

# The characteristics of social problem-solving among Palestinian adolescents

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## RESEARCH ARTICLE

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### ABSTRACT

Social problem-solving skills are the individual's way for better social adaptation. Therefore, the study aimed to investigate the characteristics of Palestinian adolescents' social problem-solving (Positive orientation, negative orientation, rational style, impulsive style, and avoidance style) in connection to some demographic variables (i.e. gender, age, family composition, father's education, and mother's education). As an instrument, Social Problem-Solving Inventory-Revised (SPSI-R) was applied to 410 Palestinian adolescents whose ages (12, 15, and 18 years old). The results showed that the Palestinian adolescents had the highest level of positive orientation and the least level of negative problem orientation towards solving social-problems. In addition, the finding showed that there were no differences between girls and boys in positive orientation, rational style and impulsive style, while females had a tendency towards negative orientation and avoidance style. There were no differences attributed to age in negative orientation, rational style, impulsive style, and avoidance style. However, it was found that positive orientation was prominent in 18 years old. There was no difference in adolescents' family composition in their dealing with social problems. Also, there was no difference in solving social problems attributed to the father's education. However, there was no difference in negative orientation, positive orientation, rational style, and impulsive style attributed to mother's education. However, there was a relationship between the mother who has elementary school and avoidance style.

### KEYWORDS

adolescents, social problem-solving

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## INTRODUCTION

Adolescents are members of society, and as such, they face a variety of issues, including social problems that arise during their everyday interactions, for which they require effective solutions (Heppner et al., 2004; Nezu, 2004). These problems could be (i.e. having a difference with your colleague, or having daily skirmishes with your family member, teacher or friends). However, in order to deal with these problems, a number of factors must be considered, including people's views and attitudes concerning their abilities to solve these problems (this attitude is called *problem orientation*) (ibid). Consequently, Individuals' ability to develop, choose, and implement solutions to personal problems that arise in their daily lives is reflected in their social problem-solving (SPS) skills (Aburezeq & Abu Taha, 2018a; D'Zurilla, Nezu, & Maydeu-Olivares, 2004; Nezu, 2004). A social problem (SP) is any problem that arises in one's life that necessitates a response in order to receive proper adaptive treatment. However, due to the numerous difficulties, persons confronted with this circumstance may not be able to receive an immediate efficient solution (D'Zurilla, Nezu & Maydeu-Olivares, 2004). Therefore, SP solving is the cognitive-emotional behavioral process used by individuals attempting to solve the social challenges they face in their social context, especially the experience of major negative interpersonal events (Aburezeq & Kasik, 2021a). Accordingly, based on many readings and reviewing a number of modern studies, as shown in the section of literature review, we found that the majority of the researches used Social Problem-Solving Inventory-Revised (SPSI-R) as the main instrument to measure individuals' SPS. SPSI-R was adopted to find relationships between SPS and other aspects such as loneliness, apprehension, social cognitive-affective aspects, tension, traumatic experience, psychological adjustment, quality of life, the practice of physical activity, empathy, peace education, attachment, self-esteem, violence, and academic attainment (Aburezeq & Kasik, 2021b). The current study also used the inventory as the main instrument.

### First: Social Problem-Solving Inventory-Revised (SPSI-R)

In order to measure SPS, D'Zurilla, Nezu, Maydeu-Olivares, Olivares, and D'Zurilla (2002) created an inventory of 25 items to measure SPS and divided it into: (a) problem orientation, which is either Positive Problem Orientation (PPO) or Negative Problem Orientation (NPO), and (b) problem-solving styles (i.e. Rationality (RS), Impulsivity (IS, and Avoidance (AS)). These dimensions are the focus of our research, and they are mentioned elaborately below.

#### PPO

In PPO, Individuals tend to regard their problems as challenges. They have a positive outlook and believe that difficulties can be solved. They have a strong belief in their ability to manage difficulties and a basic understanding that effective problem-solving needs effort and time, as well as consideration of negative emotions as an important element of the broader problem-solving process (Nezu, 2004).

#### NPO

NPO has a group of dysfunctional cognitive-emotional schemas (e.g. low self-efficacy and the anticipation of negative results), and problems are considered as threats (D'zurilla, Chang, &



Sanna, 2003; D’Zurilla, Nezu, Maydeu-Olivare, et al., 2002; Jaffee & D’Zurilla, 2003; Maydeu-Olivares & D’Zurilla & 1995). The following are some characteristics of people who have a negative attitude about the problem: They see problems as dangers. They do not expect the problems to be resolved. They have concerns about their abilities to tackle the problem. They are frustrated while dealing with challenges. They have bad feelings when facing those problems (Nezu, Nezu, & D’Zurilla, 2012). For the purposes of measuring the NPO among Palestinian adolescents, Aburezeq and Kasik (2021d) examined the psychometric properties of an Arabic version of the NPO questionnaire, which showed high validity and reliability.

## RS

RS is a problem-solving approach that emphasizes the reasonable, intentional, and methodical application of effective problem-solving techniques. The problems are considered as a task that needs to be methodologically resolved (Aburezeq & Abu Taha, 2018b; D’zurilla et al., 2003; D’Zurilla, Nezu, Maydeu-Olivare, et al., 2002; Jaffee & D’Zurilla, 2003; Maydeu-Olivares & D’Zurilla, 1995).

## IS

IS is a set of restricted, impulsive, rushed, unfinished, and uncaring efforts to resolve problems (D’zurilla et al., 2003; D’Zurilla, Nezu, Maydeu-Olivare, et al., 2002; Jaffee & D’Zurilla, 2003; Maydeu-Olivares & D’Zurilla, 1995). It is a method used by some people to tackle difficulties by attempting to solve them in a hasty or negligent manner. These efforts can be defined as hurried, limited, and incomplete (Nezu et al., 2012).

## AS

It is a problem-solving pattern that is characterized by procrastination, inactivity, reliance, and inaction. The problem solver tries to delegate responsibility for his or her issue to others (D’zurilla et al., 2003; D’Zurilla, Nezu, Maydeu-Olivare, et al., 2002; Jaffee & D’Zurilla, 2003; Maydeu-Olivares & D’Zurilla, 1995).

## LITERATURE REVIEW

All the following previous studies used SPSI-R by D’Zurilla, Nezu, Maydeu-Olivare, et al. (2002), which is adopted in the current study. In Hungary, Aburezeq and Kasik (2021c) found that there was a relationship between SPS and PWB; PPO and RS positively impacted PWB, while NPO, IS and, AS negatively impacted PWB. In Turkey, Yavuz and Guzel (2020) found a positive relationship between SPS skills and communication skills. Chang, et al. (2020a) indicated that loneliness was positively associated with NPO and AS and negatively associated with PPO and RS. Another study by Chang, et al. (2020b) indicated that NPO fully mediated the positive association between loneliness and anxious symptoms. On contrary, NPO only partially mediated the positive association found between loneliness and depressive symptoms. In Vietnam, Nguyen, Tran, and Nguyen (2020) found that elementary students had a low level of interpersonal problem-solving ability, and they needed the intervention of teachers and parents as well. Examining the relationship between stress and gastrointestinal symptoms Roy,



Schwartz-Mette, and Nangle (2020) explored that there was a link between SPS, stress, and gastrointestinal symptoms, as having a low SPS resulted in higher stress levels, and consequently increased the severity of gastrointestinal symptoms. Hatam, Abolghasemi, and Kafi (2019) revealed that while SPS skills increased, RS and AS were improved due to the influence of empathy training. In Spain, De la Fuente, Chang, Cardeñoso, and Chang (2019) indicated that weak SPS was connected to stress and was not associated with poorer psychological adjustment (i.e., greater depressive symptoms and less life satisfaction). Kasik, József Balázs, Guti, Gáspár, and Zsolnai (2018) exhibited that IS was found among 12 years old; AS was higher among 14 years old; while RS and AS were common among 16 years old. In addition, they found that Family background had the strongest link to NPO, IS and, AS.

De la Fuente, Chang, Cardeñoso, and Chang (2018) noted that PPO and RS predicted the use of functional coping strategies, while NPO predicted the use of dysfunctional coping strategies. In Palestine, Abu Hamda (2017) demonstrated that female students had higher levels of NPO, while both (female and males) had similar levels in PPO, RS, IS and, AS. In Japan, Sone et al. (2017) found that there was a positive link between physical activity and SPS as higher SPS could be more frequently witnessed among participants who exercised regularly. In Hungary, Kasik and Gál (2016) revealed that parents noticed PPO among their children, unlike their teachers. Mothers and teachers had considered prosociality are more typical among children, unlike fathers. In China, Fang, Luo, Li, and Huang (2016) demonstrated that there was a significant increase in positive SPS and decrease in negative SPS in Chinese final year nursing students as they experienced more practice in dealing with patients and that enabled them to have a positive orientation towards their SPS. In Hungary, Kasik, Gáspár, Guti, and Zsolnai (2016) showed that PPO was more usual among 12-year-olds, while NPO, RS, and anxiety were more typical among 16-year-olds. The degree of NPO and AS was higher among those with increased anxiety as compared to those with lower levels of anxiety. The family structure and parents' educational levels were the most profoundly influential in terms of SPS. Kasik (2016) indicated that the Hungarian mothers' and teachers' opinion was, to some extent, similar in all age groups. Fathers believed that RS and PPO were more typical.

In peace education and its relationship to SPS, Kabasakal, Sagkal, and Türnüklü (2015) indicated that peace education program increased Turkish students' SPS skills, and as a result, the students' tendency towards violence decreased. A longitudinal study in Hungary by Kasik (2014) showed that NPO, RS and AS showed increasing tendency with age. However, PPO was not found to be correlated to age. The mothers' ratings indicated the same results in the domains of NPO, PPO and RS. On the contrary, the teachers' ratings showed that NPO, RS and AS had an increased tendency. As for the family factors, mothers' educational level had an effect on NPO and IS, while fathers' educational level had an influence on RS in all years. Abu-Ghazal and Falwah (2014) revealed that the RS was the most followed style among Jordanian adolescents. It was revealed that males had more levels in the AS. In addition, the RS was mostly adopted among 16 and 17-year-old adolescents. A positive relationship was found between the ambivalent attachment and the NPO. Lindsay et al. (2011) found that NPO, IS and RS appeared as unitary factors among British offenders, while PPO and AS loaded on a single factor at opposite ends. The participants became more positive and less impulsive in their style and orientation towards SPS. In Australia, Wilson (2011) indicated that the relationship between cognitive distortions and NPO was strengthened as depressive symptoms and strong links between cognitive distortions anxiety symptoms and depressive symptoms were on one side and NPO



was on the other side. [Siu and Shek \(2010\)](#) revealed that AS, NPO, and IS were linked to lower Chinese family functioning. On the contrary, RS and PPO were related to higher family functioning. Furthermore, it was revealed that the highest association was found in AS, which was a significant predictor of conflicts among the following: Father-daughter, mother-son, and mother-daughter. In Palestine, [El-Ghosain \(2008\)](#) showed that the students' ability in both genders to solve their SP was moderate. In addition, there were no differences between the high achievers and low achievers in their SPS skills.

## RESEARCH QUESTIONS

The study comes as a response to the lack of studies in the Palestinian library in terms of the modernity of the results about SPS; the last study that investigated SPS was conducted in 2017 by [Abu Hamda \(2017\)](#). Unfortunately, the quality of research in Palestine is poor relative to international research ([Assaf & Aburezeq, 2018](#)). Therefore, the current study is modern and comprehensive as it studies more variables in this respect such as (gender, age, family composition, father's education, and mother's education). The previous variables were not studied altogether in one study in the context of Palestine. In addition, the current study used three ages (12, 15, and 18); this is new in the Palestinian library concerning SPS. The new additions in the current study were not included in the only two Palestinian studies about SPS; ([Abu Hamda \(2017\)](#) and [El-Ghosain \(2008\)](#)). Therefore, the current study addressed the following questions: (1) What are the characteristics of SPS among the Palestinian adolescents? (2) Are there any statistical differences in SPS among the Palestinian adolescents attributed to their gender? (3) Are there any statistical differences in SPS among the Palestinian adolescents attributed to their age? (4) Are there any statistical differences in SPS among the Palestinian adolescents attributed to their family composition? (5) Are there any statistical differences in SPS among the Palestinian adolescents attributed to their father's education? (6) Are there any statistical differences in SPS among the Palestinian adolescents attributed to their mother's education?

## METHODOLOGY

The area of the study was social psychology as it followed the descriptive approach.

### Participants

The study included 410 Palestinian adolescents by the use of a random stratified sampling. The following table showed the sample number and percentages according to the demographic variables: Gender, age, family composition, father's education, and mother's education ([Table 1](#)).

The table showed that there was a balance between the number of the two genders; male ( $n = 201$ ) and female ( $n = 209$ ). In addition, there was a good distribution of the participants' ages as shown; 12 years old = 124, 15 years old = 127, 18 years old = 159. The family composition revealed that the vast majority of the respondents live with their mother, father and more than one sibling ( $N = 364$ ), while just three participants live with their grandparents. Surprisingly, the majority of the participants live with a mother or a father who graduated from high school.



Table 1. The distribution of the study sample according to the demographic variables

Demographic variables	Classification	Number	Percent
Gender	Male	201	49%
	Female	209	51%
Age	12 years old	124	30.2%
	15 years old	127	31%
	18 years old	159	38.8%
Family composition	Mother, father and one child	17	4.1%
	Mother, father and more than one sibling	364	88.8%
	Mother and her children	16	3.9%
	Father and his children	10	2.4%
Father's education	Grandparents and grandsons	3	0.7%
	Non-educated	12	2.9%
	Elementary	33	8.0%
	Preparatory	61	14.9%
	Secondary	141	34.4%
	University	123	30%
Mother's education	Postgraduate	40	9.8%
	Non-educated	8	2.0%
	Elementary	8	2.0%
	Preparatory	47	11.5%
	Secondary	188	45.9%
	University	146	35.6%
	Postgraduate	13	2.3%

## Instrumentation

**Social Problem-Solving Inventory-Revised (SPS-I).** SPS-I included 25 items distributed into five factors; PPO (5) items, NPO (5) items, RS (5) items, IS (5) items, and AS (5) items. The respondents' responses were 5-point (from 0 to 4) Likert-type as follows: 0 = Not at all true of me; 1 = Slightly true of me; 2 = Moderately true of me; 3 = Very true of me; 4 = Extremely true of me.

**Limitations of the study.** The study was conducted in Palestine, Gaza Strip during the school year 2021/2022, the first semester. The study also considered the geographical distribution of the respondents as they are not living in one geographical area. It could be said that the sample relatively represented the whole population of adolescents in the Gaza Strip.

**The instrument's psychometric properties.** To validate the instrument, it was applied to 49 Palestinian adolescents before the implementation of this study. After being sure of the validity and reliability, the instrument was used for the main study. For reliability, Cronbach's alpha for the whole items was (0.883); a very high value. Split Half Method revealed (0.791) for the first part and (0.780) for the second part - (both of the two values were high). Guttman Split-Half Coefficient was (0.898). In addition, it was revealed that Pearson Correlation Coefficient was high in all items. We made sure that the Arabic translation of the instrument was reliable through a certified translator and back-translation process.



## RESULTS

In this section, we presented the study findings based on the study questions as follows:

Answer to the first question “What are the characteristics of SPS among the Palestinian adolescents?”

To answer the first question, we used ranks, percentage, standard deviation, and mean for the sample of study as shown in the table below.

The table showed that PPO was ranked the first among the Palestinian adolescents as it represented (22%) of the adolescents’ overall responses to the whole inventory. RS came second as it represented (20.73%), followed by IS (15.12%), then NPO (14.73%). Finally, AS was (13.66%). Prominently, the majority of the Palestinian adolescents had a positive orientation towards solving their social problems.

Answer to the second question “Are there any statistical differences in SPS among the Palestinian adolescents attributed to their gender?”

To answer the second question, we used the Independent Samples *T*-Test for the responses of the sample as shown in the below table.

The table showed that there were no differences between girls and boys attributed to PPO, RS, and IS. However, the table illustrated that there were differences attributed to gender in NPO and AS. The mean (1.61) in NPO showed that females had higher levels of NPO than boys whose mean was (1.33). In addition, the mean (1.44) in AS showed that females had higher levels of AS than boys whose mean was (1.28). Accordingly, NPO and AS were higher among Palestinian adolescent girls.

Answer to the third question “Are there any statistical differences in SPS among the Palestinian adolescents attributed to their age?”

To answer the third question, we used One -Way ANOVAs for the responses of the sample as shown in the below table.

The table showed that there were no differences attributed to the adolescents’ age in NPO, RS, IS, and AS. However, it was found that only in PPO there were differences attributed to gender. After applying Post hoc, the differences in PPO were attributed to (18 years old adolescents).

Answer to the fourth question “Are there any statistical differences in SPS among the Palestinian adolescents attributed to their family composition?”

To answer the fourth question, we used One -Way ANOVAs for the responses of the sample of study as shown in the below table.

The table explained there were no differences attributed to the adolescents’ family composition in NPO, PPO, RS, IS, and AS. That meant that there was no relationship to the adolescents’ family composition in their dealing with social problems.

Answer to the fifth question “Are there any statistical differences in SPS among the Palestinian adolescents attributed to their father’s education?”

To answer the fifth question, we used One -Way ANOVAs for the responses of the sample of study as shown in the table below.

The table indicated that there were no differences attributed to the adolescents’ fathers’ education in NPO, PPO, RS, IS, and AS. It meant that there was no effect to the adolescents’ fathers’ education on their dealing with social problems.



Answer to the sixth question “Are there any statistical differences in SPS among the Palestinian adolescents attributed to their mother’s education?”

To answer the sixth question, we used One -Way ANOVAs for the responses of the sample of study as shown in the table below.

The table indicated that there were no differences attributed to the adolescents’ mothers’ education in NPO, PPO, RS, and IS. However, differences were found in AS. By doing post hoc, the direction of the differences told that the adolescents whose mothers had the elementary school had AS.

## DISCUSSION

The study aims at exploring the nature of SPS among the Palestinian adolescents (male and female) in connection to some demographic variables such as gender, age, family composition, father’s education, and mother’s education. Surprisingly, the results show that (88, 8%) of the respondents live with their parents and have more than one sibling in the family. Furthermore, the majority of fathers’ and mothers’ education is secondary, and followed by a university degree. These figures could help to know the demographic variables affecting their SPS (Table 1).

The first question is a general question to identify which orientation (PPO or NPO), or style (RS, IS, and AS) is mostly followed by adolescents. The results in Table 2 indicate that the majority of respondents (22, 3%) have PPO towards solving their problems, followed by RS (20, 7%), while AS (13, 6%) is the lowest among them. These results correspond to the following studies: The results of Kasik and Gál (2016) reveal that parents noticed PPO among their children. Fang et al. (2016) demonstrates that there is positive SPS among the sample. Abu-Ghazal and Falwah (2014) reveal that the RS is the most followed style among Jordanian adolescents. Results show that PPO ranked first SP, this means that the Palestinian adolescents are characterized by the following according to Nezu (2004): They have a positive outlook and believe that difficulties can be solved. They strongly believe in their ability to manage difficulties and realize that effective problem-solving needs effort and time. In addition, RS is found the second-ranked after PPO. These results show more explanation about the Palestinian adolescents’ SPS; they have a reasonable, intentional, and methodical application of effective problem-solving techniques. They see problems as tasks that can be methodologically resolved (D’zurilla et al., 2003; D’zurilla, Nezu, Maydeu-Olivares, et al., 2002; Jaffee & D’zurilla, 2003; Maydeu-Olivares & D’zurilla, 1995). However, as AS is ranked the last, it defines the nature of the Palestinian adolescents as they: Do not put off their dealing with a problem, or have others solve

Table 2. The mean, percentage, and rank of sample responses to SPS-I

Factor	No. of items	Mean	Std. Deviation	Percentage%	Rank
NPO	5	1.4727	0.95210	14.73	4
PPO	5	2.2356	1.05413	22.36	1
RS	5	2.0732	1.00518	20.73	2
IS	5	1.5122	0.83896	15.12	3
AS	5	1.3659	0.82207	13.66	5





it for them (D'zurilla et al., 2003; D'Zurilla, Nezu, Maydeu-Olivare, et al., 2002; Jaffee & D'Zurilla, 2003; Maydeu-Olivares & D'Zurilla, 1995).

The second question measures if there are differences between males and females in their SPS. In Palestine, which is a third world country, females have oral communication apprehension (Abu Taha & Aburezeq, 2018, 2019), and this is why the results in Table 3 show that there are no differences between girls and boys in PPO, RS and IS, while females have NPO and AS. The girls negatively think of their problems and they avoid them lest the confrontation and communication with others. These results are similar to the results found in the Palestinian study of Abu Hamda (2017) who demonstrates that females had higher levels of NPO, and shows that (females and males) have similar levels in PPO, RS, IS. However, the results of this question contradict Abu-Ghazal and Falwah (2014) who state that males have higher levels in the AS.

The third question examines if there are differences in SPS attributed to age (12, 15, or 18 years old). The results in Table 4 illustrate that there are no age differences in NPO, RS, IS, and AS. However, it is found that PPO is prominent at 18 years old. These results contradict Kasik, József Balázs, et al. (2018) who exhibit that IS is found among 12 years old; AS is higher among 14 years old; while RS and AS are common among 16 years old.

The most essential element influencing behavior of one's problem-solving during childhood and adolescence is family structure (e.g., Grusec & Davidov, 2007). In addition, the family structure has the most impact on SPS (Kasik et al., 2016). According to Keltikangas-Järvinen (2005), the development of SPS is also substantially influenced by family interactions (e.g., between parents and children, between children themselves). As a result, the family's composition is crucial. The fourth question investigates the differences in SPS attributed to family composition (i.e. living with mother, father and one sibling; living with mother, father and more than one sibling; living with mother and her children, living with father and his children; living with grandparents and grandsons). However, the results in Table 5 indicate that there is no difference in adolescents' family composition when dealing with social problems.

The parents' educational levels are extremely influential in terms of SPS (Kasik et al., 2016). Therefore, the fifth question seeks to know if there are differences in SPS are attributed to fathers' education. The answer in Table 6 shows no differences in solving SPS attributed to the

Table 3. Independent Samples T-Test differences in gender's responses to SPS-I

Factor	Gender	Mean	Std. Deviation	T. value	Sig.
NPO	Male	1.3397	0.86625	0.007	Sig
	Female	1.6109	1.01768		
PPO	Male	2.1263	1.06992	0.603	Not Sig
	Female	2.3493	1.02782		
RS	Male	1.9895	1.01056	0.897	Not Sig
	Female	2.1602	0.99459		
IS	Male	1.4163	0.80403	0.309	Not Sig
	Female	1.6119	0.86456		
AS	Male	1.2871	0.75261	0.006	Sig
	Female	1.4478	0.88301		



Table 4. One -Way ANOVAs differences in age responses to SPS-I

Domains	Source of variance	Sum of squares	Df.	Mean square	F Value	Sig.
NPO	Between groups	2.068	2	1.034	1.142	0.320
	Within groups	368.686	407	0.906		
	Total	370.754	409			
PPO	Between groups	11.035	2	1.034	5.064	0.007
	Within groups	443.445	407	0.906		
	Total	454.480	409	1.034		
RS	Between groups	3.811	2	1.906	1.894	0.152
	Within groups	409.434	407	1.006		
	Total	413.245	409			
IS	Between groups	3.366	2	1.683	2.408	0.091
	Within groups	284.513	407	0.699		
	Total	287.879	409	1.683		
AS	Between groups	1.291	2	0.645	0.955	0.386
	Within groups	275.111	407	0.676		
	Total	276.402	409			

Table 5. One -Way ANOVAs differences in family composition

Domains	Source of variance	Sum of squares	Df.	Mean square	F Value	Sig.
NPO	Between groups	3.562	4	0.891	0.982	0.417
	Within groups	367.192	405	0.907		
	Total	370.754	409			
PPO	Between groups	7.348	4	1.837	1.664	0.158
	Within groups	447.132	405	1.104		
	Total	454.480	409			
RS	Between groups	4.671	4	1.168	1.157	0.329
	Within groups	408.574	405	1.009		
	Total	413.245	409			
IS	Between groups	4.268	4	0.891	1.524	0.194
	Within groups	283.611	405	0.907		
	Total	287.879	409			
AS	Between groups	2.423	4	0.606	0.895	0.467
	Within groups	273.979	405	0.676		
	Total	276.402	409			

fathers' education. These results contradict (Kasik et al., 2016) who confirm that father's education influences adolescents' SPS.

It is noteworthy that mothers' education is one of the main determinants in solving SP (ibid). Accordingly, the sixth question investigates the differences in solving SP attributed to mothers' education. Table 7 clarifies that there is no difference in NPO, PPO, RS, and IS attributed to mothers' education. However, there is a relationship between adolescents who have a mother finished elementary school and adolescents' AS.



Table 6. One -Way ANOVAs differences in father's education

Domains	Source of variance	Sum of squares	Df.	Mean square	F Value	Sig.
SPS_NO	Between groups	1.802	5	0.360	0.395	0.852
	Within groups	368.952	404	0.913		
	Total	370.754	409			
SPS_PO	Between groups	6.655	5	1.331	1.201	0.308
	Within groups	447.825	404	1.108		
	Total	454.480	409			
RS	Between groups	4.373	5	0.875	0.864	0.505
	Within groups	408.872	404	1.012		
	Total	413.245	409			
IS	Between groups	5.127	5	1.025	1.465	0.200
	Within groups	282.752	404	0.700		
	Total	287.879	409			
AS	Between groups	4.604	5	0.921	0.864	0.505
	Within groups	271.797	404	0.673		
	Total	276.402	409			

Table 7. One -Way ANOVAs differences in mother's education

Domains	Source of variance	Sum of squares	Df.	Mean square	F Value	Sig.
SPS_NO	Between groups	10.220	5	2.044	2.290	0.045
	Within groups	360.534	404	0.892		
	Total	370.754	409			
SPS_PO	Between groups	6.238	5	1.248	1.124	0.347
	Within groups	448.242	404	1.110		
	Total	454.480	409			
RS	Between groups	3.792	5	0.758	0.748	0.588
	Within groups	409.453	404	1.013		
	Total	413.245	409			
IS	Between groups	6.471	5	1.294	1.858	0.101
	Within groups	281.408	404	0.697		
	Total	287.879	409			
AS	Between groups	10.290	5	2.058	3.124	0.009
	Within groups	266.112	404	0.659		
	Total	276.402	409			

## CONCLUSION

The study investigates the characteristics of Palestinian adolescents' SPS in relation to some demographic variables (i.e. gender, age, family composition, father's education and mother's education) by the use of SPS-I. Proper statistics methods are used to study the relationship between the demographic variables and SPS (i.e. PPO, NPO, RS, IS, and AS). The results show that the Palestinian adolescents have a high level of PPO, and a low level of NPO, which is a good indicator. In addition, their RS is second-ranked factor; this shows that they have



effective SP techniques. In contrast, they have a lower level of AS as they do not delegate responsibility to others. The findings show that there are no differences between girls and boys in PPO, RS and IS, while females have higher NPO and AS. There are no differences in NPO, RS, IS, and AS attributed to age. However, it is found that PPO was prominent at 18 years old. There is no difference in adolescents' family composition when dealing with SP. Also, there is no difference among adolescents in solving SPS attributed to their father's education. However, there is no difference in NPO, PPO, RS, and IS attributed to their mother's education. However, there is a relationship between the adolescents' mother who finishes elementary school and AS.

The study sometimes goes in line with the results of some previous studies and sometimes goes against the results. It can be said that the Palestinian adolescents, like other adolescents, have special characteristics of SPS. This study is a comprehensive study as it targets a big number; 410 Palestinian adolescents, equally distributed between males ( $n = 210$ ) and females ( $n = 209$ ). In addition, it targets the beginning of adolescents' age (12 years old), the middle (15 years old), and the end (18 years old). Furthermore, it addresses all types of family composition (mother, father and one sibling; mother, father and more than one sibling; mother and her children; father and his children; grandparents and grandsons), and addresses father's and mother's education (elementary, preparatory, secondary, university, or postgraduate). These demographic variables show the comprehensiveness of the study.

### Implications for further research

The study is limited to the Palestinian adolescents in the Gaza Strip, and the ages (12, 15, and 18). It will be highly recommended that future studies be conducted to investigate SPS among the other parts of Palestine (i.e. The West Bank and the diaspora, especially those who are in the refugee camps in the neighboring countries). Other different ages could be used (i.e. 13, 14, 16, and 17 years old). It will be a good idea if more demographical factors are investigated (i.e. the achievement of adolescents at school, or their parents' financial situation).

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*Conflict of Interest and Ethics:* The authors declare that they have no conflicts of any kind with any person or institution. The authors got permission from the university, the Ministry of Education and a consent form from each child under 18 years.



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