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**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\*&\$,+-#16')<!%19('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 ?)

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- \* .!

!

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.!!

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!#:\$#!bX" S!( 'H!:\$-!\$!^+#!#'" +#!5!" 162+#!31,\*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! !

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N.! 7(! \*4\*3<!&\$- \*!H: \*3\*!\$! -#1) \* (#!H+ : \* -!# ' 18' -#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.)

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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.!

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





