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5.26\*7\*\*8987\*

**SOLA 4951/SOLA9451**

**RESEARCH THESIS A**

"#\$%&! ' (#\$&#!) \*#\$+, -!.....Y  
0 ' (#\$&#!) \*#\$+, -!\$( )!& ' (-1, #\$\$# ' (!# 2 \* -!% ' 3!& ' 13- \*!& ' (4\* ( ' 3!.....Y  
0 ' (#\$&#!) \*#\$+, -!\$( )!& ' (-1, #\$\$# ' (!# 2 \* -!% ' 3!\$)) #+' (\$, !, \* &#13\*3-5) \* 2 ' (-#3\$# ' 3-5, \$6! -#\$%!!.....Y  
728 ' 3#\$ (#!, + (9-!.....Y  
0 ' 13- \*!) \*#\$+, -!.....Y  
03\* )#!8 ' +(-!.....Y  
0 ' (#\$&#!: ' 13-!.....;  
" 1 2 2 \$3<!\$( )! =+2 -! ' %!#: \*!& ' 13- \*!.....;  
"#1) \* (#!, \* \$3(+(>! ' 1#& ' 2 \* -!.....;  
?@!AB ' (-C!\$( )!DE!D3 '>3\$2!F\*\$3(+(>!G1#& ' 2 \* -!.....;  
0 ' 13- \*!F\*\$3(+(>!G1#& ' 2 \* -!A2\$88\* )#!?!?@!D3 '>3\$2!\$( )!DE!F\*\$3(+(>!G1#& ' 2 \* -!6\*, ' HC!!  
J\*\$&: +(>!-#3\$#\* >+\* -!.....||  
0 ' 13- \*!-&: \* ) 1, \*!.....K  
=- \* -- 2 \* (#!.....L  
=- \* -- 2 \* (#! ' 4\*34+\*H!.....L  
J: \* -+! =!A " GF= I MKN5 " GF=MIKNC! =- \* -- 2 \* (#!.....D  
D3\* - \* (#\$# ' (!.....M  
" 162+--+ ' (!.....M  
P\$39(+>!.....NQ  
@R\$2+(\$# ' (-!.....NQ  
" 8\* &\$, !& ' (-) \*3\$# ' (!\$( )! -188, \* 2 \* (#\$3<!\$ -- \* -- 2 \* (#!.....NQ  
J: \* -+! S#: )3\$H\$, T! " 1-8\* (-+ ' (T!\$( )!J+2 \*!@R#\* (-+ ' (!U!.....NQ  
@R8\* &#\* )!3\* - ' 13& \* -!% ' 3!-#1) \* (#-!.....NN  
0 ' 13- \*!4\$, 1\$# ' (!\$( )!) \*4\*, ' 82 \* (#!.....N/  
D3+V\* -!.....N/  
B\*\$, #: !\$( )! "\$%\*#<!.....N/  
=&\$) \* 2+&! : ' (\* -#<!\$( )!8, \$>+\$3+- 2!.....N;  
=) 2+(+ -#3\$#4\*! 2\$##\*3-!\$( )!, + (9-!.....N;  
=88\* ( )+R! =!!@ (>+ ( \* \*3-! =1 -#3\$, +\$!A@ =C!O ' 28\*## (&+\* -!.....NK  
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K.! Z('H,\*>\*!'%!\*(>(\* \*3+(>!) \* ->(!83\$&#&\*!\$())!&'(#\*R#1\$,!%\$&# '3-!+28\$&#(>!#: \*!  
\*(>(\* \*3+(>!)+-&+8,+(\*.!  
L.! b()\*3-#\$(+(>! '%!#: \*!-&'8\*!83+(&+8,\*-!('32-T!\$&&'1(#\$6+,#\*-\$!)!6'1()-!'%!  
-1-#\$(,\$6,\*!\*(>(\* \*3+(>!83\$&#&\*!+(!#: \*!-8\*&+!&!)+-&+8,+(\*.!  
O.! =88,+&\$#+'(! '%!\*-#&6,+ -: \*)!\*(>(\* \*3+(>!2\*#: ') -!# '!&'28,\*R!\*(>(\* \*3+(>!83'6,\*2!  
- ',4+(>.!  
g.! ^,1\*(#!\$88,+&\$#+'(! '%!\*(>(\* \*3+(>!\*&:(+\_1\*-T!# ',-!\$())!3\*- '13&\*-.!  
M.! =88,+&\$#+'(! '%!-<-\*2\$#&!\*(>(\* \*3+(>!-<(#: \*-+-\$())!\*->(!83'&\*--\*-.!  
NQ.! =88,+&\$#+'(! '%!-<-\*2\$#&!\$883'\$&: \*-!# '!#: \*!&'()1&#!\$())!2\$(\$>\*2\*(#! '%!\*(>(\* \*3+(>!  
83'0\*&#-.!  
NN.!@#: +&\$,!&'()1&#!\$())!83'%--+'(\$,!\$&&'1(#\$6+,#<.!  
N/!@%\*&#4\*!'3\$,!\$())!H3+##\*(!&'221(+&\$#+'(!(!83'%--+'(\$,!\$()),\$<!)'2\$+(-!  
N;.!03\*\$#4\*!T+(( '4\$#4\*!\$())!83'\$&#4\*!) \*2\*\$('13.!  
NI.!D3'%--+'(\$,!1-\*!\$())!2\$(\$>\*2\*(#! '%!+(%'32\$#+'(!  
NK.!G3)\*3,<!2\$(\$>\*2\*(#! '%!-\*,%T!\$())!83'%--+'(\$,!&'()1&#.!  
NL.!@%\*&#4\*!#\*\$2!2\*26\*3- :+8!\$())!#\*\$2!,\*\$)\*3- :+8.!  
J: +-&'13-\*!+!) \* ->(\* )#!'\$)3\*--!#: \*!,\*\$3(+(>'1#&'2\*-!6\*,'H!\$())!#: \*!&'33\*-8'()(>!  
@(>(\* \*3-!=1-#3\$,+\$! "#\$>\*!N!0'28\*##(&<!"#\$(\$3)-!%'3!D3'%--+'(\$,!@(>(\* \*3-!\$-! -: 'H(!  
J: \*!%1,,!+#! '%! "#\$>\*!N!0'28\*##(&<!"#\$(\$3)-!2\$<16\*!'1()!+(!=88\*())+R! =.!  
!  
=#\*3!-1&&\*--%1,,<!&'28,\*#(>!#: +-&'13-\*T!<'1!- : '1,)!6\*!\$6,\*!# 'W!

=#!#: \*!&'(&,1-+'(! '%!#: +-&'13-\*T!-#1)\*(-!- : '1,)!6\*!\$6,\*!# 'W!  
N.! Y\*4\*,'8!\$!) \* ->(!'3!\$!83'&\*--!'3!+(4\*-#>\$\*!\$!: <8'#: \*-+-%', 'H+(>!)1-#3<!\$())!  
83'%--+'(\$,!\*(>(\* \*3+(>!-\$(\$3)-!AOT!gT!MT!NQC!  
/! 03#&\$,,<13\*%,\*&#!'(!\$!-8\*&\$,+&#6')<! '%!9('H,\*>\*!3\*,\$#\*)!# '!#: \*+3!#: \*-+&# '8+&!A;C!  
;.! =88,<!-&+\*(#&+&!\$())!\*(>(\* \*3+(>!2\*#: ') -!# '!- ',4\*!\$(!\*(>(\* \*3+(>!83'6,\*2.!AOC



6\*!&' 28,\*#\*)!\$( )!-162+##\*)!#!P\*3,+() \*!Z\$<!\$( )!18,'\$)\*)!#!#: \*!" GF=! IMKN5MIKN!



**A**

7#!+-!+(#\* ( ) \* )!# : \$#!J : \* -+ -! =!& ' 4 \* 3!# : \*! -& ' 8+( >T!8,\$ ( ( +(>T!\$( )!& ' 2 8, \*#+( >!  
83\* 8\$3\$#+' ( -!% ' 3!# : \*!83' d\* &#.!  
N.! D3' d\* &#!D,\$ (! i!# : +-!H+,!& ' 2 83+- \*!\$!N` /!8\$> \*!) ' &1 2 \* (#! \*R8,\$+( +(>!# : \*!d1 -#%+&\$#+' (!% ' 3!  
# : \*+3!83' d\* &#T!\$!3' 1> :!, \$< ' 1#! '%!\$!8,\$ (! '%!H' 39!# : 3' 1> : ' 1#!# : \*!83' d\* &#T!+( &,1)+( >!\$( <!



	/.! " * 2+(\$3! D3* - *(\$#+' (! ;.! D3'>3*--!a*8'3#! !	O! ! NQ!	NQ j! ! K j!	" 18*34+- ' 35=--*-- ' 3!AKQ5KQC! ! " 18*34+- ' 3!
J: * --!0!	N! ^+(\$,!a*8'3#! /.! D\$3#&+8\$#+' (! ;.! D3* - *(\$#+' (! '%!H' 39			





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If there is a significant difference between the male and female and age groups



?\*, 'H!\$3\*!# :+(>-!#'!&' (-+) \*3!H: \* (!81##+(>!# '> \*#: \*3!#: \*!,#\*3\$#13\*!\$(!)83'>3\* --!3\*4\*H!  
)&'12\*(#!

<p>F#*3\$#13*!a*4*H! !</p>	<p>(W a , a a ?)  ! ?3+*%!6\$&amp;9&gt;3'1(!# '!83'd*&amp;#! ! "122\$3&lt;! '%!,#*3\$#13*!3*, *4\$(!# '!83'd*&amp;#! ! 7)*(#%+&amp;\$#+' (! '%!&gt;\$8-m!+(!#: *!,#*3\$#13*! ! D3'6,*2!"#\$*2*(#!A+(%'32*)!6&lt;!&gt;\$8-!+(!#: *!, ,#*3\$#13*C! ! B&lt;8'#: * -+-\$(!)\$+2-!</p>	<p>KQ j!</p>	<p>N/'NK!</p>
<p>D3'd*&amp;#!D,\$(!  D3'd*&amp;#! Y*8*( )*(#! D3*8\$3\$#+'(-!</p>	<p>AH a a a a ?) ! ! D3'8'-'*!)!"',1#'(5@R8*3+2*(#\$,!P*#:' )', '&gt;&lt;! ! J: * -+!#2*,+( *!i!%'3!( *R#!#H'!#*32-! o! n1-#%+&amp;\$#+' (! '%!#2*!\$, '&amp;\$#+' (!%'3!*\$&amp;:! #\$-9! ! =4\$,\$6,*!3*- '13&amp;* -!+) * (#%+* )! ! a*_1+3*!)#3\$+((&gt;!)\$(!)18-9+,+(&gt;!) * (#%+* )!</p>	<p>/Q j!</p>	<p>;`K!</p>

(Ca a a a ?) W a  
a a a a ?)  
  
D3'd\*&#!-8\*&%+&T!61#!2\$<!( &,1) \*!  
! @4+)\* (&\*!'!#3\$+((>!)' (!-8\*&%+&!\*\_1+82\*(#!  
! @4+)\* (&\*!'!- '2\*!18-9+,+(>!)!(\*H!  
- '%H\$3\*52\*#:' )-!  
! D3\*,+2+(\$3<!3\*-1,#-!  
! D3\*,+2+(\$3<!-9\*#&: \* -!  
! 0'28' (\* (#-58\$3#-!'3)\*3\* )!



J: \*!,\$#\*!8\* (\$,#<!+\$88,+\*)!8\*3!&\$,\* ( )\$3!)\$<!A+ (&,1)+( >!H\*\*9\* ( )-\$ ( )!816,+&! : ',+)\$<-C!#:\$#!  
#: \*!\$--\*--2\* (#!+!'4\*3)1\*!J: \*3\*!+!( '!83' `3\$#\$!'!# : \*!,\$#\*!8\* (\$,#<!% '3!-162+--+ ' (-!2\$) \*!  
8\$3#!H\$<!# : 3' 1>: !\$!)\$<.!  
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P\$39+(>!>1+) \* ,+ (\* -!% '3!\$--> (2\* (#!-162+--+ ' (-!H+,,!6\*!83' 4+ ) \* )!\$#!# : \*!-\$2\*!#2\*!\$-!  
\$--> (2\* (#!) \*\$#,-!# ' !\$--+-#H# : !2\*\*#(>!\$--\*--\$6,\*!3\*\_1+3\*2\* (#-!" 162+--+ ' (-!H+,,!6\*!  
2\$39\*)!\$&&'3)+(>!# ' !# : \*!2\$39+(>!>1+) \* ,+ (\* -!83' 4+ ) \* ) .!

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J: \*3\*!+-( '!\*R\$2!% '3!# : +-!&' 13- \* .!

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7%<' 1!:\$4\*!R8\*3+ (&\*)!\$(!+, (\* --!'3!2+-)\$4\* (#13\*!6\*<' ( )!<' 13!&' (#3',!#:\$#!H+,,!+ (#3%\*3\*!H# : !  
<' 13!\$--\*--2\* (#!8\*3%'32\$(&\*T!<' 1!\$3\*! \*,+>6,\*!# '!\$88,<!% '3! "8\*&\$,! 0' (-) \*3\$#+' (!83+'3!# ' !  
-162+##(>!\$(!\$--\*--2\* (#! '3!+##+(>!\$(!\*R\$2.!!  
!

!#:\$#!bX" S!( ' H!:\$-!\$!^+#!# '!" #!5!" 162+##131,\*T!H : +&: !2\*\$(-!#:\$#!+!<' 1!-#!(!\*R\$2!  
'3!-162+##!\$!8\*+\*!'!%\$--\*--2\* (#T!<' 1!\$3\*!) \* &,\$3+(>!<' 13-\* ,%1%#! \* (' 1>: !# '!) ' !-\$ ( )!&\$ ( ( '#!  
, \$#\*3!\$88,<!% '3! "8\*&\$,! 0' (-) \*3\$#+' ( .!  
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^'3! ) \*\$#,-! '%! \$88,<+(>! %'3! "8\*&\$,! 0' (-) \*3\$#+' (! \$ ( )! &' ( )#+' (-! %'3! # : \*! \$H\$3)! '%!  
-188,\*2\* (#\$3<!\$--\*--2\* (#T!8,\*\$- \*!- \*\*!# : \*!+(% '32\$#+' (! ' (!bX" Sf-! "8\*&\$,! 0' (-) \*3\$#+' (!  
8\$>\*.!

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a\*\_1\* -#-!% '3!# : \*--!H# : )3\$H\$,T!-1-8\* (-+' (! '3! \*R#\* (-+' (!- : ' 1,)!6\*!2\$) \*!+(!H3+##(>!# ' !# : \*!  
J: \*--!0' '3)+(\$# '3.!J: \*!% ', ' H+(>!83' &\*)13\* -!\$ ( )!31,\* -!H+,,!6\*!\$88,+\*)!H: \* (!\$!-#1) \* (#!H+ : \* -!  
# ' !H# : )3\$H! '3' 2T! '3! -1-8\* ( )! "GF=IMKN5" GF=M!KN.! J: \*-\*!31,\* -! -188,\*2\* (#!# : \*!bX" S!  
) \*\$),+ (\* -T!&' ( )#+' (-T!\$ ( )!83' &\*)13\* -!% '3!H# : )3\$H+(>!%3' 2!\$!&' 13- \* .!!!  
DF@=" @!XGJ@W! !

N.! 7(!\*4\*3<!&\$-\*!H: \*3\*!\$!-#1) \* (#!H+ : \* -!# ' !8' -#8' (\*!&' 28,\*#+' (! '%!# : \*!# : \* -+T!+.\*!# ' !  
-1-8\* ( )! H'39! \$ ( )!&' 28,\*#\*!# : \*!# : \* -+!+(!\$!,\$#\*3! - \* -+ ' (T! H3+##\* (!\$883' 4\$,' !%!# : \*!  
-18\*34+- '3!21-#!%3-#16\*!' 6#\$+ ( )!6\*%'3\*!-162+##(>!\$!H3+##\* (!3\*\_1\* -#!# ' !# : \*!J: \*--!0' `'  
'3)+(\$# '3.!

J: \*!-18\*34+- '3!2\$<13\*%1-\*!\$883' 4\$,' !% '3!\$!4\$3+\*#<' !%13\*\$- ' (-T!\*>.!#:\$#!# : \*! (\*&\*--\$3<!



/.! =!-#1) \* (#!H: '!+-!8\*32+##\*)!#!H#: )3\$H!H#: '1!%\$,13\*!%3' 2!-16d\*&#! "GF=IMKN5MIKN!  
-: '1,)!3\*`\* (3',!+(!#: \*!%' ,,'H+(>!- \*--+ '(!H#: ! \$! J: \*--+!X' 2+(\$#+' (!^'32.!X'#!#: \$#!  
1() \*3! ('32\$,! &+3&12-#\$(&\* -!) +-&' (#(1\$#+' (!H#: '1#!%\$,13\*!'3!%+(\$(&+,\$! 8\* (\$,#<! +-!  
8'--+6,\*!' (<!18!#!#: \*!0\* (-1-!Y\$#\*.!  
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;.! S: \* (!\$!-#1) \* (#!+-!>3\$ (#\* )!\$ (!\*R#\* (-+' (!#: \*3\*!2\$<16\*!\$!8\* (\$,#<13\* -1,#+(>!(!\$!3\*)1&#+' (!  
'#!#: \*!#: \*--+! 2\$39.!J: +-!H+,!6\*!+28' -\*)!\$&&'3)+(>!#!!31,\*-!\$883'4\*)!6<!#: \*!J: \*--+!





'#: \*3H+ - \*! '6#\$+ (! \$! a+-9! =-- \* -- 2 \* (#! % '3! \$883' 4\$,! 6<! #: \*+3! -18\*34+- '3! \$()! 6<! #: \*! " 8\$&\*!  
P\$(\$>\*3!+(!H: ' - \*!-8\$&\*!#: \*!H'39!+-!# '!6\*!)' (\*.!)

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a+-9! =-- \* -- 2 \* (#!#\* 28,\$#\* -!% '3! "D=0@ "T!@ sb7DP@XJ!\$()!DaG0@Yba@ " ! \$3\*!\$4\$+,\$6,\*!' (!  
#: \*! 2 ' ' ),\*! -+#\*.! a+-9! =-- \* -- 2 \* (#-! \$()! \*R\$28,\* -! \$3\*! \$,3\*\$) <! \$4\$+,\$6,\*T! #: 3' 1>: ! <' 13!  
-18\*34+- '3!% '3! 2\$(<!\$&#4+##\* -.!0 ' 28,\*##)!'3!2' )+##\*)!4\*3-+' (-!- : '1,)!6\*!-162+##\*)!\$-!->(\*)!  
:\$3)!&'8+\* -!\$()!P " !S '3)!\*, \*&#3' (+!4\*3-+' (-!# ' !Z+\$(!^' (>!0 :+(!A9%.&:+( [ 1(-H.\* )1.\$1C.!

**A**

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bX" S!:\$-!\$(!' (>' +(>!&' 2 2+2 \* (#!# ' !% ' -#\*3+(>!\$!&1,#13\*!' %!, \*\$3(+(>!+(%' 32 \* )!6<!\$&\$) \* 2+&!  
+ (#\* >3+##<.! =,,! bX" S! -#1) \* (#-! :\$4\*!\$!





