitably play such role (41).
481 Interestingly, one article focused on two different cultural orientations within one country and
482 reported that parents' profession influence career choice as children from agricultural
483 backgrounds tend to take on their parents' job, while those from industrialised settings have
484 more autonomy and career decidedness (52). This finding emphasizes the complex interplay
485 of cultural context and the environment in the career aspirations of youths (42).

486 The review suggest that youths of collectivist orientations, tend to subordinate personal
487 interests to group goals, emphasising the standards and importance of relatedness and family
488 cohesion (51). However, such patterns of behaviour may be conflicted, particularly during
489 cross-cultural transitions. Parental influence have been reported to generate difficulties within
490 the family and discrepancies over career choice decisions are not uncommon within both
491 cultures (46, 60-62). The conundrum is will adolescents of collectivist orientation be
492 comfortable with their cultural ethos after resettling in a different environment with
493 individualistic cultural beliefs and practices?

494 Our study revealed that when youth transfer from their heritage culture to a different cultural
495 setting, their cultural values are challenged and their career decision-making patterns may be
496 affected. For instance, Tao *et al.* reported that students of Chinese descent who were
497 acculturated to Canada primed personal interests, self-efficacy and financial stability instead
498 of honouring parental and societal expectations in their career decision-making (25). Similarly,

499 Asian American students with stronger adherence to Asian values had a high sense of
500 obligation to parents (48) and were more likely to perceive family support than their
501 counterparts who were more acculturated to American values (23). *Our data also suggest a*
502 *strong interplay of individualist and collectivist cultural values coexisting in harmony and*
503 *jointly influencing the youth in the current global environment define themselves, relate to*
504 *others, and decide priorities in conforming to social/societal norms.* Movement across cultures
505 (migration) leads to several changes and adjustments in an individual's life. The internal and
506 psychological changes the youth may encounter, otherwise known as psychological
507 acculturation, also affect their career identity (63). Given that only three out of the 30 reviewed
508 studies were conducted in bicultural settings (23, 25, 48), further studies are recommended to
509 examine the career choices practices of youths who have transferred from collectivistic to
510 individualistic cultures.

511

512 **Practical implications for counsellors and policy makers**

513 Social Learning Theory proposes that the role of a career counsellor is to help clients expand
514 their career choices and help clarify beliefs that can interfere or promote their career plans (64).
515 Culture has a major influence on people's beliefs therefore, it is integral that career counsellors
516 are able to provide culturally responsive career directions to guide the youth in the pursuit of
517 their career aspirations. Providing accessible sources of support and empowering youths to
518 openly discuss their concerns relating to career decision-making will broaden the youths'
519 understanding and this could have a significant impact on their academic and career pathways.
520 Family support is important for all youths as they navigate their career explorations, especially
521 for migrants. The role of counsellors is not only limited to the youths, it can also benefit the
522 entire family. Essentially, counsellors can attempt to engage not just the youths in exploring
523 academic and vocational opportunities, but also offer avenues for families to become involved
524 and connected to the career decision-making processes.

525 Given the perennial migration streams across the globe, we recommend that career counsellors
526 and policy makers would endeavour to be suitable career anchors to substitutes for the absent
527 significant others in the lives of migrant youths. The influence of cultural heritage on career
528 choice and with increasing numbers of intercultural transitions, the cultural identity and
529 development of the youth, particularly for migrants, can be a complex and challenging process.
530 When migrant youths transfer away from their heritage cultures, leaving their significant others

531 behind, they face a daunting task to decipher their career aspirations. Cultural identities
532 combined with the varied expectations for achievement can be an overwhelming experience
533 for the youth. Counsellors can seize this opportunity to provide companionship and direction
534 as the youth figure out their career pathways (65, 66).

535 The counselling support to the family unit and community can have an incredibly positive
536 influence on youths and their ability to feel connected to their cultural identity. For migrant
537 families, this can also be a source of cultural comfort particularly for youths adjusting to the
538 bicultural identity experience (25). For career counsellors working with migrant youth, it is
539 imperative to develop an awareness of the multiple systemic challenges youth contend with in
540 their various social and academic settings. The significance of a school environment that is
541 conducive and embraces the racial and academic identity of its students can be a huge asset to
542 boost youth morale. Gonzalez *et al.* reported that students who feel culturally validated by
543 others at school and experience positive ethnic regard, have more confidence in their career
544 aspirations (67). Career counsellors together with other educators and service providers hold
545 influential positions as they can furnish academic, cultural and social support that family
546 members alone cannot provide.

547

548 **Strengths and Limitations of this study**

549 The major strength of this review is that it has provided increased understanding of the cultural
550 underpinnings of the factors that influence the career choices of youths. The study has also
551 highlighted areas of knowledge gaps in the literature, such as fewer studies exploring the
552 impact of extrinsic factors on career choice and the need for more bicultural studies. However,
553 the conclusions drawn from this review are limited to the data that were extracted from the
554 studies identified. We acknowledge that there are caveats with the use of the concepts
555 “collectivist and individualistic” to describe the cultural underpinnings of different countries
556 as there are some fluidity around their usage as suggested by Hofstede (27, 68). However, the
557 use of these concepts was helpful in classifying the cultural background of the participants
558 included in this review. The findings of the studies reviewed within each country may not
559 necessarily be representative of all the cultural orientations in those countries. Furthermore,
560 researchers from different cultures (or studying different cultures) may have chosen to study
561 only the variables that they believe will have relevance. Nevertheless, most of the studies
562 reviewed had large sample sizes and were conducted in various countries across the globe.

563 **Recommendations**

- 564 • Of the 30 articles reviewed, only one involved qualitative study designs. Further
565 qualitative studies on this topic are required to provide in-depth understanding of the
566 influences on youth's career choices and to allow causal inferences to be made.
- 567 • There were only three articles that examined the career decision-making of the
568 bicultural youths from the perspective of the mainstream and the heritage cultures.
569 Better career choices for the bicultural youth will enhance their self-identity and lead
570 to commitment to duty and eventual career satisfaction. Without harnessing the
571 potentials of youths through career education and training, the bicultural and migrant
572 youths' face uncertainties in the future in the host country. The rippling effects of
573 such uncertainties in the future could have a detrimental effect on the country's
574 economy. Therefore, there is the need for increased research activities in this area in
575 host countries. *Educational system planning should be developed to encourage youth
576 to have self-efficacy and be more involved in job-related information seeking. This
577 will be especially efficient in progressing bicultural youths who might have migrated
578 with their parents into a new culture.*
- 579
- 580 • The three bicultural studies were conducted in North America and involved only Asian
581 youths. There is the need for further studies to examine the level of family involvement
582 in youths' career choices among migrant families in different cultural settings.

583

584 **Conclusions**

585 The three factors investigated in this study are pervasive in influencing the career decisions of
586 youths in both individualistic and collectivist societies. In collectivist societies, parental
587 intervention is understood as a requirement to support their children's efforts and equip them
588 to be responsible and economically productive. Meanwhile, the standard practise in
589 individualistic societies is for parents to endorse their children's opinions and encourage them
590 to choose careers that make them happy. Overall, further research is imperative to guide the
591 understanding of parental influence and diversity in bicultural and migrant youths' career
592 prospects and their ability to use the resources available in their new environments to attain
593 meaningful future career goals. Additional research, particularly qualitative, is required to
594 explore the level of family involvement in youths' career choices among migrant families in
595 different cultural settings.

596 **Conflict of interest**

597 The authors declare that the research was conducted in the absence of any commercial or
598 financial relationships that could be construed as a potential conflict of interest.

599 **Author Contributions**

600 PAT and BMA extracted the data. BMA, TIE and DL critically appraised and validated the
601 study findings. PAT developed the first draft of the manuscript. BMA, TIE, DL and KT
602 reviewed and edited the manuscript. All authors read and approved the final manuscript for
603 submission.

604

605

606

607

608

609

610

611

612

613

614

615

616

617

618

619

620

621

622

623

624

625

626

In review

627 **References:**

628

- 629 1. Bubić A, Ivanišević K. The Role of Emotional Stability and Competence in Young
630 Adolescents' Career Judgments. *Journal of Career Development*. 2016;43(6):498-511.
- 631 2. Robertson PJ. Health inequality and careers. *British Journal of Guidance &*
632 *Counselling*,. 2014; 42(3):338-51.
- 633 3. UNESCO. Learning to live together: what do we mean by "youth:?" Retrived online
634 06-12-2017 from [http://www.unesco.org/new/en/social-and-human-](http://www.unesco.org/new/en/social-and-human-sciences/themes/youth/youth-definition/)
635 [sciences/themes/youth/youth-definition/](http://www.unesco.org/new/en/social-and-human-sciences/themes/youth/youth-definition/) 2017.
- 636 4. Gati I, Saka N. High school students' career-related decision-making difficulties.
637 *Journal of Counseling and Development*. 2001;79(3):331.
- 638 5. Howard KA, Walsh ME. Children's conceptions of career choice and attainment:
639 Model development. *Journal of Career Development*. 2011;38(3):256-71.
- 640 6. Porfeli EJ, Lee B. Career development during childhood and adolescence. *New*
641 *directions for youth development*. 2012;2012(134):11-22.
- 642 7. Kunnen ES. The effects of career choice guidance on identity development. *Education*
643 *Research International*. 2013;2013.
- 644 8. Lent RW, Brown SD, Hackett G. Toward a Unifying Social Cognitive Theory of
645 Career and Academic Interest, Choice, and Performance. *Journal of Vocational Behavior*.
646 1994;45(1):79-122.
- 647 9. Blanco Á. Applying social cognitive career theory to predict interests and choice
648 goals in statistics among Spanish psychology students. *Journal of Vocational Behavior*.
649 2011;78(1):49-58.
- 650 10. Lent RW, Brown SD, Hackett G. Contextual supports and barriers to career choice: A
651 social cognitive analysis. *Journal of counseling psychology*. 2000;47(1):36.
- 652 11. Carpenter P, Foster B. The career decisions of student teachers. *Educational Research*
653 *and Perspectives*. 1977;4(1):23-33.
- 654 12. Gokuladas VK. Factors that Influence First-Career Choice of Undergraduate
655 Engineers in Software Services Companies: A South Indian Experience: v15 n2 p144-165
656 2010; 2010.
- 657 13. Ryan RM, Deci EL. Intrinsic and Extrinsic Motivations: Classic Definitions and New
658 Directions. *Contemporary Educational Psychology*. 2000;25(1):54-67.
- 659 14. Nyamwange J. Influence of students' Interest on Career Choice among First Year
660 University Students in Public and Private Universities in Kisii County, Kenya. *Journal of*
661 *Education and Practice*, v7 n4 p96-102 2016. 2016;7(4):7.
- 662 15. Shoffner MF, Newsome D, Barrio Minton CA, Wachter Morris CA. A Qualitative
663 Exploration of the STEM Career-Related Outcome Expectations of Young Adolescents.
664 *Journal of Career Development*. 2015;42(2):102-16.
- 665 16. Bakar AR, Mohamed S, Suhid A, Hamzah R. So You Want to Be a Teacher: What
666 Are Your Reasons? ; 2014.
- 667 17. Edwards K, Quinter M. Factors influencing students career choices among secondary
668 school students in Kisumu municipality, Kenya. *Journal of Emerging Trends in Educational*
669 *Research and Policy Studies*. 2011;2(2):81-7.
- 670 18. Wu LT, Low MM, Tan KK, Lopez V, Liaw SY. Why not nursing? A systematic
671 review of factors influencing career choice among healthcare students. *International nursing*
672 *review*. 2015;62(4):547-62.
- 673 19. Bossman I. Bossman, Ineke, Educational Factors that Influence the Career Choices of
674 University of Cape Coast Students (April 5, 2014). Available at SSRN:

- 675 <https://ssrn.com/abstract=2420846> Available at SSRN: <https://ssrncom/abstract=2420846>
676 2014.
- 677 20. Beynon J, Toohey K, Kishor N. Do visible minority students of Chinese and South
678 Asian ancestry want teaching as a career?: Perceptions of some secondary school students in
679 Vancouver, BC. *Canadian Ethnic Studies Journal*. 1998;30(2):50.
- 680 21. Guan Y, Chen SX, Levin N, Bond MH, Luo N, Xu J, et al. Differences in Career
681 Decision-Making Profiles Between American and Chinese University Students: The Relative
682 Strength of Mediating Mechanisms Across Cultures. *J Cross-Cult Psychol*. 2015;46(6):856-
683 72.
- 684 22. Caldera YM, Robitschek C, Frame M, Pannell M. Intrapersonal, Familial, and
685 Cultural Factors in the Commitment to a Career Choice of Mexican American and Non-
686 Hispanic White College Women. *Journal of Counseling Psychology*. 2003;50(3):309-23.
- 687 23. Hui K, Lent RW. The roles of family, culture, and social cognitive variables in the
688 career interests and goals of Asian American college students. *Journal of Counseling*
689 *Psychology*. 2018;65(1):98-109.
- 690 24. Mau WC. Cultural Differences in Career Decision-Making Styles and Self-Efficacy.
691 *Journal of Vocational Behavior*. 2000;57(3):365-78.
- 692 25. Tao D, Zhang R, Lou E, Lalonde RN. The cultural shaping of career aspirations:
693 Acculturation and Chinese biculturals' career identity styles. *Canadian Journal of*
694 *Behavioural Science / Revue canadienne des sciences du comportement*. 2018;50(1):29-41.
- 695 26. Wambu G, Hutchison B, Pietrantoni Z. Career Decision-Making and College and
696 Career Access among Recent African Immigrant Students. *Journal of College Access*.
697 2017;3(2):17.
- 698 27. Hofstede G. *Culture's Consequences: Comparing Values, Behaviors, Institutions, and*
699 *Organizations Across Nations*. Thousand Oaks, Sage. 2001.
- 700 28. Hofstede G. *Culture's Consequences: International Differences in Work-Related*
701 *Values*. Beverly Hills: CA: Sage; 1980.
- 702 29. Hofstede G. Dimensionalizing cultures: The Hofstede model in context. *Online*
703 *readings in psychology and culture*. 2011;2(1):8.
- 704 30. Sinha JB. Collectivism and Individualism. *Psycho-Social Analysis of the Indian*
705 *Mindset*: Springer; 2014. p. 27-51.
- 706 31. Amit A, Gati I. Table or Circles: A Comparison of Two Methods for Choosing among
707 Career Alternatives: v61 n1 p50-63 Mar 2013; 2013.
- 708 32. Mau WCJ. Cultural Dimensions of Career Decision-Making Difficulties. *The Career*
709 *Development Quarterly*. 2004;53(1):67-77.
- 710 33. Oettingen G, Zosuls C. Self-efficacy of adolescents across culture. *Self-efficacy*
711 *beliefs of adolescents*. 2006:245-66.
- 712 34. IOM. Key Migration Terms. Retrived online 27-05-2018 from
713 <https://wwwiomint/key-migration-terms>. 2018.
- 714 35. Zhang L, Gowan MA, Treviño M. Cross-cultural correlates of career and parental role
715 commitment. *J Manage Psychol*. 2014;29(6):736-54.
- 716 36. Sawitri DR, Creed PA. Collectivism and perceived congruence with parents as
717 antecedents to career aspirations: A social cognitive perspective. *Journal of Career*
718 *Development*. 2017;44(6):530-43.
- 719 37. Lee K-H. A cross-cultural study of the career maturity of Korean and United States
720 high school students. *Journal of Career Development*. 2001;28(1):43-57.
- 721 38. Fan W, Cheung FM, Leong FT, Cheung SF. Personality Traits, Vocational Interests,
722 and Career Exploration: A Cross-Cultural Comparison between American and Hong Kong
723 Students. *Journal of Career Assessment*. 2012;20(1):105-19.

- 724 39. Fan W, Cheung FM, Leong FTL, Cheung SF. Contributions of family factors to
725 career readiness: A cross-cultural comparison. *The Career Development Quarterly*.
726 2014;62(3):194-209.
- 727 40. Aromataris E, Munn Z E. Joanna Briggs Institute Reviewer's Manual. The Joanna
728 Briggs Institute (Available from <https://reviewersmanual.joannabriggs.org/>). 2017.
- 729 41. Cheung FM, Wan SLY, Fan W, Leong F, Mok PCH. Collective contributions to
730 career efficacy in adolescents: A cross-cultural study. *Journal of Vocational Behavior*.
731 2013;83(3):237-44.
- 732 42. Fouad NA, Kim S-y, Ghosh A, Chang W-h, Figueiredo C. Family Influence on Career
733 Decision Making: Validation in India and the United States. *Journal of Career Assessment*.
734 2016;24(1):197-212.
- 735 43. Gunkel M, Schlägel C, Langella IM, Peluchette JV, Reshetnyak E. The influence of
736 national culture on business students' career attitudes - An analysis of eight countries. *Z*
737 *Persforsch*. 2013;27(1):47-68.
- 738 44. Shin Y-J, Kelly KR. Cross-Cultural Comparison of the Effects of Optimism, Intrinsic
739 Motivation, and Family Relations on Vocational Identity. *Career Development Quarterly*.
740 2013;61(2):141-60.
- 741 45. Sawitri DR, Creed PA, Zimmer-Gembeck MJ. Longitudinal Relations of Parental
742 Influences and Adolescent Career Aspirations and Actions in a Collectivist Society. *J Res*
743 *Adolesc*. 2015;25(3):551-63.
- 744 46. Sawitri DR, Creed PA, Zimmer-Gembeck MJ. Parental Influences and Adolescent
745 Career Behaviours in a Collectivist Cultural Setting. *International Journal for Educational and*
746 *Vocational Guidance*. 2014;14(2):161-80.
- 747 47. Sawitri DR, Creed PA. Perceived career congruence between adolescents and their
748 parents as a moderator between goal orientation and career aspirations. *Personality and*
749 *Individual Differences*. 2015;81:29-34.
- 750 48. Polenova E, Vedral A, Brisson L, Zinn L. Emerging Between Two Worlds: A
751 Longitudinal Study of Career Identity of Students From Asian American Immigrant Families.
752 *Emerg Adulthood*. 2018;6(1):53-65.
- 753 49. Li X, Hou ZJ, Jia Y. The influence of social comparison on career decision-making:
754 Vocational identity as a moderator and regret as a mediator. *Journal of Vocational Behavior*.
755 2015;86:10-9.
- 756 50. Lent RW, Paixao MP, da Silva JT, Leitao LM. Predicting Occupational Interests and
757 Choice Aspirations in Portuguese High School Students: A Test of Social Cognitive Career
758 Theory: v76 n2 p244-251 Apr 2010; 2010.
- 759 51. Kim S-y, Ahn T, Fouad N. Family influence on korean students' career decisions: A
760 social cognitive perspective. *Journal of Career Assessment*. 2016;24(3):513-26.
- 761 52. Howard KAS, Ferrari L, Nota L, Solberg VSH, Soresi S. The relation of cultural
762 context and social relationships to career development in middle school. *Journal of*
763 *Vocational Behavior*. 2009;75(2):100-8.
- 764 53. Cheung R, Arnold J. The Impact of Career Exploration on Career Development
765 among Hong Kong Chinese University Students. *Journal of College Student Development*.
766 2014;55(7):732-48.
- 767 54. Atitsogbe KA, Moumoula IA, Rochat S, Antonietti JP, Rossier J. Vocational interests
768 and career indecision in Switzerland and Burkina Faso: Cross-cultural similarities and
769 differences. *Journal of Vocational Behavior*. 2018;107:126-40.
- 770 55. Choi K, Kim DY. A cross cultural study of antecedents on career preparation
771 behavior: Learning motivation, academic achievement, and career decision self-efficacy. *J*
772 *Hosp Leis Sports Tour Educ*. 2013;13(1):19-32.

- 773 56. Wüst K, Leko Šimić M. Students' career preferences: Intercultural study of Croatian
774 and German students. *Econ Sociol.* 2017;10(3):136-52.
- 775 57. Yamashita T, Youn G, Matsumoto J. Career decision-making in college students:
776 Cross-cultural comparisons for Japan and Korea. *Psychol Rep.* 1999;84(3 PART 2):1143-57.
- 777 58. Agarwala T. Factors Influencing Career Choice of Management Students in India.
778 *Career Development International.* 2008;13(4):362-76.
- 779 59. Bojuwoye O, Mbanjwa S. Factors Impacting on Career Choices of Technikon
780 Students From Previously Disadvantaged High Schools. *J Psychol Afr.* 2006;16(1):3-16.
- 781 60. Dietrich J, Kracke B. Career-specific parental behaviors in adolescents' development.
782 *Journal of Vocational Behavior.* 2009;75(2):109-19.
- 783 61. Myburgh J. An empirical analysis of career choice factors that influence first-year
784 Accounting students at the University of Pretoria: A cross-racial study. *Meditari Accountancy*
785 *Research.* 2005;13(2):35.
- 786 62. Keller BK, Whiston SC. The Role of Parental Influences on Young Adolescents'
787 Career Development. *Journal of Career Assessment.* 2008;16(2):198-217.
- 788 63. W. BJ. Immigration, Acculturation, and Adaptation. *Applied Psychology.*
789 1997;46(1):5-34.
- 790 64. Krumboltz J. A learning theory of career counseling. In M. L. Savickas & W. Bruce
791 Walsh (Eds.), *Handbook of career counseling theory and practice* (pp. 55-80). Palo Alto, CA:
792 Davies-Black. 1996.
- 793 65. Gushue G, Clarke C, Pantzer K, Scanlan K. Self-efficacy, perceptions of barriers,
794 vocational identity, and the career exploration behaviour of Latino/ a high school students.
795 *Carreer Development Quarterly.* 2006;54:307 -17.
- 796 66. Risco CM, Duffy RD. A Career Decision-Making Profile of Latina/o Incoming
797 College Students. *Journal of Career Development.* 2011;38(3):237-55.
- 798 67. Gonzalez LM, Stein GL, Huq N. The Influence of Cultural Identity and Perceived
799 Barriers on College-Going Beliefs and Aspirations of Latino Youth in Emerging Immigrant
800 Communities. *Hispanic Journal of Behavioral Sciences.* 2013;35(1):103-20.
- 801 68. Hofstede G. *Cultures and organizations: Software of the mind.* McGraw-Hill, London.
802 1991.
- 803 69. R. SD, A. CP, J. ZGM. Longitudinal Relations of Parental Influences and Adolescent
804 Career Aspirations and Actions in a Collectivist Society. *J Res Adolesc.* 2015;25(3):551-63.

805

806

807

808

809

810

811

812

813

814

815

816

817

818

819

820 **Figure Legends**

821 **Figure 1 Search strategy**

822 The figure shows the search strategy including databases assessed for this study.

823

824

825 **Figure 2 Diagrammatic illustrations of included studies highlighting the factors that**
826 **influence youth career choices.**

827 The figures shows studies reporting the three factors (intrinsic, extrinsic, and interpersonal)
828 influencing youths career choices and the number of studies focusing on each factor.

829

830

831 **Figure 3 Career influencing factors.**

832 The figures shows identified career influencing factors and their distribution in cultural settings
833 from the included studies.

Tables

Table 1. Quality assessment of included articles

Table 1a. Quality assessment of included qualitative studies using the JBI CAT

Authors and year	Theoretical principles	Research question	Data collection method	Data analysis	Results interpretation	Research orientation	Researcher influence	Participant representation	Ethical considerations	Evidence based conclusion	Scores (10)
Polenova, et al., 2018(48)	Y	Y	Y	Y	Y	U	U	Y	U	Y	8.5

Table 1b. Quality assessment of included quantitative studies using the JBI cross-sectional studies CAT

N^o	Author and year	Inclusion criteria	Study setting and subjects described	Valid measurements	Decreased risk of bias	Confounding identified	Confounding adjusted	Measured outcomes	Appropriate Statistics	Scores (8)
1	Agarwala, 2008(58)	U	Y	Y	Y	Y	N	Y	Y	6.5
2	Atitsogbe et al., 2018(54)	N	Y	Y	U	U	N	Y	Y	5
3	Bojuwoye & Mbanjwa, (2006)(59)	N	Y	Y	Y	N	N	Y	Y	5
4	Caldera et al., 2003(22)	N	Y	Y	Y	Y	N	Y	Y	6
5	Cheung et al., 2013(41)	N	Y	Y	Y	U	U	Y	Y	6

6	Cheung & Arnold, 2014(53)	N	Y	Y	Y	Y	Y	Y	Y	7
7	Choi & Kim 2013(55)	N	U	Y	Y	Y	N	Y	Y	5.5
8	Fan et al., 2012(38)	N	Y	Y	Y	Y	N	Y	Y	6
9	Fan et al., 2014(39)	N	Y	Y	Y	N	N	Y	Y	5
10	Fouad et al., 2016(42)	N	Y	Y	Y	Y	N	Y	Y	6
11	Guan et al., 2015(21)	N	Y	Y	Y	Y	Y	Y	Y	7
12	Hui & Lent, 2018(23)	N	Y	Y	Y	Y	N	Y	Y	6
13	Gunkel et al., 2013(43)	N	Y	Y	Y	Y	Y	Y	Y	7
14	Gokuladas 2010(12)	N	Y	Y	Y	Y	Y	U	Y	6.5
15	Kim, et al., 2016(51)	N	Y	Y	Y	Y	N	Y	Y	6

16	Lee & Ki-Hak, 2001(37)	N	Y	Y	Y	N	N	Y	Y	5
17	Lent et al., 2010(50)	N	Y	Y	Y	Y	Y	Y	Y	7
18	Howard et al., 2009(52)	U	Y	Y	Y	Y	Y	Y	Y	7.5
19	Li & Jia, 2015(49)	N	Y	Y	Y	Y	N	Y	Y	6
20	Mau, 2000(24)	N	Y	Y	Y	Y	N	Y	Y	6
21	Sawitri et al., 2014(46)	N	Y	Y	Y	Y	N	Y	Y	6
22	Sawitri et al. 2015(47)	N	Y	Y	Y	Y	N	Y	Y	6
23	Sawitri et al, 2015(69)	N	Y	Y	Y	Y	N	Y	Y	6
24	Sawitri et al., 2017(36)	N	Y	Y	Y	Y	N	Y	Y	6
25	Tao et al., 2018(25)	Y	Y	Y	Y	Y	N	Y	Y	7

26	Wüst & Leko, 2017(56)	N	Y	Y	Y	N	N	Y	Y	5
27	Yamashita et al., 1999(57)	N	Y	Y	Y	N	N	Y	Y	5
28	Yun-Jeong and Kelly, 2013(44)	N	Y	Y	Y	Y	N	Y	Y	6
29	Zhang et al., 2014(35)	Y	Y	Y	Y	Y	N	Y	Y	7

Abbreviations: Y= yes, N= no, U= unknown

Table 2: Summary of studies included in the review

Serial No	Author and year	Study setting and cultural values identified	Research Method	Sample size	Participants' Level of Education	Factors and Study outcomes identified
1	Agarwala, 2008(58)	Collectivist: - India	Quantitative	99	University	<ul style="list-style-type: none"> • Intrinsic - Personal characteristics like skills, competencies and abilities. • Extrinsic – Desire for benefits, financial reward, social recognitions and job security. • Interpersonal - Fathers were the most significant individuals influencing career choice. Collectivistic ethos were the predominant cultural values, though some students demonstrated individualistic tendencies.
2	Atitsogbe et al., 2018(54)	Collectivist: – Burkina Faso Individualistic:	Quantitative	700	University	<ul style="list-style-type: none"> • Intrinsic – Swiss students more influenced by vocational interests.

		– Switzerland				<ul style="list-style-type: none"> • Extrinsic - Burkina Faso students influenced by job accessibility, which could prevent them from choosing careers related to their preferred fields.
3	Bojuwoye & Mbanjwa, (2006)(59)	Collectivist: - South Africa	Quantitative	80	Institute of Technology students	<ul style="list-style-type: none"> • Intrinsic - Personal interest (50%) • Extrinsic – Prestigious jobs (52.5%) • Interpersonal - Family members were the most influential when making career decision (82.5% mostly mothers) and then teachers and peers.
4	Caldera et al., 2003(22)	Collectivist – Mexico Individualistic – America	Quantitative	158	University	<ul style="list-style-type: none"> • Intrinsic – Non-Hispanic White American women influenced by intrapersonal factors. • Interpersonal - Mexican American women wanted to identify with parents but they also wanted to surpass parents.
5	Cheung et al., 2013(41)	Collectivist: - China - Hong Kong Individualistic: - United States	Quantitative	1175	High school	<p>Interpersonal – Influence of significant others (teachers, parents and peers). Hong Kong students rated perceived efficacy of teachers higher than parents due to lower level of parental education.</p>

6	Cheung & Arnold, 2014(53)	Collectivist - China	Quantitative	271	University	<ul style="list-style-type: none"> • Intrinsic - Individually motivated achievement influenced career development. • Interpersonal – Strong influence of significant others. A stronger dependence on teachers, followed by peers and less of parents.
7	Choi & Kim 2013(55)	Collectivist: - South Korea Individualistic: - United States	Quantitative	422	University	<ul style="list-style-type: none"> • Intrinsic – Personal interests influenced American students’ career selection • Extrinsic – Job prospect influenced the Korean students’ career choices.
8	Fan et al., 2012(38)	Collectivist: - Hong Kong Individualistic: - United States	Quantitative	761	University	<ul style="list-style-type: none"> • Intrinsic – American students significantly more influenced by personality traits. • Extrinsic – Vocational/job interest was also a deciding factor for career choice. Personality traits were stronger than vocational interest in predicting career explorations in both cultures. • Interpersonal – Hong Kong students were more accommodating of opinions of others in the social environment.
9	Fan et al., 2014(39)	Collectivist: - Hong Kong	Quantitative	1563	University	<ul style="list-style-type: none"> • Interpersonal – In both Hong Kong and United States, culture played a significant role in student choice of

		Individualistic: - United States				career. Significant influences of family orientation in Hong Kong compared to the United States. Strong independence among United States students and higher perceptions of family intrusiveness.
10	Fouad et al., 2016(42)	Collectivist: - India Individualistic: - United states	Quantitative	568	University	<ul style="list-style-type: none"> • Interpersonal – Family influence was similar in the four-factor model between both cultures. However, there is a stronger family influences among the collectivist Indian culture.
11	Gokuladas, 2010(12)	Collectivist - India	Quantitative	1550		<ul style="list-style-type: none"> • Intrinsic - Students considered self-interest before societal interest. • Extrinsic - Students saw income as an important component of life. • Interpersonal – Adolescents’ career decision-making were influenced by parents, siblings, family members peers and educators.
12	Guan et al., 2015(21)	Collectivist: - China Individualistic: - United States	Quantitative	1874	University	<ul style="list-style-type: none"> • Intrinsic – American students scored higher on aspiration for ideal occupation, internal locus of control and efforts invested in career decision making. • Interpersonal – Chinese students scored significantly higher on consulting with others, desire to please others,

						willingness to compromise, dependence on others, and procrastination.
13	Gunkel et al., 2013(43)	Individualistic - Germany - Finland - Germany - Spain - United States Collectivist - Argentina - Bulgaria - China - Ukraine	Quantitative	1845	University	<ul style="list-style-type: none"> • Interpersonal – In high power distance cultures, career related decisions are not solely based on one’s own preferences. Career attitudes are influenced by cultural dimensions.
14	Hui & Lent, 2018(23)	Bicultural – Collectivist in individualistic setting: - Asian Americans	Quantitative	348	University	<ul style="list-style-type: none"> • Intrinsic - Higher self-efficacy, outcome expectations, and interests were related to family support. • Interpersonal – Strong family support and similar results for US-born and Asian-born students. Students with stronger adherence to Asian values were more likely to perceive family support to pursue science related careers.

15	Howard et al. 2009(52)	Partly Individualistic & Collectivist - Northern Italy - Southern Italy	Quantitative	588	Middle school	<ul style="list-style-type: none"> • Intrinsic – Self-efficacy and goal setting orientation and motivation are influenced by social support. • Interpersonal – For students from Southern Italy which is characterised as agricultural economy, familial support directly influenced their career choice. For students from Northern Italy which is an industrialised setting, family support is related to more career decidedness.
16	Kim et al., 2016(51)	Collectivist: - South Korea	Quantitative	420	College students	<ul style="list-style-type: none"> • Intrinsic - Self-efficacy is influenced by family support • Interpersonal – Strong family informational support, family expectations, family financial support.
17	Lee, 2001(37)	Collectivist: - Korea Individualistic: - United States	Quantitative	597	High school	<ul style="list-style-type: none"> • Intrinsic – Stronger career maturity, goal orientation, confidence, and independence among the United States students. • Interpersonal – Strong family influence for Korean students based on societal expectations.
18	Lent et al., 2010(50)	Collectivist - Portugal	Quantitative	600	High school	<ul style="list-style-type: none"> • Intrinsic – Interest predicts self-efficacy and outcome expectations • Interpersonal – Social support impacts on peoples’ self-efficacy beliefs.

19	Li et al., 2015(49)	Collectivist: - China	Quantitative	98	University	<ul style="list-style-type: none"> • Intrinsic – personal preferences but strongly influenced by social comparison. • Interpersonal – career choices influenced by peers through social comparison.
20	Mau, 2000(24)	Collectivist: - Taiwan Individualistic: - United States	Quantitative	1566	University	<ul style="list-style-type: none"> • Intrinsic – American students were higher on decision-making self-efficacy. • Interpersonal – Familial and societal expectations influence Taiwanese students
21	Polenova, et al., 2018(48)	Bicultural – Collectivist in individualistic setting: - Asian Americans	Qualitative	12	University	<ul style="list-style-type: none"> • Intrinsic – Internal locus of control and personal interest. There was an interaction between two cultures. • Interpersonal – High sense of obligation to parents (filial piety).
22	Sawitri et al., 2014(46)	Collectivist: - Indonesia	Quantitative	954	High school	<ul style="list-style-type: none"> • Intrinsic – Self-efficacy is important but it is affected by parental influence. • Interpersonal – Perceived career congruence with parents.
23	Sawitri et al., 2015(45)	Collectivist: - Indonesia	Quantitative	351	High school	<ul style="list-style-type: none"> • Intrinsic - Adolescent–parent career congruence is indirectly associated with self-efficacy and career aspirations. • Interpersonal – Strong parental influence

24	Sawitri et al. 2015(47)	Collectivist: - Indonesia	Quantitative	601	High school	<ul style="list-style-type: none"> • Intrinsic – Goal oriented career aspirations, performance and mastery approach are dependent on degree of perceived congruence with parents. • Interpersonal – Perceived career congruence with parents reduces self-oriented goals.
25	Sawitri et al, 2017(36)	Collectivist: - Indonesia	Quantitative	337	High school	<ul style="list-style-type: none"> • Intrinsic – Higher career congruence with parents lead to career confidence and self-efficacy. • Interpersonal - Those who value inequality conform to parents and give up their own career goals.
26	Shin & Kelly, 2013(44)	Collectivist: - South Korea Individualistic: - United States	Quantitative	347	University	<ul style="list-style-type: none"> • Intrinsic - In both cultures, the results show that optimism was an important factor to vocational identity. American families encourage students to become self-sufficient and independent • Interpersonal – Family support plays an important role in career development for the Korean students.
27	Tao <i>et al.</i> , 2018(25)	Bicultural – Collectivist in individualistic setting: - Chinese Canadians	Quantitative	194	University	<ul style="list-style-type: none"> • Intrinsic – Self-efficacy • Extrinsic – Financial stability • Interpersonal – familial influence <p>Bicultural Chinese students who were acculturated to Canada were intrinsically motivated in their career decision-making, while those who had stronger</p>

						Chinese acculturations were influenced by extrinsic and interpersonal factors.
28	Wüst & LekoSimic, 2017(56)	Collectivist: - Croatia Individualistic: - Germany	Quantitative	478	University	<ul style="list-style-type: none"> • Extrinsic – High income and secure jobs are important to German students while being part of a recognised profession is important to Croatian students. • Interpersonal – Social responsibility (helping others, support society) is important to Croatian students
29	Yamashita et al., 1999(57)	Collectivist: - Japan - Korea	Quantitative	2087	University	<ul style="list-style-type: none"> • Extrinsic – Economic viability, highly appreciated and well paid jobs • Interpersonal - Parents, teachers and friends have influence on career choice of occupation
30	Zhang et al., 2014(35)	Individualistic: - United States Collectivist: - Mexico	Quantitative	372	University	<ul style="list-style-type: none"> • Interpersonal – Mexican-born females had higher family orientations than their US-born and Non-Hispanic White counterparts. Country of birth was more strongly related to career commitment than ethnicity/ cultural background.

Figure 1.TIF

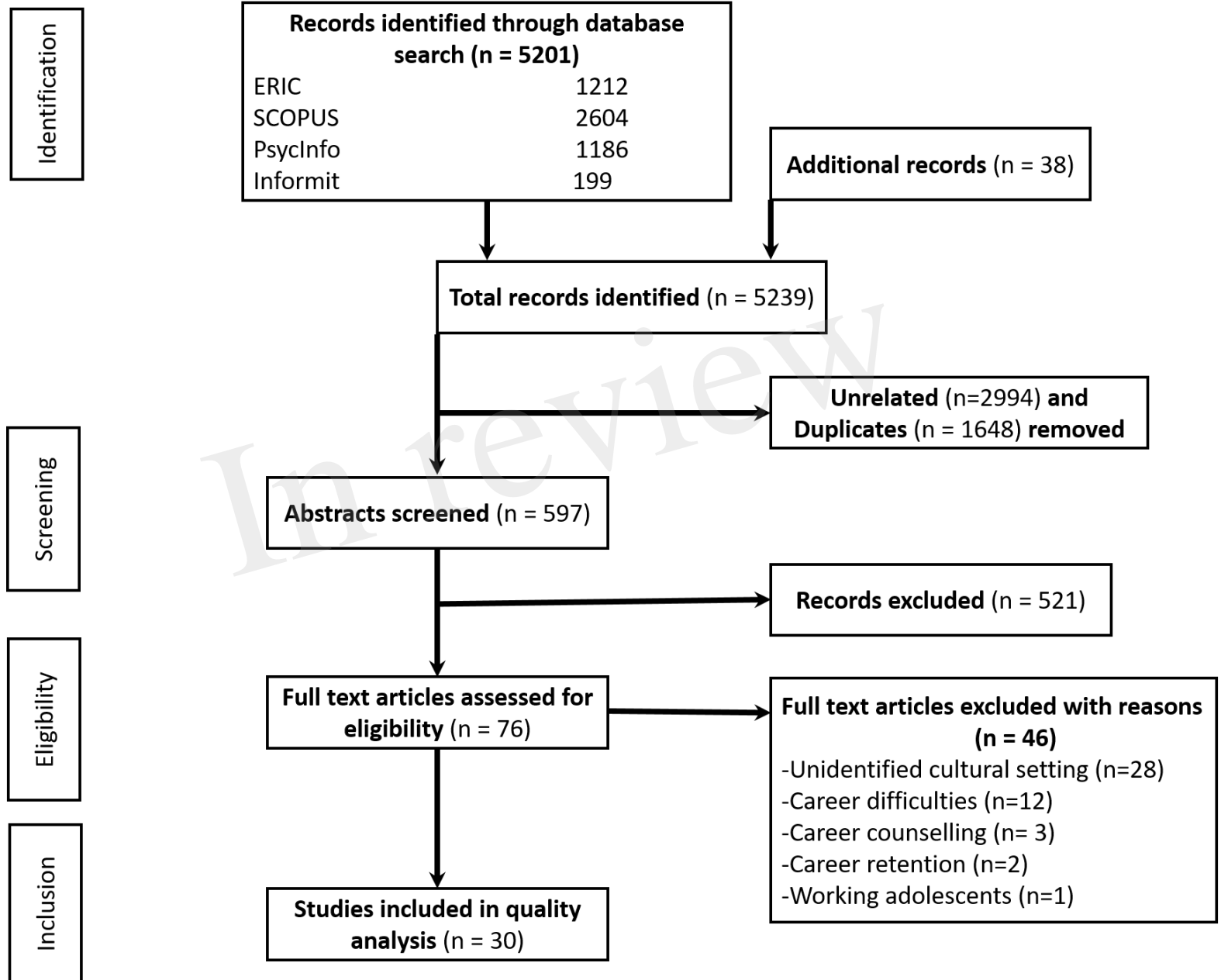


Figure 2.TIF

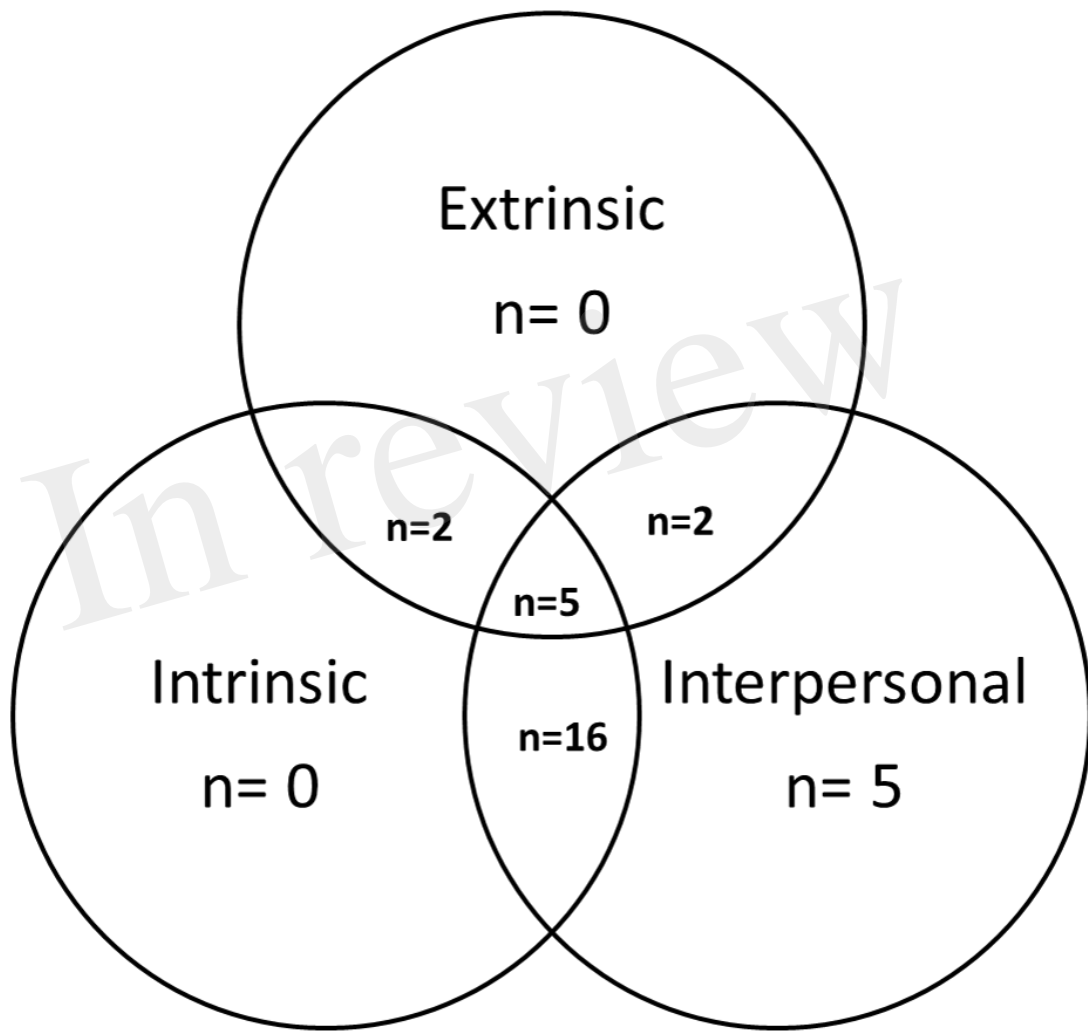


Figure 3.TIF

